Glacier Bay National Park and Preserve Alaska



Backcountry and Wilderness Management Plan

A RENEWED VISION FOR WILDERNESS STEWARDSHIP, A DIVERSITY OF BACKCOUNTRY VISITOR EXPERIENCES, AND AN ENDURING COMMITMENT TO TLINGIT HOMELAND VALUES

July 2022 PUBLIC REVIEW DRAFT



Aagáa áwé k'idéin gaxtulatéen haa tl'átgi ka haa kusteeyí haa ítx yaa has na.ádi aa has du jeeyís
So that too, we may protect our land and our culture for those yet to come

~ Traditional Tlingit Prayer

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Letter from the Superintendent

Dear Friends,

The National Park Service is proposing a Backcountry and Wilderness Management Plan that tiers off of the stringent protections in the Glacier Bay National Park and Preserve General Management Plan (1984). Applicable to designated Wilderness lands and waters in the park, the plan will address key stewardship topics to preserve Glacier Bay's exceptional backcountry and wilderness visitor experiences, resources, and values into the future.



This draft marks an important milestone by presenting for your review a renewed vision with refined guidance, strategies, and zoning to help future managers achieve desired future conditions aligned with current law and policy. The plan also incorporates what we heard during:

- Glacier Bay Backcountry visitor social science gathered in 2017 and 2018 (NPS 2021)
- Public and stakeholder input gathered over two 60-day outreach periods in 2020 and 2021
- Government-to-government consultation with the Hoonah Indian Association and the Yakutat Tlingit Tribe representing the original people and stewards of Glacier Bay

Between July 20 and August 20, 2022 we invite your feedback on this draft. During this 30-day review it is most helpful if you offer feedback on our proposed comprehensive directions for managing designated Wilderness: the long-term vision, desired conditions, and strategies for protecting resources and connecting visitors to key park experiences and values.

We are also seeking input on two options proposed in chapter 2 (page 48) and chapter 3 (page 60):

- Frontcountry Access Zone (Option 1) is no change from current management directions. In this option, recreational hiking in designated Wilderness is primarily on beaches and in untracked wilderness that is generally accessed from the water (except on limited trails originating from Bartlett Cove and the park frontcountry).
- Frontcountry Access Zone (Option 2) proposes changes in current management direction to provide a developed trail in Falls Creek up to Excursion Ridge to support independent day trips (noncommercial) and extended hikes into untracked wilderness (including multiday guided hiking). The change would create a more accessible wilderness hiking experience for park users, and new opportunities for visitors who may not have the resources, equipment, time, or skill to engage in a backcountry experience that is only accessible from the water.

Your feedback will help park managers select between these alternative futures and to refine this draft plan. There are a variety of ways you can comment:

- Submit electronically: go.nps.gov/GBwild (short link URL) or https://parkplanning.nps.gov/GBwild
- Mail and email:
 Glacier Bay National Park and Preserve, P.O. Box 140, Gustavus, AK 99826
 GLBA public comments@nps.gov

After incorporating public feedback, the park will perform environmental compliance and provide one last opportunity for public comment. We rely on your feedback to help guide our stewardship, so please take an active role and offer your unique perspective on the vision and changes being proposed at this time.

Thank you for your interest in designated Wilderness management in Glacier Bay National Park.

Philip Hooge, Superintendent

Glacier Bay National Park and Preserve







Figure 1. Glacier Bay National Park covers 3.2 million acres of rugged mountains, dynamic glaciers, temperate rainforest, wild coastlines and deep sheltered fjords. It is a Biosphere Reserve and part of a 25-million-acre World Heritage Site—one of the world's largest international protected areas. From sea to summit, Glacier Bay offers limitless opportunities for adventure and inspiration.



Figure 2. The park backcountry encompasses 2.6 million acres with the highest conservation protection our country affords: designated Wilderness. In a remote Alaskan setting, backcountry access is by water and air, except a few road-accessible land connections proximate to Gustavus and Bartlett Cove, the only developed area in Glacier Bay National Park where visitor services are available. This wilderness encompasses Tlingit Homeland originally peopled with the ancestors of tribal members now largely living nearby in Hoonah and Yakutat. Other communities with gateway connections to the backcountry include Elfin Cove, Excursion Inlet, Haines, Skagway, and Juneau as a regional hub where visitors can make connections to the rest of Alaska, the lower 48 US states, and beyond.

Haa Aaní: Our Land

Recognizing and honoring the rich cultural tapestry of Indigenous use and occupation in designated Wilderness, and supporting the enduring connection between the Tlingit and their Homeland, this plan highlights Indigenous Homeland values embraced by Glacier Bay's original people and advances agency-wide conversations about diverse cultural perspectives and values. Toward this end, we collaborated with Tlingit elders and speakers to incorporate, as appropriate, Tlingit language to encourage readers to consider the concepts presented here through the world view of those who consider Glacier Bay National Park Homeland.



(left, Satellite of Glacier Bay, Icy Strait and the Gulf of Alaska).

(images below) Huna Tlingit past and present in Homeland:

(left) seal hunting encampment

(middle) harvesting gull eggs

(right)
paddling
toward a
former village
site and
cemetary (now
in Wilderness).







Figure 3. The traditional territory of the Huna Tlingit encompasses all the lands and waters of Glacier Bay National Park and the Yakutat Tlingit clans have strong ties to the Dry Bay Preserve and much of the northern Outer Coast. The images above show some of the ways the Tlingit evolved with and adapted to the dynamic and changing Glacier Bay landscape—just as they, in turn, shaped the natural resources and ecosystems. Today, Glacier Bay National Park designated Wilderness encompasses *Tlingit Aaní* (Homeland) and protects traditional lifeways and a living cultural landscape that physically and spiritually sustains past, present, and future generations.

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ELEMENTS OF THE BACKCOUNTRY AND WILDERNESS MANAGEMENT PLAN

2022 PUBLIC REVIEW DOCUMENT

Part I – The Backcountry and Wilderness Management Plan. This draft management plan outlines the long-term vision for the Glacier Bay Wilderness within the park backcountry. This plan describes backcountry contexts, future general management direction and zoning for designated Wilderness areas of the park, and specific actions to achieve desired future conditions.

The National Park Service (NPS) will share part I for public review and comment as a part of the NPS collaborative and transparent planning process.

After public comment on this draft, the National Park Service will finalize the plan and complete any necessary environmental compliance needed to implement the actions outlined in this draft plan.

FUTURE DOCUMENTS

Part II – Environmental Assessment. The National Park Service will prepare an analysis to identify the impacts of implementing specific actions outlined in the plan. This analysis will be completed when the actions are sufficiently developed to complete a meaningful analysis under the National Environmental Policy Act (NEPA). The National Park Service will release this document for public review before developing part III.

Part III – Decision Document. The National Park Service will prepare responses to substantive public concerns generated during the environmental assessment review, select a final alternative, publish any changes or corrections to parts I and II, and document the rationale for the NPS decision, along with mitigations and final determinations, assessing whether proposed actions would result in impairment or unacceptable impacts to park resources and values as defined by current policy and law, including the following:

- The 1916 NPS Organic Act (16 United States Code [USC] 1) charges the National Park Service with providing for public enjoyment while protecting our nationally significant resources and values, unimpaired for the enjoyment, education, and inspiration of this and future generations.
- The NEPA review process is used by NPS managers in tandem with other applicable laws and policies, including section 106 of the National Historic Preservation Act and the Wilderness Act of 1964 (16 USC section 1131 et seq.).

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PART I: BACKCOUNTRY AND WILDERNESS MANAGEMENT PLAN (DRAFT)

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CHAPTER 1: INTRODUCTION

WHAT IS IN THIS DOCUMENT – DAA SÁYÁ YÁ ATÓOWU YÁ X'ÚX'? (WHAT IS IN THIS BOOK/PLAN?)

This backcountry and wilderness management plan (the plan) sets the framework for the National Park Service to manage the 2.6 million acres of designated Wilderness lands and waters in Glacier Bay National Park (the park). For the purposes of this plan, the term "backcountry" refers to the designated Wilderness lands and waters within Glacier Bay National Park. The park consists of other nonwilderness waters that some consider part of the park's backcountry; however, those waters will be addressed in subsequent planning efforts and are not within the scope of this plan. This plan supplements the 1984 general management plan with updates that largely focus on the following goals:

- Meet all requirements of the 1964 Wilderness Act, as implemented by the Alaska National Interest Lands Conservation Act of 1980 (ANILCA) and current law and policy, balanced with the park's enabling proclamation objectives of science and tidewater glacier access. Together, these mandates preserve the Glacier Bay Wilderness relatively unaffected by modern impacts for people to experience its remote wildness, serving as a place of hope, discovery, and connection to America's natural and cultural heritage—even for those who never set foot in the wilderness.
- Serve as a collaborative vision for providing visitor opportunities and managing visitor use in the wilderness, applying the updated Interagency Visitor Use Management Framework to protect resources and connect visitors to fundamental park experiences and values consistent with the NPS mission and the 1916 NPS Organic Act. The vision also clarifies where business partners have an important role in enabling wilderness-dependent experiences and conversely, where self-guided opportunities are more appropriate based on Wilderness Act extent necessary determinations.
- Recognize and honor the rich cultural tapestry of indigenous use and occupation in
 the wilderness and support the enduring connection between the Tlingit and their
 Homeland. The plan will highlight indigenous Homeland values embraced by Glacier
 Bay's original people and advance agencywide conversations about diverse cultural
 perspectives and values. Toward this end, park staff collaborated with Tlingit elders
 and speakers to incorporate, as appropriate, Tlingit language to encourage readers to
 consider concepts presented here through the world view of those who consider
 Glacier Bay National Park Homeland.

The plan is organized into four chapters:

- Chapter 1: Introduction. This chapter describes the need for the plan, the plan organization, and the relationships to other plans and relevant policies.
- Chapter 2: General Management Direction. This chapter outlines the general management direction for the wilderness, including a long-term management vision, goals and objectives, zoning, and desired conditions for wilderness lands and waters.
- Chapter 3: Management Strategies and Actions. This chapter identifies management strategies and actions to achieve and maintain goals and objectives for wilderness management.
- Chapter 4: Wilderness Character Monitoring. This chapter describes wilderness character monitoring that will support the implementation of the plan and the protection of wilderness character.
- Appendix A: Related Planning and Legislative Context. This appendix summarizes related plans and foundational legal management guidance.
- Appendix B: Extent Necessary Determination. This appendix examines to what extent commercial services are necessary in the Glacier Bay Wilderness to meet its intended purposes.
- Appendix C: Cultural Resource Studies. This appendix summarizes supporting cultural resource studies and Tlingit Homeland planning references.

PLANNING FOR THE GLACIER BAY BACKCOUNTRY AND WILDERNESS – DAAT YOO TUWATÁN ÁT HAA L'ÉELK'W HÁS AANÍ (*PLANNING FOR OUR GRANDPARENTS' LAND*)

This plan provides long-term, comprehensive management guidance for protecting wilderness character, stewarding natural and cultural resources, and managing visitor use within park areas designated as wilderness. The plan applies guidance from the Interagency Visitor Use Management Council (www.visitorusemanagement.nps.gov), the Keeping It Wild 2 framework (https://www.fs.fed.us/rm/pubs/rmrs_gtr340.pdf) for protecting wilderness character consistently across the national wilderness preservation system, and the NPS dynamic portfolio of tiering management plans that serve as internal agency tools to accomplish the following:

- Articulate strategies for the public enjoyment of national parks to ensure resources are protected and unimpaired for future generations.
- Set desired visitor experiences based on a unit's unique qualities and the values that merited its national designation.
- Guide agency decision-making, activities, and investment priorities with transparency and accountability to the American public.

This plan will guide management for the approximately 2.6 million acres of designated Wilderness (see map, figure 2). The National Park Service is charged with managing these wilderness lands and waters to preserve, maintain, and restore their wilderness character as samples of a truly wild America, preserved for people and specific public purposes (see the following text boxes).

Few places across the national wilderness preservation system can match the wilderness character of the Glacier Bay Wilderness today, as described in a recent baseline assessment (NPS 2022). Glacier Bay Wilderness is also exceptional within the national park system for having the highest ratio of terrestrial area as wilderness (99%) and its unique designation of marine wilderness. This wilderness includes 53,000 acres of marine wilderness waters that are managed under proprietary NPS jurisdiction as a globally important sanctuary for myriad ecologically important species, including threatened species, such as humpback whales and Steller sea lions.

What Is Wilderness Character?

Wilderness character is defined as the combination of biophysical, experiential, and symbolic ideals that distinguishes wilderness from other lands.

- **Natural quality:** Ecological systems that are substantially free from the effects of modern civilization.
- **Untrammeled quality:** Essentially unhindered and free from the intentional actions of modern human control or manipulation.
- **Undeveloped quality:** Retaining its primeval character and influence and is essentially without permanent improvement or modern human occupation.
- **Solitude or primitive and unconfined recreation:** The state of being alone or remote from habitations or the sights and sounds of other people; the experience of being in an unfrequented or secluded place.
- Other features of value: Attributes not required of or found in every wilderness that reflect the wilderness character of a specific wilderness. Based on the last clause of section 2(c) of the Wilderness Act, which states that a wilderness "may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value." This attribute captures important elements of the wilderness that are not covered in the other four qualities of wilderness character, such as cultural or paleontological resources.
- Glacier Bay also protects a unique type of wilderness, **marine wilderness**. This quality of wilderness character recognizes protected waters as a globally important sanctuary for myriad sensitive marine species, including humpback whales.
- The Glacier Bay Wilderness also serves as a **living laboratory**, where natural forces and processes predominate and applied research contributes to global scientific knowledge and effective resource management.



FIGURE 4. A GLACIER SITS BENEATH THE HIGH PEAKS OF THE GLACIER BAY WILDERNESS

The Public Purposes of Wilderness

Pursuant to the Wilderness Act, section 4(b), wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, education, conservation, and historical use.

- The **recreation** purpose of wilderness encourages us to get out and explore on our own to find solitude or with others to enjoy shared experiences.
- The **scenic** purpose of wilderness invites us to enjoy the spectacular views showcased in wilderness.
- The **scientific** purpose reinforces the role of science in wilderness stewardship. For over a century, Glacier Bay has been considered a living laboratory, contributing to global scientific knowledge and effective resource management through applied research.
- The **educational** purpose affirms that wilderness can be a place of learning and exploration for people of all ages.
- The **conservation** purpose promotes the continued protection of wilderness as places of significant ecological and cultural importance for "the earth and its community of life."
- The **historical** purpose of wilderness connects us with the people, communities, and indigenous cultures that have historical and current relationships with places we now know as NPS wilderness. For the Tlingit, Glacier Bay is Homeland, a place that physically and spiritually sustains past, present, and future generations.



FIGURE 5. SATELLITE OF GLACIER BAY, ICY STRAIT, AND THE GULF OF ALASKA. DESIGNATED WILDERNESS IN THIS AREA ENCOMPASSES THE TRADITIONAL HOMELAND OF THE HUNA TLINGIT, WHO RETAIN LIVING CULTURAL TIES WITH THIS DYNAMIC LANDSCAPE.

Other characteristics unique to this wilderness are described in a Glacier Bay Wilderness character narrative (NPS 2015b), including notably as a living laboratory for ongoing scientific inquiry. The Glacier Bay Wilderness is also Homeland for Tlingit clans, principally living today in nearby Hoonah and Yakutat. By managing the backcountry to preserve wilderness character and what is unique and special about the wilderness, the National Park Service sustains values and opportunities that are rapidly disappearing elsewhere in today's world, offering a place of hope and inspiration.

WHAT WE HEARD - ÁT WUTUWA.ÁX (WE HEARD THIS)

Input from the public and tribes helped to shape this plan since its initiation in 2019. Public and stakeholder input was gathered during two 60-day outreach periods in 2020 and 2021. Key issues brought forward during this input included a desire to retain Glacier Bay's exceptional wilderness and backcountry visitor experiences, resources, and values for the future; the significance of the place for different people; and the importance of the National Park Service evolving and optimizing future management, including to recognize and honor the rich cultural tapestry of indigenous use and occupation in the backcountry, and support the enduring connection between the Tlingit and their Homeland. We also heard varied perspectives that highlight the significance and deeper meaning of the Glacier Bay Wilderness for people, including the following:

- For those seeking an immersive wilderness experience, the Glacier Bay Wilderness is one of the most pristine natural places on the planet.
- For those seeking adventure, its remoteness and the requirement for self-reliance are valued parts of the experience—as are escaping crowds and public land overuse.
- For those seeking a range of outdoor experiences, the wilderness supports public use and enjoyment.
- For those seeking hope in a changing world, Glacier Bay's wilderness is a place where
 humans exercise humility and restraint and, by doing so, preserve a precious portal to
 American's wild past for generations yet unborn.
- For the Tlingit, it is Homeland—Tlingit Aani—a place that physically and spiritually sustains past, present, and future generations.
- For those conducting research, designated Wilderness is an unfragmented living laboratory where natural forces and processes predominate to inspire discovery and support deeper human understandings.

As we reach an important milestone in creating this draft plan, park managers encourage the public to submit comments during the official comment period to help inform NPS stewardship of approximately 2.6 million acres of designated Wilderness lands and waters in Glacier Bay National Park.

PURPOSE FOR THE PLAN - DAAT GÁA SÁ X'ÚX' (WHAT IS THE BOOK/PLAN FOR?)

The need for the plan is to outline strategies to respond to increasing and changing visitor demands and to provide broad guidance for terrestrial and marine wilderness areas. The purpose of the plan is to provide for the protection of natural and cultural resources and values, wilderness character, and high-quality visitor experiences within wilderness.

Through the refinement of desired conditions, zoning, and the development of management strategies, the plan updates guidance on cultural and natural resource issues as well as visitor use management challenges. The plan also provides a shared vision for the wilderness that is responsive to evolving visitor interests, recreational use patterns, collaboration with tribes, and a growing understanding of issues because of research, inventory, and monitoring.

The plan will provide management guidance for the following planning needs:

- Preserve wilderness character. Glacier Bay National Park's wilderness management guidelines are outdated and are inadequate for the park to monitor and manage impacts to wilderness character. Although overnight camping permits are required for Glacier Bay proper, the park does not require backcountry permits in locations such as Dundas Bay, which has experienced increasing use. The park does not conduct routine backcountry and wilderness patrols or regular monitoring of backcountry and wilderness locations for visitor impact; rather, current patrols and monitoring assess regulation violations, which may have an impact on the park's resources. As a result, each new wilderness activity is managed reactively on a case-by-case basis without holistic guidance or the ability to analyze cumulative impacts to wilderness character. Guidance is needed to proactively preserve wilderness character considering increasing and changing visitor uses.
- Provide visitor access to tidewater glaciers. Core to Glacier Bay's enabling proclamation is visitor access to tidewater glaciers. Tidewater glaciers, although not unique to Glacier Bay, are a defining feature of the landscape and a significant draw for park visitors. Increasing visitation to tidewater glacial areas creates challenges for maintaining and improving visitor experience and resource conditions in these popular areas. The dynamic nature of the glacial environment also provides challenges as the accessibility of tidewater glaciers changes with the tides, the weather, and other longer-term factors like glacial retreat. Specific guidance on preserving wilderness character, in addition to providing high-quality visitor experience, is needed for tidewater glacier areas.
- Provide guidance for commercial service providers to collaboratively achieve park desired conditions and goals. As current contracts are written, commercial tour operators lack clear boundaries and expectations for use, lack guidelines specific to the wilderness, and do not consistently address wilderness character, homeland values, or resource protection in business practices. The park does not have a standardized format for reviewing commercial use of the backcountry and wilderness lands. Opportunities exist for commercial tour operators to offer additional customized tour options that would change the timing, duration, and location of day

- use activities. Some of these practices could decrease the commercial tour operator's ability to schedule tours to minimize encounters with other groups, impacting visitor opportunities for solitude. This issue could present challenges to customers of the service providers and other visitors through potential increased crowding at key locations. Guidance is needed to provide clarity for commercial service providers.
- Address conflicting use and expectations in heavily used areas. In the dynamic Glacier Bay landscape, there are a shrinking number of high demand visitor attractions as tidewater glaciers melt and glacial recession and vegetation succession limit opportunities for wildlife viewing and hiking in certain areas. Visitation is further limited to a narrow band of marine shoreline by geography and physical conditions including steep terrain, dense vegetation, and few beaches. Visitors ranging from backcountry campers to tour vessel passengers are increasingly recreating in the same areas, and multiple user groups in heavily used areas may result in conflicts of expectations, experiences, and impacts to wilderness character. Scheduling limitations and changes in visitor use patterns have resulted in increasingly concentrated use at popular destinations, whereas historically, these groups would have spread their use over a larger area in a longer time frame. Visitors are more prone to be within sight and sound of other visitors, affecting soundscapes and viewscapes and reducing opportunities to experience natural sounds and solitude. Guidance is needed to provide high-quality visitor experiences while preserving wilderness character in these high-use areas.
- Incorporate Tlingit Homeland values in wilderness management. The wilderness character of Glacier Bay National Park is defined, in part, by the sustained connection between past, present, and future generations of Tlingit and the lands and waters they call Homeland. Tlingit interactions with Homeland have shaped the ecology of the area for countless generations through simple acts such as harvesting berries, salmon, and gull eggs and through more complex metaphysical and spiritual processes as well. In the distant past, a young girl called down a faraway glacier, forever altering the Glacier Bay landscape, and even today, glaciers calve, icebergs slide gently away, and turbulent waters settle when the Huna Tlingit proffer food and tobacco to the spirits of living and nonliving beings. While Wilderness Act language has sometimes been interpreted to preclude Homeland concepts, the original intent of the act was not to deny indigenous inhabitation and use of wilderness areas or the ecological role indigenous people played in landscapes. Management strategies for park wilderness must incorporate Tlingit perceptions of a landscape that has supported humans since time immemorial. The park has collected archeological data and considerable ethnographic information in partnership with tribal entities, but the park must continue to increase its understanding of Tlingit relationships to Homeland and incorporate that understanding in managing Homeland. Importantly, the park must also clearly articulate Homeland values for backcountry visitors. Facilitating access to, and meaningful engagement with, Homeland in partnership with Hoonah Indian Association and Yakutat Tlingit Tribe is essential to ensuring that the park's wilderness remains a living, whole community.

- Address and define desired conditions for resources and visitor experiences within and on areas adjacent to marine wilderness areas. Glacier Bay protects 53,000 acres of designated marine wilderness. Protecting marine wilderness presents unique challenges and opportunities given the considerable connectedness of marine ecosystems, the importance of the ocean's most productive and biologically diverse areas to commercial interests, and climate change. With increasing visitation, changes to visitation patterns and activities and the desire to access those designated marine wilderness areas and adjacent areas, there is a need to address and define desired conditions for resources and visitor experiences within and adjacent to marine wilderness.
- Protect wildlife and sensitive shoreline areas. In addition to camping, Glacier Bay's shoreline is an increasingly popular destination for day use activities, such as hiking. Commercial use in these shoreline areas has more than tripled in the past five years. Increasing visitor use may result in impacts to resources (wildlife, habitat, and cultural) in areas sensitive to disturbance. For example, along biologically rich shoreline areas that are essential to animals' foraging and nesting, the sights and sounds of human activity can both displace wildlife and reduce wildlife viewing opportunities for visitors. Social trails have been created in heavily used areas, causing impacts to park resources and the visitor experience. Higher levels of visitor use may also increase vandalism and looting of sensitive cultural sites. For example, cultural resources have been affected by looting in Dundas Bay and clearing to access artifacts in Excursion Inlet. Cultural resources newly discovered and accessible to visitors because of isostatic rebound need to be evaluated for protection. This plan will provide management guidance to address these impacts.
- Understand intact, complex terrestrial and marine ecosystems. Glacier Bay National Park and Preserve's enabling proclamation identifies "scientific inquiry" as a primary park purpose. As climate change and other stressors impact wilderness resources, Glacier Bay's legacy of research (with records dating to 1891) and contiguous wilderness lands make it an ideal living laboratory to study natural processes and the human potential to affect them, including impacts from anthropogenic climate change. At the same time, it is important to ensure that the benefit of research investigations outweigh negative impacts to other wilderness values. The park provides a place where dynamic glacial systems, successional landscapes, and the interplay between the terrestrial and marine systems can be studied. Guidance is needed to continue research and other administrative access in a manner that does not impact resources.

To address the primary planning needs, this plan will:

- Prepare updated management guidance, including the development of management strategies, to preserve and enhance wilderness character in designated Wilderness areas.
- Establish desired conditions for visitor use that are consistent with resource protection. Desired conditions provide visitors with the opportunity to inform

expectations related to access, availability of services, and potential for crowding at heavily used locations.

- Identify best practices for managing visitor use to protect resources and promote high-quality visitor experiences while meeting legal requirements.
- Identify appropriate commercial services through an extent necessary determination process.
- Establish guidance on how to integrate indigenous world views in managing Glacier Bay Wilderness lands and waters.
- Review and consider revising the benign neglect management strategy for historic structures with a direct association to Tlingit Homeland values.

A series of studies were conducted between 2004 and 2018 on myriad relevant topics, including wilderness, wildlife, visitor use, cultural landscapes, acoustic resources, and vessels. These studies and subsequent reports provide insights into visitor experiences of the park and park resource conditions. These studies shall continue to inform strategies the park can implement to address the emerging issues in the wilderness.

The management strategies identified in this plan will be accomplished over time. They will be adjusted as needed during the implementation phase. Individual actions directed by this plan will be evaluated for compliance with federal regulations when projects are ready for implementation.

Planning History and Context – Wáa Sá Woonei? (How Did We Do It?), Adax Yéi Jiwtuwanéi Át (Things We Worked on Before)

This document is part of the park's planning portfolio and fulfills a park planning priority for resource preservation and visitor use management in the backcountry and wilderness of the park. A park planning portfolio is the collection of planning documents that guides decision making and satisfies law and policy. Glacier Bay's planning portfolio creates a logical, trackable guide for park management actions.

The National Parks and Recreation Act of 1978 (54 USC 100502) requires the preparation and timely revision of general management plans for each unit of the national park system. At a minimum, each park must have a plan or series of plans that address the four statutory requirements identified in 54 USC 100502:

- 1. measures for the preservation of the area's resources;
- indications of types and general intensities of development (including visitor circulation and transportation patterns, systems, and modes) associated with public enjoyment and use of the area, including general locations, timing of implementation, and anticipated costs;
- 3. identification of an implementation commitment for visitor carrying capacities for all areas of the unit; and

4. indications of potential modifications to the external boundaries of the unit and the reasons therefore.

Glacier Bay's existing general management planning documents continue to provide relevant guidance and are listed below. These plans may be supplemented through the development of additional planning documents.

Associated park plans:

- General management plan (1984)
- Vessel quotas and operating requirements environmental impact statement (2003)
- "Final Legislative Environment Impact Statement on the Harvest of Glaucous-Winged Gull Eggs," by the Huna Tlingit (2010)
- Foundation statement (2010)
- Frontcountry management plan (2019)

This plan is consistent with the general guidance of the existing documents listed above and described in more detail in appendix A. Further, its proposed recreation use is consistent with the overall management objectives of the park as outlined in the 1984 general management plan. When completed, this backcountry and wilderness management plan will be the definitive guide for day-to-day park wilderness management in the portfolio. This document will also be supplemented by the Keeping It Wild 2 framework "Building Blocks for Integrating Wilderness Character," which describe the fundamental information needed to effectively integrate wilderness character into park planning, management, and monitoring.

Together, these plans are components of the park's planning portfolio and help the park to meet the general management plan statutory requirements of 54 USC 100502. The following section describes some of the legislative actions related to this planning effort. Additional related studies and administrative commitments are found in appendix A.

Legislative Context

Management in Glacier Bay National Park and Preserve is directed by federal mandates, including the Organic Act of 1916, the enabling proclamation (1925), the Wilderness Act (1964), ANILCA (1980), NPS Management Policies (2006), and other legislative actions listed on the following page, with a summary of the legislative commitments tied to management of the wilderness detailed in appendix A.

Associated legislation:

- Organic Act of 1916
- Presidential Proclamation 1733 (1925)
- Presidential Proclamation 2330 (1939)

- Presidential Proclamation 3089 (1955)
- Presidential Proclamation 4618 (1978)
- The Wilderness Act of 1964
- National Historic Protection Act (1966)
- National Environmental Policy Act (1970)
- American Indian Religious Freedom Act (1978)
- Archaeological Resource Protection Act (1979)
- Alaska National Interest Lands Conservation Act (1980)
- Native American Graves Protection and Repatriation Act (1990)
- Huna Tlingit Traditional Gull Egg Use Act Public Law (PL) 113–142 (2014)

Management Context

Commercial Services and Concessions. Commercial services available in the park are managed under two types of authorities: commercial use authorizations and concession contracts. Currently, 15 to 20 operators use commercial use authorizations, providing 12 different service types (e.g., air taxi, hiking, mountaineering), and 41 concessioners operate under concession contracts, providing 10 different service types (e.g., lodging, tour vessels, charter vessels, cruise ships). While the majority of these users operate in the wilderness, some provide commercial visitor services in the Frontcountry Zone. Most visitors experience Glacier Bay using one or more of these commercial operators.

The park facilitates a backcountry kayak drop-off service through a contract with a concessioner. The concessioner operates lodging services in the frontcountry zone, food and beverage services, operates the day boat that provides visitors the opportunity to access tidewater glaciers, and provides camper and/or kayaker drop-off services. By managing the drop-off locations and schedules, the park disperses campers to reduce impacts and enhance wilderness experiences. A balance in management of day boat uses for kayak drop offs versus wilderness viewing is an ongoing challenge (State of the Park Report 2017).

Guided fishing in Glacier Bay National Park has been limited primarily to marine waters with few authorized exceptions for freshwater fishing. Two spatially explicit exceptions for guided freshwater fishing in wilderness exist, having occurred since 1980.

The park also has commercial use authorizations for air taxi services.

In addition, the park manages tour and charter vessel use through concessioner contracts. Depending on the service type, these operators may be authorized to provide different types of activities.

For more information on the extent to which these commercial services may be allowed, refer to the extent necessary determination (appendix B).

Fisheries. If park staff noticed a change in either the visitor experience or angler harvest and associated catch rates, which may be predictive of overfishing in certain areas of the park, particularly along the Bartlett River, staff would consult with the Alaska Department of Fish and Game to determine whether there is a conservation concern and, if necessary, consider proposals to the Board of Fisheries to implement additional management strategies to reduce pressures on fish populations from recreational fishing.

The State of Alaska maintains management responsibility of fisheries resources. Under all alternatives, if a conservation concern was present, the Alaska Department of Fish and Game would use its responsibility through an emergency closure or through the Board of Fisheries process to change sport fishing regulations. Additionally, under the master memorandum of understanding between the National Park Service and the Alaska Department of Fish and Game, the National Park Service commits to using the state's regulatory process to the maximum extent allowed by federal law in proposing changes in existing state regulations. This commitment does not preclude or limit in any way the superintendent or any federal authorities to address threats to park resources or values.

Government-to-Government Consultation. The park has identified the groups traditionally associated with park locations and has developed strong relationships with most traditionally associated groups, including three federally recognized tribal governments, one non-federally recognized tribe, and three Alaska Native Claims Settlement Act of 1971 regional and village corporations. The park formally consults with federally recognized tribal governments at least once annually but informally consults with these entities much more frequently. Park staff located in indigenous communities assist in enhancing communication and building relationships with tribal governments.

In 1995, the park signed a memorandum of understanding with Hoonah Indian Association, the federally recognized tribal government representing the Huna clans. This agreement has been reauthorized every five years. Additionally, the park and Hoonah Indian Association have collaborated for many years through cooperative agreements focused on Journey to Homeland events and the development and operation of the Huna Tribal House.

In 2002, the park along with Wrangell-St. Elias National Park and Preserve, signed a memorandum of understanding with Yakutat Tlingit Tribe, the federally recognized tribal government of the Yakutat clans. This document outlines NPS's commitment to partner with Yakutat Tlingit Tribe on matters associated with Yakutat Tlingit Homeland in the Dry Bay Preserve and sections of the Outer Coast as well as lands within Wrangell-St. Elias. The park has also partnered with Yakutat Tlingit Tribe through cooperative agreements for many years to implement Journey to <u>Gunaaxoo K</u>wáan Homeland programs.

In 2015, the park signed a general agreement between the National Park Service, the Hoonah Indian Association, and the Alaska Native Voices Educational Institute to formalize roles and responsibilities in an ongoing program whereby native guides provide interpretation aboard cruise ships in Glacier Bay.

Research Permitting. Opportunities to study unique natural phenomena in the park are defined by the enabling legislation, fundamental to which is research on glacial behavior and the newly uncovered landscape and subsequent biological communities that develop in the

wake of glacial recession. Some research projects are constrained by park regulations that seasonally offer nonmotorized recreational opportunities. Since 2010, the park's science-in-wilderness interdisciplinary team has evaluated all research proposals (internal and external) using the science in wilderness framework (USFS 2010) to consider and mitigate impacts to wilderness character, along with a minimum requirements analysis.

Aviation. Much of the wilderness that is not accessible by watercraft is almost exclusively accessed by aircraft. Under federal law, the Alaska National Interest Land Conservation Act authorizes fixed-wing aircraft landings and takeoffs in Alaskan designated Wilderness areas. Forms of access prohibited under section (4)c of the Wilderness Act include helicopter and rotary-wing aircraft landings, takeoffs, and dropping off or picking up material and supplies. Under park-specific restrictions, floatplane landings and transiting in Glacier Bay (including designated Wilderness) is managed seasonally to offer a range of visitor experiences, including recreational opportunities in nonmotorized settings. The park further requires that fixed-wing aircraft fly above a minimum altitude of at least 500 feet to protect wildlife and visitor experiences.

Also, while the National Park Service does not manage airspace, the Federal Aviation Authority guidance for "Noise-Sensitive Areas" (USDOT 2004) applies to overflights, requiring pilots to stay 2,000 feet above ground level. Further, recognizing that aircraft noise is a concern for terrestrial and marine wildlife, migratory birds, and the preservation of the wilderness character, the National Park Service will also work with the Federal Aviation Authority to address overflight management concerns, including any impacts to resources as well as wilderness experience. Section 1110(a) of ANILCA specifically authorizes the secretary of the interior to issue "reasonable regulations" to protect the "natural and other values" of the affected area. This section also authorizes the secretary to close an area otherwise open to these types of motorized vehicles for such "special access" if, after notice and a hearing in the vicinity of the affected area, the secretary finds that such use would be "detrimental to the resource values of the unit or area."

SCOPE OF THE PLAN – HAA LÉELK'W HÁS AANÍ JEEYÍS ÁYÁ YÁ X'ÚX' (THIS PLAN IS ABOUT OUR GRANDPARENTS' LAND)

This plan will guide wilderness management specific to the approximately 2.6 million acres of designated Wilderness lands and waters in Glacier Bay National Park (see map, figure 2).

Areas Outside the Scope of This Plan

- Inholdings
- The Glacier Bay Preserve (this area is addressed under another plan)
- Alsek River visitor activities (this activity is addressed under another plan, acknowledging that rafting management decisions require an international treaty). At the same time, this plan offers broad designated Wilderness stewardship guidance, and where possible, addresses the relationships between wilderness and

- nonwilderness areas of the park, acknowledging the interconnected relationship of park lands and waters.
- Park lands and waters previously described as "eligible" for wilderness designation that are managed by the National Park Service to preserve their eligibility status by avoiding nonconforming or incompatible uses until formal designations are considered by Congress. At the same time, this plan acknowledges the interconnected relationship of the park's designated Wilderness and eligible wilderness areas and offers a stewardship model that could be applied following any status change. Eligible wilderness park waters and other park waters will be addressed in a future planning process, which will allow the National Park Service to think holistically about the management of the park's marine environments and use of these areas.
- Vessel activities in park waters (these activities are addressed in park regulations, vessel quotas and operating requirements, and commercial contracts and permits). At the same time, this plan acknowledges the interconnected relationship of the park's designated Wilderness and eligible wilderness areas and the importance of holistic park management with respect to
 - vessel use in nonwilderness waters that adversely affects wilderness character in designated Wilderness
 - Glacier Bay social science indicators that visitor experiences of "wildness" do not require setting foot in designated Wilderness (NPS 2021; Swanson 2011)
- Nonwilderness park lands acquired after ANILCA that either do not fall within designated Wilderness boundary envelopes (as specified in section 5(a) of the Wilderness Act and section 701 of ANILCA) or that were acquired with covenants or characteristics incompatible with wilderness designation. This includes Chookanheeni/Berg Bay lands (previously allotment 03-110, A-001770, acquired in 2020 through a cooperative effort), managed by the National Park Service, with rights held by the Hoonah Indian Association through a deeded easement for cultural uses.
- The frontcountry portion of the park surrounding Bartlett Cove (this area is addressed in the 2019 frontcountry management plan)

PLAN BACKGROUND AND CONTEXT - SHKALNEEK (THE STORY)

The Park - Haa Léelk'w Hás Aaní (Our Grandparents' Land)

Glacier Bay National Park encompasses more than 3.2 million acres of rugged mountains, dynamic glaciers, temperate rainforests, coastlines, and fjords in remote southeast Alaska. Originally established as a national monument by presidential proclamation in 1925, the land became a national park and preserve, with designated Wilderness, in 1980 under the Alaska National Interest Land Conservation Act. The park and preserve has always been a place of dynamic change. Since 1986, Glacier Bay National Park and Preserve has been part of the Glacier Bay-Admiralty Island Biosphere region, one of the largest biosphere regions in the world representing an outstanding example of the marine and terrestrial ecosystems of the

Sitkan Biogeographic Province of North America. In 1992, Glacier Bay National Park and Preserve joined with Wrangell-St. Elias National Park and Preserve in the United States and the Tatshenshini-Alsek Provincial Park and Kluane National Park in Canada to form a 25-million-acre United Nations Educational, Scientific and Cultural Organization world heritage site, one of the largest protected wilderness areas on the planet outside Greenland and the Antarctic.

The total terrestrial area of Glacier Bay National Park and Preserve is approximately 2.9 million acres and consists primarily of mountains carved by glaciers with narrow beaches along the coast. The six distinct mountain ranges in Glacier Bay National Park and Preserve include the Fairweather Range, the Saint Elias Mountains, the Takhinsha Mountains, the Beartrack Mountains, and portions of the Alsek Range and Chilkat Range. Glacier Bay National Park and Preserve is considered to have significant glacial coverage, and according to Loso et al. (2014), satellite imagery showed that glacial ice covered 2,055 square miles (5,323 square kilometers) of Glacier Bay National Park and Preserve in 2010, an estimated 40.1% of the total park area.

The marine areas of Glacier Bay National Park and Preserve are composed of Glacier Bay proper in the center of the park, Icy Strait, Cross Sound, and Excursion Inlet along the southern border of the park and the Gulf of Alaska along the western boundary (see maps, figures 1 and 2). Glacier Bay proper is approximately 62 miles (100 kilometers) in length, with widths varying from 9 miles (15 kilometers) at mid-bay to 2.5–5 miles (4–8 kilometers) in the lower and upper portions.

The park lies within the ancestral Homelands of two Tlingit tribes, the Huna and Yakutat Tlingit, who sustained themselves for many generations from the area's abundant resources. Although exact settlement dates are difficult to determine, archeological evidence and oral history document a long-term, sustained relationship between the Tlingit and both the marine and terrestrial systems of Glacier Bay, Icy Strait, and the park's Outer Coast. According to the Tlingit, the park has been peopled from time immemorial; this human presence has shaped, and been shaped by, the landscape and ecological systems of the area. In particular, the marine and terrestrial ecosystems that developed in Glacier Bay proper following glacial retreat in the late 1700s evolved with ongoing human interaction until the late 20th century. The relationship between the park's land and waters and the ancestral and living Tlingit is integral to the park's intact ecosystem.

The Glacier Bay Wilderness – Kawayéil' Aan (Quiet, Peaceful Land)

Glacier Bay's backcountry encompasses approximately 2.6 million acres of designated Wilderness. Unique in the national wilderness system, Glacier Bay's backcountry includes around 53,000 acres of marine wilderness and has the highest percentage of terrestrial land designated as wilderness (99%). These wilderness areas include most of the land in the park above the mean high tide line and five marine wilderness waterways: Beardslee Islands, upper Dundas Bay, Hugh Miller/Scidmore Complex, Adams Inlet, and Rendu Inlet. The National Park Service has jurisdiction over all marine waters (both water column and submerged land) within Glacier Bay National Park and Preserve. These pristine wild waters and lands provide

premium opportunities for recreation, exploration, and adventure in glacially influenced marine, terrestrial, and freshwater ecosystems.

Parkwide Visitor Demographics and Experiences – Aadóo Sáwé Hás Wé Sh Tuwáa Kasyéiyi? (Who Are the Visitors/Tourists?)

America's national parks are among our nation's greatest treasures, managed for the enduring benefit and legacy of present and future generations. A gem among these national treasures, Glacier Bay National Park offers a sample of truly wild America, an awe-inspiring place to experience nature on its own terms in a dynamic landscape, where ancient Tlingit heritage blends with living cultural traditions.

Glacier Bay delivers powerful natural and cultural experiences every day, while annually serving around 672,000 visitors (NPS 2019). Most of these visitors are cruise ship passengers aboard vessels, and these individuals never set foot on land in the park (626,000 passengers) (NPS 2019). Around 30,000 visitors visit Bartlett Cove annually, or the park frontcountry, where services and developed facilities in 7,120 acres of terrestrial nonwilderness support higher concentrations of visitors and help preserve natural conditions and the wilderness character quality of solitude (NPS visitor use data, 2017). Approximately 16,500 annual tour vessel passengers (NPS 2019) experience the park primarily on sleep-aboard adventure class vessels holding between 100 and 150 passengers. Since 2010, passengers' interest in off-vessel activities, especially hiking, has significantly intensified, creating new on-shore impacts, both to the natural environment and for traditional wilderness users.

On average, park visitors travel more than 3,000 miles from home to visit the park from around the world (20%), across the country (80%), within the state (>5%), or nearby areas (2%) (RSG 2016). Overall park visitor expenditures and contributions total \$168 million in economic output, benefit 400 different companies, support an estimated 2,090 jobs, provide \$58.8 million in labor income, and add \$94.5 million in total contributions to the national gross domestic product (2019 frontcountry management plan).

The Backcountry and Wilderness Visitor

Annually, an average of 6,000 backcountry visitors (2009–2019 average) (NPS 2009–2019) participate in some form of camping or are aboard small vessels (private and charter) that may offer shore landings. These visitor numbers have been stable for many decades, due in part to a variety of limiting conditions (e.g., remoteness, expense, required equipment and skill, limited prime season transportation, guiding, rental options, and NPS-regulated marine vessel quotas to protect park wildlife and other resources while providing a range of recreational opportunities to park visitors). At the same time, notable fluctuations do occur—for example, 1991 saw a high of 9,657 campers and boaters, while 2021 saw a low of 989 due to COVID-19 visitor travel disruptions (NPS data, 1991–2021).

Visitor survey data was collected in 2017 and 2018 to characterize the park backcountry experience for this planning effort. Sampling primarily targeted visitors engaged in independent recreation (often in designated Wilderness) but also captured data from visitors on targeted classes of motorized marine vessels (NPS 2021).

Specific to the wilderness visitor experience (excluding the Alsek River, covered in a separate plan), social science characterizes the range of Glacier Bay Wilderness experiences as a once-in-a-lifetime trip by people seeking Alaska wilderness experiences of solitude, natural sound, and renewal through connection to nature, along with adventure, learning, and experiencing glaciers. Whether as day visitors who spend on average 10 hours or overnight visitors spending an average of five days in the park, most visitors rapidly develop a strong emotional place attachment to Glacier Bay, and few leave disappointed. In open-response questions, wilderness visitors commented that wildlife, learning, and experiencing glaciers added the most to the experience. "Poor weather" rated as the top negative experience (14%) and 43% of visitors responded that "nothing" detracted from their experience (NPS 2021).

Most park visitors experience the wilderness from the outside looking in, viewing designated Wilderness from the deck of a boat within approximately 537,000 acres of park nonwilderness waters. These visitors experience the park seasonally via cruise ships, tour and charter vessels, and day boat tours between Bartlett Cove and upper Glacier Bay. Surrounded by the wilderness landscape, many people develop a deep connection to the wilderness's scenic, cultural, and natural resources and conservation values, even without setting foot on shore.

Some visitors enjoy the more intimate wilderness experience of traveling Glacier Bay's scenic shorelines. Unlike much of the vast wilderness where natural barriers make access difficult, this wilderness boundary is uniquely accessible by water for Glacier Bay's customary mix of motorized and nonmotorized users (tour and charter vessel, private motorboat/sailboat, floatplane, day boat camper drop-off service, and sea kayak). This accessibility supports a range of wilderness experiences, including opportunities for engaging in wildlife viewing, sightseeing, natural and cultural interpretation, sea kayaking, angling (guided and unguided), camping, beach walking, and hiking into untracked wilderness. This accessibility also enables experiences of tidewater glaciers and hiking accessible glaciers, that, while increasingly limited due to glacial recession, is an opportunity central to the formation of Glacier Bay as a national monument in 1925.

Some visitors get a taste of wilderness, entering terrestrial wilderness from originating trails or shorelines in Bartlett Cove. These frontcountry-proximate wilderness experiences are often targeted to those who may not otherwise be able to access a more extended or immersive experience because of physical conditions or the lack of time, equipment, or backcountry skill. Wilderness access originating from the community of nearby Gustavus (including Bartlett Lake/Towers Trail and Falls Creek) affords both visitors with ground transportation and local residents more rugged hiking and routes into untracked wilderness.

Other visitors travel deeper from the wilderness boundary to be fully immersed in wilderness lands and waters, a trip that requires serious preparation, skill, equipment, and place-specific knowledge, given Glacier Bay's dynamic, remote, and unforgiving environment. These visitors often look to the National Park Service and commercial partners for last supplies and trip support as they launch their trip through the Beardslee Islands tidal cut at the northeast end of Bartlett Cove, less than a mile from the most fully developed area of the frontcountry. Water access through the cut opens and closes with the tides (getting shallower each year due

to isostatic rebound), creating a natural gateway to marine wilderness and the largest area of the park with seasonal nonmotorized restrictions.

Overall, Glacier Bay National Park backcountry visitors have a median age range of between 50 and 59 years old and are 91.5% white. More than 85% of visitors have at least a four-year college degree and more than 50% of visitors have an annual household income of more than \$100,000 (NPS 2021). Additional visitation characteristics are as follows:

- Independent backcountry users include nonmotorized use (primarily sea kayaking, few backpacking) and motorized use (private vessels).
- Independent kayakers and private boaters reported doing substantial planning for their trips, and 75% reported knowing where they planned to camp or anchor (NPS 2021).
- Some visitors use commercial services to access the wilderness, including 36% of visitors who reported using a guide while visiting Glacier Bay, and 26% said they rented equipment on their trip to Glacier Bay (NPS 2021).
- Backcountry visitors reported viewing wildlife, experiencing wilderness, solitude, having an adventure, and experiencing glaciers as their top purposes for visiting (NPS 2021).

Wilderness Day Use and Access – Aadéi Áwé Yaa Ntookoox Haa Léelk'w Hás Aaní (*Traveling by Foot in Our Grandparents' Land*) and Yaakw Yík Yaadéi Yaa Has Nakoox Haa Léelk'w Hás Aaní (*Traveling by Boat in Our Grandparents' Land*)

Wilderness day use and access at Glacier Bay typically occur either through viewing the wilderness from a cruise ship traveling on nonwilderness waters, hiking into wilderness from the frontcountry near Gustavus and Bartlett Cove, or with the aid of private or commercial vessels.

Day users aboard cruise ships experience the wilderness from a distance. Although this experience aboard a cruise ship often involves thousands of other passengers, many individuals confirm that a profound experience of its "wildness" without ever setting foot in Glacier Bay's designated Wilderness.

The marine wilderness surrounding the Beardslee Islands is also accessible by marine vessel for both day and overnight use. Many visitors venture deeper into the Glacier Bay Wilderness for day use, but this is typically done using commercial or private vessels that drop off visitors at designated locations. Most day use beyond areas proximal to the frontcountry occurs near tidewater glaciers or other glaciers and glacial features that tend to be easier to hike to within a couple of hours. This type of day use access is facilitated by commercial or private vessels. In addition to tour, charter, and private vessels, cruise ships also provide day use access to nonwilderness waters adjacent to the wilderness of Glacier Bay.

Day use at Glacier Bay occurs in or proximal to the frontcountry of the park or is aided by commercial services through vessel drop offs near the Glacier Bay Wilderness. Although visitors do access the backcountry and wilderness by aircraft, these tend to be longer,

overnight excursions. For those visitors who access wilderness contiguous to the frontcountry for the day, access occurs from the Bartlett Cove area, typically along the Bartlett River Trail or the route to Point Gustavus. Visitors also access the wilderness from Gustavus through the Towers Trail to Bartlett Lake.

Scientific Research in the Park – Yaa Ntusakwéin Yá Haa Léelk'w Hás Aaní (We Are Beginning to Learn about Our Grandparents' Land)

In its 1925 enabling proclamation, a fundamental purpose for protecting Glacier Bay was its value to future generations as a living laboratory for humanity to gain scientific knowledge based on the area's "unique opportunities for the scientific study of glacial behavior and of resulting movements and development of flora and fauna and relics of ancient interglacial forests."

Today, having hosted more than a century of research resulting in countless important contributions to science, Glacier Bay is considered a globally important reserve for learning about nature and helping the National Park Service and other management agencies wisely manage protected areas the world over. Moreover, Glacier Bay's terrestrial and marine wilderness ecosystems offer unique scientific perspectives on intact natural systems and planetary trends, including those due to human influences (e.g., accelerated glacier recession, ocean acidification, wildlife abundance and health).

Access to Tidewater Glaciers and Hiking Accessible Glaciers – Sít' Niyaadéi (*Traveling to the Glacier*)

Also central to the formation of Glacier Bay as a national monument in 1925 was the presence and ability to access and enjoy "Tidewater glaciers of the first rank in a magnificent setting of lofty peaks, and more accessible to ordinary travel." The desire by visitors to see and enjoy tidewater glaciers remains just as relevant today—even though their extent has dramatically changed over the past century (and will continue to change given the characteristic dynamism of Glacier Bay).

Because of this fundamental park purpose, access to tidewater glaciers and hiking-accessible glaciers in designated Wilderness justifies greater allowances for visitor experiences within sight and sound of other parties. Specifically, this access includes areas where safe marine vessel approaches and anchorages enable easy shore visitor access comparable to 1890s steam cruiser beach landings. For the purposes of this plan, this access is interpreted more broadly to include Glacier Bay's customary mix of motorized and nonmotorized marine visitor access modes (tour and charter vessels, private motorboats, sailboats, sea kayaks and other human powered vessels).

Tlingit Homeland - Haa Aaní (Our Homeland)

Tribal members travel to Homeland independently and in large groups for ceremonies or other activities or events. Independent tribal visitation typically involves small groups traveling by small vessel to harvest resources, primarily sockeye salmon (gaat), black chitons (shaaw, marine mollusks), and various berries (tléik'w). In recent years, most large tribal group gatherings in the park are those cooperatively sponsored by the National Park Service,

the Hoonah Indian Association, or Hoonah City Schools. These "Journey to Homeland" events have included catamaran trips to the glacier face to perform ceremonies, group harvesting trips to Dundas Bay or Bartlett Cove, educational trips to selected sites, youth kayak or backpacking trips throughout the park, and gull egg (k'wát) harvesting trips.

Importantly, tribal visitation to Homeland is not limited to physical visitation. In Tlingit culture, an individual or group of individuals are symbolically transported to a sacred place when a place name is uttered or when a story, song, or dance related to a place is performed. When clan-owned regalia (at.óowu) depicting sacred places or events that occurred in a sacred place are brought out at ceremonies, they also evoke visitation. Thus, virtual visitation to Homeland is frequent. These intangible visits are frequent and of great spiritual significance.

Tlingit ancestors (haa shagóon), whose spirits remain in Homeland, are not visitors but rather residents of the Glacier Bay Wilderness. Their presence in Homeland is recognized and honored on every trip to Homeland. For the Tlingit, a return to Homeland is an opportunity to be in the presence of those who have gone before and to engage with the landscape in the same way that ancestors engaged. Disrespectful behavior (ligaas) in Homeland by both tribal members and other visitors offends those ancestral spirits whose role is to maintain Tlingit presence in and to steward Homeland.

The Wilderness Act and Indigenous Concepts of Homeland – Has Tu Áani Áwé <u>Ka</u> Uhan Tsú (*The Land Belongs to Them* [All the Sentient Beings] and We Belong to It Also)

Wilderness as defined in the Wilderness Act of 1964 is an area "where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain" and which "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable." The act's language has often been narrowly interpreted, leading to criticism that it fails to recognize indigenous use and occupation of many wilderness areas and the valuable ecological role that traditional indigenous communities played through ongoing interactions with lands and waters. However, this narrow interpretation was not the original intent of the act. Subsequent legislation, ANILCA, and agency-specific policy and regulations have clarified the act's intention and the necessity of acknowledging past human habitation and use, as well as current indigenous use, of wilderness areas throughout the nation.

Importantly, indigenous perspectives about traditional Homeland have much in common with the aspirations of the Wilderness Act. Both embrace the interrelatedness of humans and the larger community of life; the need for humility, respect, and restraint in relating to the natural world; the need to think forward to future generations (Haa yatx'í jeeyis áyá; for our children); and the value of meaningful personal connection to place.

At Glacier Bay, park managers recognize that the continued relationship of the Tlingit with their Homeland is as much a part of its wilderness character as the glaciers, the bears, and the opportunity for an unconstrained experience. Management strategies for Glacier Bay's wilderness will consider that the landscape has supported humans since time immemorial

and will facilitate ongoing physical and spiritual connections between traditional people, their ancestors, and their Homeland to ensure that the Glacier Bay Wilderness remains a living community. This plan advances the park's commitment to honoring Tlingit Homeland concepts, as presented in the following text, enhancing relationships between the agency and traditional people and collaborating on cultural and natural stewardship of the Glacier Bay Wilderness.

Haa Léelk'w Has X'us.eetí Aadéi Yaa Ntoo.át Walking in the Footsteps of Our Grandparents

Carved and painted footprints traverse the length of the Yaa Naa Néx Kootéeyaa (the Healing Totem Pole) in Bartlett Cove. They travel symbolically through time, past carved images of abundant resources and traditional long houses, across the advancing glacier's face, and cling to the edges of elder's tears. Reaching the carefully crafted depiction of Xunaa Shuká Hít, Huna Ancestors' House, at the very top of the 20-foot pole, the footprints metaphorically circle back and around, just as the Huna Tlingit themselves continue to retrace ancestral paths in Glacier Bay Homeland.



Since time immemorial—time before memory—the Huna Tlingit clans have embraced and been embraced by Glacier Bay Homeland. They did not simply occupy or settle or inhabit the landthey shaped and, in turn, were shaped by the dynamic forces of an environment that surged and retreated, evolved and adapted, grew and senesced. Their ancestors effected ecological change in myriad ways—through the simple acts of harvesting berries and seal, crafting clan houses from nearby trees, and excavating rocky shorelines to facilitate canoe landings. But even the very substance of Glacier Bay Homeland—its shape and depth—was sculpted by acts of human courage—and human frailty. In the ancestral past, a young Tlingit girl called down a far distant glacier, forever erasing the braided river channels of L'éiwshaa Shakee Aan (Sand Hill Mountain Land, near Bartlett Cove). A clan's human sacrifice halted the glacier's advance at Sdakweix Lutú (Point Adolphus) just before the advancing ice choked off the clan's sole connection to the productive waters of the Outer Coast. In a far distant village, young men's disrespect manifested an avalanche and a subsequent tsunami in Ltu.áa (Lituya Bay), and shamanic powers caused the greatest of mountains, Tsalxaan (Mount Fairweather), to tremble and split. Even today, glaciers calve, icebergs slide gently away, and turbulent waters settle when the Huna Tlingit proffer food and tobacco to the spirits of living and non-living beings. The Tlingit relationship to land and sea is such that a single intentional act—or a moment of disrespect—can direct geological events and the resulting cascade of forever-altered ecological processes. Tlingit Aani, Homeland, is not free from human control, but rather in an intimate and balanced relationship with it.

Maintaining this delicate balance requires ongoing, respectful interaction. Elders say, "a káx yan tudél wé tl'átgi ka at wudikeen áani aat ka éil"—we are stewards of the land, the air, and the sea. As vital components of the web of life, humans must fully participate in the seasonal rounds of gathering and harvesting to maintain balance. Failure to do so creates instability in the natural order, trammeling the earth, the air, and the sea. Community members, especially clan and house leaders, are caretakers, adél kuyawdzitaak, of the resources within their territory. Just as the host of any gathering must properly honor his guest through respectful interaction if he wishes them to return, so must a caretaker host and honor the salmon, the seal, the deer upon which the community depends. Tlingit caretakers are unsettled and shamed when the gifts of the land and sea are not accepted and shared. Repercussions are sure to ensue; salmon left unharvested may refuse to return in future years and sea otters left unchecked may deplete the foods necessary to feed families. Tlingit protocol demands that proffered gifts be received and reciprocated in an unending cycle of giving and receiving. To receive from the land is to nurture it.

And to walk on the land is to connect with all those who have walked before you. Young people say, "Haa léek'w hás x'us.eetí aadéi yaa ntoo.át," we are walking—stepping again—in the footsteps of our ancestors. Figuratively, each Tlingit does so by embracing long-held traditions and protocols, but literally, living Tlingit walk in their grandparents' footsteps through repeated reenactments of the same journey, the same carefully ordered round of harvesting and celebrating in the same familial places. It is honorable to hold, and be guided by, deep ancestral knowledge of the land and sea. For the Tlingit, connection with the land is not focused on self-fulfillment or acquisition of new knowledge but rather on paying homage in a carefully proscribed manner to those who guided you there. The land is alive with ancestors. Their presence is longed for, sought after, and deeply experienced on every journey home. They are ritually fed—offered dry fish, seaweed, salmon, and seal oil—whenever one ventures in Homeland. Open to their presence, a fisherman is guided—and rewarded—by his father's wisdom, a woman harvesting spruce roots at Tléikw Aaní (Berry Land, Dundas Bay) sings with her recently departed auntie, and a young girl is imperceptibly drawn to her ancestral village site on the shores of Lituya Bay. Accompanied by ancestors who speak and sing and respond, the Tlingit travel the same paths over and over again, warmed by the presence of unseen others.

Ancestral footsteps traverse much of Tlingit Aani, including rocky shorelines, river valleys, mountaintops, and the vast expanses of ice covering the majority of the Huna territory. While Tlingit life now largely centers around productive shoreline habitats, it wasn't always so. Many clans recount "Under the Ice" stories, which document intrepid ancestral migrations across and under sheets of glacial ice to find—and settle—richer stretches of coastal shoreline. Rock cairns dotting the highest peaks in Homeland attest to explorations far above tree line, perhaps undertaken during the dangerous flood times that elders speak quietly of. Storytellers remember and share the epic journeys of Kaakeix'wtí, a Xákwnoowúkeidi man who travelled the Outer Coast alone, eventually crossing the Brady Icefield carrying newly discovered copper treasures to his kin at L'éiwshaa Shakee Aan. And clans fleeing the rapidly advancing glacier in S'é Shuyee (Area at the End of the Glacial Silt, pre-little Ice Age Glacier Bay) dispersed throughout Icy Strait, finding solace in new settlement sites in Kuyeik' Le'aan (Peaceful Village Excursion Inlet), Káax'noowú (Grouse Fort, Homeshore), and Xóots Geiyí (Brown Bear Village; Port Frederick). These wanderings attest to the Tlingit's ability and willingness to explore new territory in search of safer village sites and more plentiful resources. They journeyed not in pursuit of personal enlightenment or recreation but rather out of necessity—to sustain their clan.



The Tlingit were able to explore new places not because distant shorelines or thickly wooded hillsides were untouched but rather because they were filled with kin. Fully inhabited, Tlingit Aani is alive with the spirits of animate and inanimate beings—plants and animals, rocks and ice. Has tu áani awé ka uhan tsú, the land belongs to them [all the sentient beings] and we, as humans, belong to it also. Place names reflect this status; geographical locations are claimed by the resources, the sentient beings, that populate the area: K'aach' X'aayí, is "the point that belongs to the seaweed," K'wát' Aaní, is "the land that belongs to the gull eggs," and Yáxwch'i Aaní, is the "stretch of Outer Coast ruled by the sea otters." Even the farthest reaches of the Fairweather Range are inhabited and claimed as Yéik Yi Aaní, "land belonging to the spirits." One never experiences solitude in Tlingit Aaní but rather is surrounded by the presence of familial others. Berry pickers speak to their kin, the bears, asking for protection and mercy. Killer whales receive songs from clan brethren and in return, shepherd a vessel safely home. Black-legged kittiwakes are regaled by their sisters, the T'akdeintaan Clan women, and reciprocate by crying out the names of those passing Gaanaxaa (Boussole Head). Icebergs near Margerie Glacier respectfully addressed as Chookanshaa (Chookaneidí Clan women) change course to safely slip around approaching vessels. Animate and inanimate beings are sibs—as familial to a Tlingit as a human brother or sister.

To say that a place is "claimed" by a Tlingit clan as territory belies the essence of the relationship between people and place. True, the borders of clan territories are limned on maps of Glacier Bay today, but the myriad place names that cover the land may better represent the Tlingit bond with Homeland. These place names describe more than just location—they convey the rich tapestry of harvesting areas, sacred places, and the scenes of geological and historic events that comprise the Tlingit world. Clan-owned crests depicting these named places, and the stories and songs associated with them, document tragic and triumphant events in a particular clan's history. The connection to Homeland and the beings it holds is so powerful that simply evoking a place name, singing a traditional song, or displaying clan regalia transports those present to Homeland. The Wooshkeetan Clan travel symbolically to Fort of the Young Woman in Seclusion, in Excursion Inlet when the Wéitadi Noow button robe is held aloft at a clan gathering in Hoonah. The treasured Mount Fairweather Woman's Hat, Shaatukwáan Shaawu Shakee.át, draws the T'akdeintaan to Tsalxaan at a clan leader's ku.éex' (memorial service). Though physically distant, they are ritually emplaced in sacred ancestral locations in Homeland, through words and songs and treasured regalia.



The Tlingit language, rich in metaphor and deep in meaning, holds no words that embody western concepts of wilderness, a place largely free of modern human influence, a place substantially unchanged by human works, a place where solitude reigns. The Tlingit know that every human action has the power to mold the land and affect the spirits of animate and inanimate beings. For them, the land has meaning only as a place of intricate, balanced, and ongoing connection between those long past, those alive today, and those yet to come. The Glacier Bay Wilderness—the land, and air and sea—is ordered and sustained by those who cocreated it.



Toowú sigóo áyá We are happy

Has du een yéi haa teeyí When we are with our ancestors

T'akdeintaani yátx'i Children of the T'akdeintaan

A kaanáx wutu.aadí As we walk through the land

Yeisú a <u>x</u>oox' áyá They are still there

Haa shagóon aaní On our ancestors' land

Aadéi satoo á<u>x</u> ji We can hear

Haa dachxáni yání Our grandchildren's voices there

"Glacier Bay Song," written in Homeland by Journey to Homeland students and culture bearers, 2016.

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CHAPTER 2: GENERAL MANAGEMENT DIRECTION

INTRODUCTION – SHUX'ÁA AAYÍ (THE BEGINNING)

The general management plan for Glacier Bay National Park and Preserve provides high-level guidance on how the park will be managed. This chapter supplements the general management plan and lays out specific descriptions of management zones that reflect desired conditions that will guide management. This chapter also includes a vision for managing the wilderness.

This chapter outlines the general management direction for management of the approximately 2.6 million acres of designated Wilderness lands and waters in Glacier Bay National Park.

VISION STATEMENT – DAA SÁWÉ TUWATÉEN HAA LÉELK'W HÁS AANÍ? (WHAT DO WE SEE IN THE FUTURE FOR OUR GRANDPARENTS' LAND?)

The backcountry of Glacier Bay National Park is an intact, dynamic wilderness where people immerse in, investigate, connect with, and preserve an ecologically and culturally significant landscape for current and future generations.

BACKCOUNTRY AND WILDERNESS MANAGEMENT OBJECTIVES – DAAT SÁWÉ HAA TUWÁA SIGÓO AKÁATX? (WHAT DO WE WANT FROM IT?) AND DAA SÁYÁ ÁT GAXTOODLÁAK AKAADÁX (WHAT WILL WE GAIN FROM IT?)

The objectives of the plan are the specific outcomes that the National Park Service is seeking to achieve through consistent management action over time. Objectives can also be considered performance measures to guide decision-making as conditions change. The following objectives will guide future management of Glacier Bay National Park's wilderness lands and waters:

- Preserve wilderness character and mitigate impacts from visitors and other sources.
- Provide for the public use and enjoyment of the wilderness as intended by the Wilderness Act as modified under ANILCA, including essential services to the extent necessary to support wilderness experiences.
- As stewards of one of only a few marine wilderness areas in the world, apply to the marine environment the Wilderness Act statutory mandate to preserve wilderness character.
- Encourage research and scientific discovery that allow Glacier Bay National Park and Preserve to continue serving as a living laboratory. Use research findings that acknowledge climate change and other anthropogenic factors to inform management decisions.

- Allow ecological processes to continue and consider restoring natural processes and conditions that have been disrupted by human-induced change whenever possible, recognizing that anthropogenic influences on climate are likely to continue.
- Foster understanding of indigenous Tlingit perceptions of Homeland and protect the enduring spiritual connection between future, living, and ancestral Tlingit in Glacier Bay Homeland in the backcountry.
- Provide a range of premium wilderness experiences where visitors spend time out of sight and sound of other people and have the freedom to experience risk, challenge, self-reliance, and spiritual connection with place. At the same time, balance high-quality wilderness experiences consistent with the Wilderness Act with Glacier Bay's establishing proclamation language that justifies greater allowances for visitor experiences within sight and sound of other parties at tidewater glaciers and hiking accessible glaciers where safe marine vessel approaches and anchorages enable easy shore visitor access for sea kayaks, tour and charter boats, and private motorboats and sailboats.
- Sustain the premium national park experience of being surrounded by and deeply
 experiencing a wilderness landscape—even for park visitors who never set foot in the
 wilderness.
- Provide on-site and virtual visitors opportunities to learn about the natural, cultural, and wilderness resources of Glacier Bay National Park and Preserve, including the connection between generations of Tlingit and Homeland, the opportunity for scientific discovery, and the dynamic glacial landscape.
- Support wilderness stewardship by embracing Leave No Trace outdoor ethics.

DIRECTION COMMON TO ALL MANAGEMENT ZONES

Nonhistoric Structures and Shelters - Yées Híti (New Houses)

National Park Service *Management Policies* 2006 (section 8.1.2) provides guidance to parks on determining appropriate uses that emphasize suitable recreation consistent with the protection of the park. That guidance considers laws, executive orders, regulations and policy, existing planning guidance, impacts on park resources and values, cost to the National Park Service, and whether the public interest will be served. Based on that guidance, the National Park Service has determined that structures and shelters in the Glacier Bay Wilderness are not appropriate at this time (though they may be considered outside designated Wilderness areas). The Glacier Bay Wilderness has been intentionally managed to have exceptional wilderness character within the special provisions of ANILCA. Given the ever-developing world, experiencing pristine shorelines without visible human structures is part of what makes the Glacier Bay experience feel extraordinary for many park users.

Similar facilities in comparable locations in Alaska (Kenai Fjords National Park and Tongass National Forest) have seen an occupancy rate of 20–60%, suggesting that construction of such structures may have a disproportionate impact to the visitor experience of viewing pristine

shorelines, relative to the value of being able to stay in a cabin. Additionally, constructing a cabin on wilderness land by default restricts visitor use of the cabin to that location. By not having cabins, Glacier Bay has been able to keep a more fluid response toward visitor use, considering retreating glaciers, shifting stream channels, and vegetation changes and preserve the wilderness character of primitive and unconfined recreation. Visitors who do not wish to camp can choose from a range of private and commercial vessels that effectively serve as floating cabins, with greater comfort and protection from the elements.

Maintenance of any backcountry structures or shelters would require vessel access, making regular service difficult and potentially result in unsafe or unhealthy conditions for visitors. In addition, while these facilities would be consistent with law and policy (ANILCA 1315[d]), because of the remote location and environmental conditions in the Glacier Bay Wilderness, service and maintenance of these facilities would be operationally challenging and expensive. Last, backcountry users in a 2018 survey did not generally support the National Park Service providing amenities such as floating cabins/rafts, outhouses, designated campsites, designated facilities, and developed trails (NPS 2021).

The National Park Service determined that backcountry cabins are not needed for public health and safety reasons under ANILCA 1315(d) at this time. Generally, most recreational users follow frequented coastal shorelines. In these locations, emergent health and safety situations (e.g., injury, hypothermia, gear failure, wildlife incidents) are best dealt with using modern emergency communication tools. Recreational users may also employ mayday calls, request for mutual aid from passing boats or other recreationalists, or rescue from NPS or Coast Guard vessels.

Eligible Drop-off Locations for Day Tour Boat – Yaakw Yán Has Akooxu Yé (Where the Boat Comes to Shore)

The day tour boat uses designated drop-off locations to provide visitors access to wilderness in Glacier Bay. These drop-off/pick-up points would continue to be reviewed annually and listed in the annual wilderness operating plan. Access points would be provided to both arms of Glacier Bay proper and would be rotated at least every two years, if possible, to reduce impacts from off-vessel activities, such as camping and informal trail creation at specific sites. The park currently uses established criteria for systematically evaluating the potential of day tour boat drop-off sites.

In the future, the National Park Service will also explore and consider implementing other operationally feasible drop-off service models that disperse visitors, reduce concentrated use and site damage, and enhance wilderness experiences by offering more flexible visitor access.

Additionally, in the past, the drop-off/pick-up sites have been marked with stone cairns. Glacier Bay is the traditional homeland of the Huna Tlingit, and the use of stone cairns has been challenging, given that similar cairns have cultural significance and can be confused with archeological sites. To replace these cairns, portable or moveable totems will be carved and installed at mean high tide (outside of wilderness) to acknowledge Homeland values and serve as guidance for backcountry users that they are about to enter designated Wilderness.

These totems are easily moved and replaced, will fit on uneven ground, and if possible, will not disturb the substrate.

Regulations and Closures – A Káa Kuwdudziteeyí Yoo X'atánk (*The Things* [*Protocols*] *We Live By*)

Glacier Bay's environment is undergoing rapid natural change. Much of Glacier Bay's visitation takes place at sites where continual geologic changes occur, such as glacier outwash formation, slope wasting, ocean scouring, and high rates of isostatic rebound. These processes tend to obscure or mitigate long-term, localized recreational use impacts—for example, when intensively used shorelines a decade later are covered with alder and use has shifted to the new shoreline. Similar use levels could not be sustained in more fragile areas such as in critical wildlife breeding, feeding, and resting habitat. Varying degrees of protection continue to be needed to ensure that natural life processes prevail throughout park wilderness. In most areas, instruction in minimum-impact camping practices and lowlevel dispersed visitor use should be sufficient, given typical campsite conditions and current visitation levels. For example, periodic campsite monitoring (NPS 2015a) and recent backcountry visitor social science (NPS 2021) indicate limited evidence of human impacts in most wilderness settings. Shoreline camping can take advantage of the nature of the marine ecosystem and make use of the intertidal zone to dispose of human waste. At the same time, some minimum impact camping practices, such as those currently pertaining to the preservation of natural and cultural resources, food storage, fires, sanitation and refuse, and pets, are mandatory and legally enforceable by inclusion in the Code of Federal Regulations (CFR) or the park's annual compendium. In some areas, regulatory closures to limit use may be needed. The option to close areas and restrict visitor use will be exercised when necessary to ensure that the activity or area is being managed in a manner compatible with the purposes for which the park was established and will comply with the requirements of 36 CFR 13.50.

Diversity of Park Experiences - Woosh Gunayáade Át (Different Activities)

In concert with the statutory requirements of the Wilderness Act, the National Park Service will use a variety of tools to connect diverse visitors to a range of high-quality wilderness opportunities and settings and to reduce conflicts between user types and groups in the wilderness. This includes continuing seasonal restrictions on the use of motorized boats and seaplanes within certain waters in response to visitor requests for nonmotorized wilderness settings (unlike wilderness in the contiguous United States, access by airplane and motorboat is allowed under ANILCA because Alaskan wilderness parks are so vast and remote, and access to and within them can be difficult). As a result, under 36 CFR 13.1180, "Closed waters, motor vessels and seaplanes," visitors enjoy enhanced opportunities for human-powered recreation in immersive marine settings that emphasize human-powered recreation and the natural soundscapes of Glacier Bay.

Guide Activity – Yaa Shandagoot Aa Hás (Guide)

Commercial guide services for sea kayaking, fishing, backpacking/hiking, mountaineering/ski touring, air taxi services, and vessel services for visitor drop off and pick up in the backcountry have been authorized by the park to provide necessary and

appropriate visitor services in wilderness. Charter and tour vessels operate under concession contracts to navigate within the park; in addition, commercial operators may offer off-vessel activities including nonmotorized water-based and land-based activities. Recommendations and requirements in this plan apply to commercial operators as well as the public. Additional information on these services is covered in the extent necessary determination section (see appendix B), which provides direction on commercial services that are proper for realizing the recreational or other purposes of purposes of wilderness.

Research – Sh tóo At Wudlitóow (S/he Studied It)

The Antiquities Act under which Glacier Bay National Monument was originally designated, the monument's enabling proclamation, ANILCA, and the biosphere reserve designation all recognize the importance of science in Glacier Bay National Park. Basic and applied research would be allowed to occur in all zones, subject to permitting review to determine whether the proposed research is consistent with the park's enabling purposes and to minimize adverse impacts to wilderness character through mitigations. Additionally, research in wilderness often requires exceptions for Wilderness Act, section 4c prohibited uses. These impacts are evaluated through a minimum requirements analysis (including as a living laboratory for research) to determine if they are necessary for the administration of designated Wilderness and to analyze and select the minimum tool necessary.

Resource Management – A Káx Yan Tudél Wé Tl'átgi Ka At Wudikeen Áani Aat Ka Éil (We Are Stewards of the Land, the Air, and the Sea)

The park has several documents that outline the resource management direction for the park. These documents stipulate the management priorities for natural and cultural resources parkwide and identify priority stewardship goals and projects. For additional information on resource management guidance, see:

- Resource stewardship strategy (2018)
- State of the parks (2018)
- Natural resource condition assessment (2017)
- Bear management plan (2013)
- Alaska Region Invasive Plant Management Plan

Tlingit Homeland - Haa Aani (Our Homeland)

The 1984 general management plan (NPS 1984) identified the need to collect archeological and ethnographic information for use by researchers and interpreters and spoke to the need to strengthen relationships in "neighboring communities with a significant population of native Americans." This plan provides more specific strategies to expand on the general management plan's limited direction for data collection. Management direction for protecting Tlingit Homeland values focus on strengthening government-to-government communication; continued efforts to document and protect ethnographic and archeological resources, including resources previously misclassified as historic structures; facilitating and

encouraging ongoing connections with Homeland; and commemorating village or other sacred sites in appropriate ways. Homeland concepts, including meaningful land acknowledgments, are embedded in all literature and orientation materials for backcountry users. Commercial service providers operating in wilderness are notified annually of available tribally approved Homeland materials and authentic cultural guides as an added benefit for guests, and future contracts and permits prohibit advertising and providing any form of commercial activity that addresses cultural resources tied to Homeland without tribal review, permission, and acknowledgment. Tlingit Homeland connections are encouraged and supported in all management zones. Traditional activities occur in all zones. Evidence of both ancestral and current cultural practices within the wilderness, such as culturally modified trees, stone cairns, burial sites, pictographs, or house pits, may be visible or recognizable to visitors. Visitors may see modern cultural practices such as vegetation gathering, gull egg harvest, goat hair collection, or berry picking or evidence of these practices. These modern cultural practices are typically of short duration and do not leave an observable long-term impact on the wilderness landscape. Other Tlingit spiritual practices continue to occur in the wilderness without the practitioners' physical presence; these practices are outside the scope of park management.

Management of Structures, Cemeteries, Ethnographic, and Archeological Resources – Haa Shagóonx'i Yáa Wtuwané (*Respecting Our Ancestors*)

The management objectives for cultural resources in the park's 1984 general management plan included locating, identifying, and cataloging significant cultural and ethnographic resources in the park to ensure compliance; preserving knowledge and/or physical remains of the area's cultural history to aid historians, archeologists, and interpretation; and managing the known sites as "discovery sites" for visitor education and enjoyment while the sites are slowly claimed by the landscape. Management objectives for individual cultural resource types described below. Additional information on management strategies and actions related to these topics are in chapter 3.

Ethnographic resources/traditional cultural properties. Many potential traditional cultural properties and ethnographic resources exist in the wilderness within Glacier Bay. Glacier Bay's current management policy is to record and nominate these places in the National Register of Historic Places in cooperation with the associated traditional populations.

Historic structures. Structures that are analyzed as having high association with Homeland and a high historical significance would be reclassified as ethnographic resources associated with the Tlingit Homeland and managed according to the ethnographic resource section above.

Cemeteries. Although cemeteries within Glacier Bay are currently recorded in the List of Classified Structures and fall under the 1984 general management plan direction, the National Park Service is legally obligated to inventory and maintain cemeteries and burial sites through the American Indian Religious Freedom Act and the Native American Graves Protection and Repatriation Act.

Cultural landscapes. Cultural landscapes in Glacier Bay are managed according to the management policies of the individual sites contained in the general landscape document; for example, an archeological cultural landscape would be subject to the Archaeological Resources Protection Act and the National Historic Preservation Act.

Visitor Orientation and Education – Áa Ashukajéis' Yé (*Teaching Others*) Has Du At Wuskú Ayís Áyá (*For Their Knowledge*)

As part of the overnight use permit process, visitors would be required to participate in backcountry orientations that support visitor safety, mitigate risks, and share park-specific Leave No Trace outdoor ethics. Orientations would also touch on key park values and concepts, including Tlingit Homeland, wilderness character, and Glacier Bay's active research and role as a living laboratory. Note that visitator education specific to acknowledging Homeland and protecting archeological sites is addressed previously.

Social science confirms that these park orientations add to the wilderness experience (especially related to bears, food storage, and human waste), but also highlight the issue of visitors' disparate knowledge and experience levels relative to standardized content. For example, while 81% of backcountry visitors will visit Glacier Bay only once (the trip of a lifetime), others have a depth of local knowledge and experience. Also, while most visitors report extensive Leave No Trace experience, some are novices (NPS 2021).

The park is committed to providing basic orientations and authoritative maps that respect this diversity of experience, supplemented by resources on targeted topics of interest to backcountry visitors new to Glacier Bay (such as tides) and backcountry skills (Leave No Trace, approved guide services). Further, orientation staff and materials would intentionally limit advice on preferred routes, site-specific campsites, or place-based destinations for these reasons:

- Wilderness visits are opportunities for discovery and exploration in untracked and remote places.
- Backcountry camper dispersal has an important role in preserving wilderness character (especially the qualities of solitude, unconfined recreation, and natural).
- The freedom to travel and camp at will enhances safety in such a dynamic and unforgiving physical environment and is a valued part of the Glacier Bay Wilderness experience.
- Backcountry visitors are ultimately responsible for accepting unknowns, determining their own course, using situational awareness to adapt as conditions change, and learning in advance what they need to know to be legal and safe.

Group Size Limits - X'ooninax Sá (How Many in the Group?)

Group size for all use types within wilderness would be limited to no more than 12 people (including guides), common to all zones year-round. Groups are considered separate when

out of sight and sound of each other. Drop-off and pick-up locations may experience temporary larger group sizes, which would reduce as groups disperse.

Group size exceptions may be granted for educational, research, safety, traditional Tlingit Homeland activities, or administrative groups. The waiver for groups of more than 12 people must be authorized by the superintendent. Guidelines for minimizing impacts from groups of more than 12 people are listed on the group size waiver.

Group size limits of 12 people are relatively standard across the national wilderness preservation system to preserve the characteristic qualities of wilderness, including across southeastern Alaska public lands proximate to Glacier Bay. The following social science data further suggests a group size of 12 is justifiable in the Glacier Bay Wilderness when accounting for these variables (NPS 2021):

- Perceptions of crowding and coastal resource conditions in overnight settings indicate that group sizes of less than six people are preferred on beaches where kayaks and tents are visible.
- Smaller group sizes are currently the norm in Glacier Bay, with only 24% of visitors traveling in a group with more than five people (2017 visitor demographics).

DESIRED CONDITIONS FOR MANAGEMENT ZONES

This section describes the desired conditions for the wilderness lands and waters within the park. Desired conditions are defined as statements of aspiration that describe resource conditions, visitor experiences and opportunities, and facilities and services that an agency strives to achieve and maintain in a particular area. They help park managers answer the question, "What are we trying to achieve?" Desired conditions focus on fundamental resources and values; the visitor experience opportunities associated with them; and the types and levels of management, development, and access that would be appropriate in a particular location. The desired conditions for this plan were based on guidance from previous planning efforts and other NPS policies and guidance.

This plan carries forward the park management zones outlined in the 1984 general management plan, which include Nonwilderness Waters, Wilderness Lands, Wilderness Waters, Development, and Special Use Zones (see the general management plan, pages 59–61, for zone descriptions). The general management plan states that "any zone may be subdivided to meet management needs or to further delineate future resource areas" (page 61). To achieve desired conditions and acknowledge that visitor use type and frequency of use varies across the Wilderness Lands Zone and Wilderness Waters Zone, this plan has subdivided the vast Wilderness Lands and Waters Zones into five subcategories. The plan includes management direction for wilderness lands and waters within the park. The five zones would achieve the following:

- Effectively manage visitor use and experience.
- Ensure that the statutory mandates of the Wilderness Act and the park-enabling legislation are aligned.

- Provide guidance inclusive of research.
- Provide guidance inclusive of the connection to Tlingit Homeland.
- Develop and achieve desired conditions for specific areas within the wilderness.

Compared with previous management approaches, this plan outlines a zoning concept that better reflects current park needs, including the dynamic landscapes of Glacier Bay and the likelihood of ecological change over time; however, the park may designate smaller units for the purposes of monitoring and other administrative needs.

Although the zones are presented as exact distances and locations, those are based on the ecological knowledge at the time of publication of the plan. As successional landscapes change, that viewshed and experience would also change.

Within the zone descriptions, several terms are used to describe the level of development for trails and facilities. Within the context of this plan, the term "informal" is used to describe visitor-created trails and/or campsites. "Formal" is used to describe any planned trail or campsite. The term "primitive" is used to describe the character of those planned trails or campsites. These would be Trail Class 1 (minimally developed) trail. These trails may have indistinct tread, may require some route finding, and are constructed of predominantly native materials. Class 1 trails tend to be narrow, have frequent obstacles, and have minimal structures for drainage or water crossings. These trails are minimally signed but may include route markers when trail is not evident (USFS 2016). Other trails may fall under different trail classes, as described in the US Forest Service publication, "Trail Fundamentals and Trail Management Objectives."

The term primitive, as applied to a campsite, describes a minimally developed site that may be delineated using natural materials (rocks, logs, some vegetation clearing). The site continues to blend with the natural environment and tends not to contain any structures, such as supporting/retaining walls or other hard delineation, beyond natural materials.

Zoning maps are shown below. Additional detail on the zoning maps can be found in the NPS StoryMap: https://storymaps.arcgis.com/stories/2047e748d233424d8789b54edd78cda1.

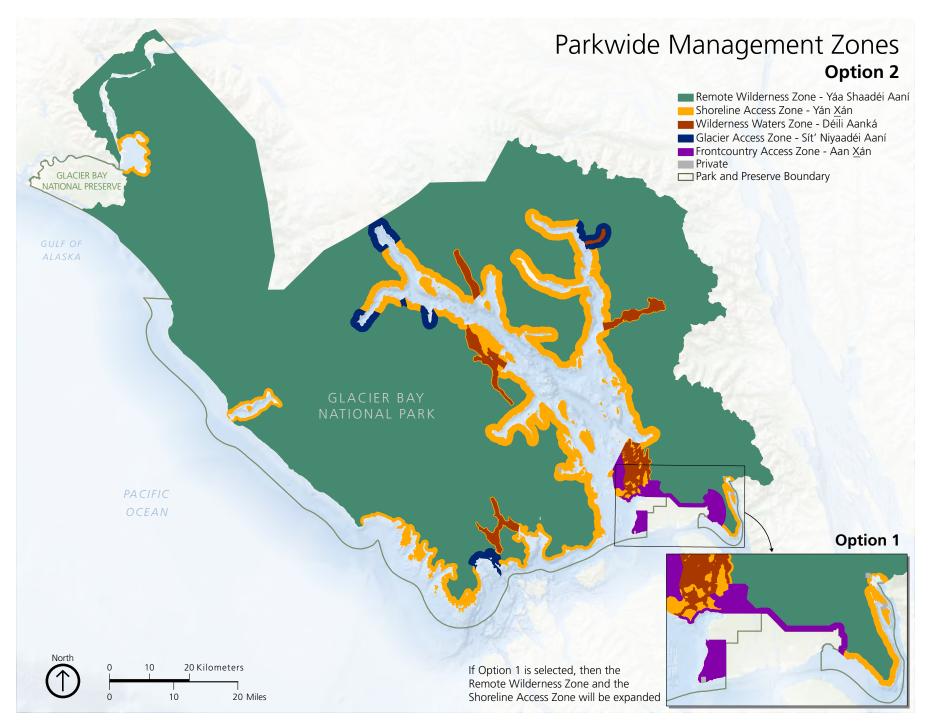


Figure 6. Zoning Map of the Glacier Bay Wilderness

Remote Wilderness - Yáa Shaadéi Aaní (The Land Up by the Mountains)

The Remote Wilderness Zone consists of the following:

- primarily interior wilderness lands that are generally buffered from visitor use impacts
- coastal lands only on the Outer Coast (Icy Point to Cape Spencer) between the preserve and Icy Point
- lands one-quarter mile inland from wilderness waters (may vary slightly if needed to ensure zoning consistency on islands and peninsulas to protect resources and provide for high-quality visitor experiences)

• lands one-half mile inland from the Outer Coast, Cross Sound and Icy Strait, and Excursion Inlet lands 1 mile inland from the nonwilderness waters of Glacier Bay proper (may vary slightly if needed to ensure zoning consistency on islands and peninsulas to protect resources and provide for high-quality visitor experiences)

Lands excluded from the Remote Wilderness Zone include lands designated as Glacier Access Zone (see zone description below) and areas near the frontcountry designated as Frontcountry Access Zone.

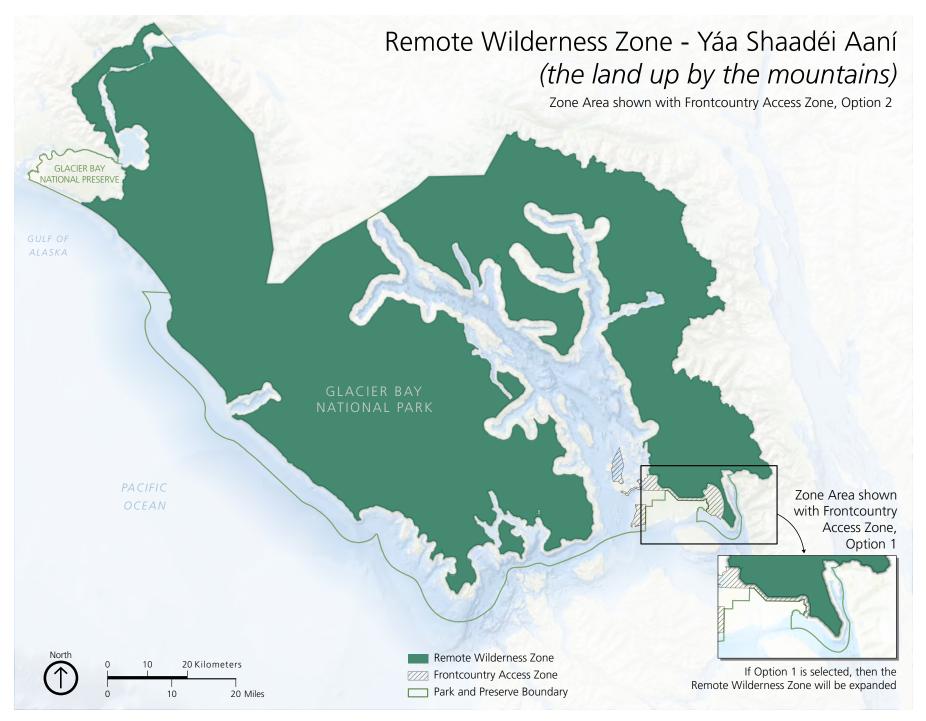


Figure 7. Remote Wilderness Zone

The zone is managed to promote intact ecosystems and high levels of self-reliance among visitors. The zone is essentially void of development, trails, or other facilities, except for the occasional research or communications installation. Visitors should expect a high degree of solitude and challenge within the zone.

Desired conditions for this zone are as follows.

Natural and cultural resources. The Remote Wilderness Zone provides for intact ecosystem processes. Natural light and sounds would predominate. Although wildlife may experience short-term, localized displacement because of small amounts of visitor or administrative uses, natural processes and patterns continue without intervention or alteration. Visitor use impacts to natural and cultural resources are unlikely to occur or to be visible.

Visitor experience. The Remote Wilderness Zone provides visitors with primitive experiences where a high degree of skill is required and the potential exists for a significant amount of risk. Self-reliance is a key component of the visitor experience, as trip planning and safety information are only accessible before the experience. Permits may be required before accessing certain areas. Visitors would experience a vast and wild landscape where natural sounds and natural light conditions prevail most of the time. Signs of other visitor use such as campsites and informal trails are unlikely to be visible, and the likelihood of encountering other visitors is low. Visitors may also encounter temporary infrastructure to support research and communications, as well as evidence of research activities or cultural practices. Visitor encounters with park staff would also be low because patrols would be infrequent, as would closures and restrictions. Wilderness users would have a low encounter rate in this zone. Low-impact recreational uses, such as mountaineering, climbing, skiing, hiking, and camping, are primary uses within the zone. To facilitate certain visitor experiences, very limited commercial services may occur in this zone.

Facilities and development. Development of trails or campsites for visitor use would not be considered. Installations would be limited to those needed for essential communication and research purposes, and many may be temporary. Approved communication and research infrastructure would be carefully sited to minimize impacts to the resource and visitor experience. Motorized and mechanized use would be limited to only those allowed by the ANILCA, including private, administrative, park-permitted, commercial, charter fixed-wing aircraft landings, and other methods as approved by a minimum requirements analysis as required by the Wilderness Act. All installations and structures in wilderness would be subject to a minimum requirements analysis.

Shoreline Access – Yán Xán (The Land Near the Shoreline)

The Shoreline Access Zone is where most wilderness visits occur. The zone consists of the following (may vary slightly if needed to ensure zoning consistency on islands and peninsulas to protect resources and provide for high-quality visitor experiences):

- coastal lands 1 mile from the mean high tide line adjoining nonwilderness waters within Glacier Bay proper
- lands one-half mile from the shore of Alsek Lake
- coastal lands one-half mile from the mean high tide line along the coasts of Lituya Bay and Cenoaph Island in the bay's interior, Excursion Inlet, Icy Strait and Cross Sound, and along the Outer Coast from Cape Spencer to Icy Point
- lands within a quarter-mile of wilderness waters and the entirety of islands that are surrounded by wilderness waters
- lands within a quarter-mile of the wilderness waters shoreline for islands where only a portion of the land is adjacent to wilderness waters

Areas excluded from the Shoreline Access Zone include lands designated as Glacier Access Zone (see zone description below) and portions of the Beardslee Islands designated as Frontcountry Access Zone.



The Shoreline Access Zone is largely managed to encourage self-reliance and connection to wilderness character. Formal trails and/or campsites would only be considered in this zone to protect resources. Otherwise, this zone would be devoid of development except for essential communication and research installations.

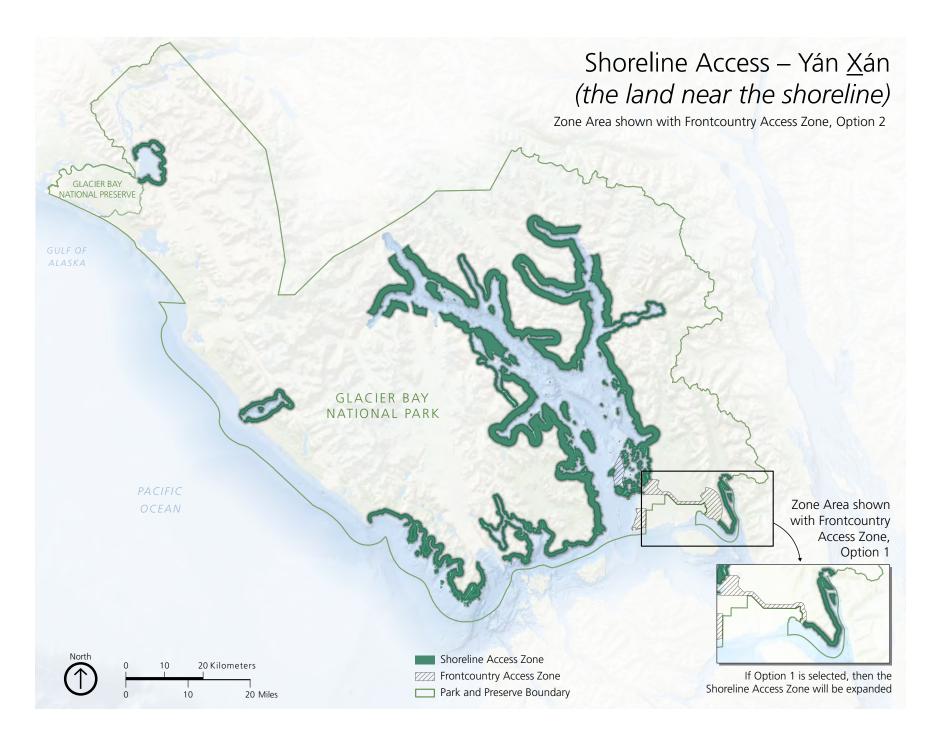


Figure 8. Shoreline Access Zone

Desired conditions for this zone are as follows.

Natural and cultural resources. Within the Shoreline Access Zone, natural processes prevail. Occasional light and noise from vessels and campers may affect dark night skies and the natural soundscape, but impacts would be occasional and temporary. Because of the possibility of camping in this zone and a slightly higher amount of visitor use than in the Remote Wilderness Zone, short-term displacement or temporary impacts to wildlife may occur. Also, because of more frequent visitor use, limited impacts may occur because of informal campsites and/or visitor created trails.

Visitor experience. Within this zone, a significant amount of self-reliance is expected. Visitor information is available before the experience or, if part of a guided experience, may be available during the activity. Visitors may encounter other visitors; however, encounter rates are likely to be low to moderate. Altered vegetation, presence of rock rings, and some visitor-created trails may be observable. Primary recreational activities include hiking along the shore, kayaker and park-permitted backcountry drop off, wildlife watching, and dispersed camping. To facilitate some of these visitor experiences, commercial services would be likely to occur. Due to the proximity of this zone to nonwilderness waters, this zone acknowledges the adjacent nonwilderness areas and considers holistic approaches to

mitigate adverse impacts to wilderness character in future marine management planning and vessel operating requirement updates.

Facilities and development. This zone would be largely devoid of development. Development of trails or campsites is unlikely. Development of formal, primitive trails and campsites or designation of camping areas would only be considered when needed for resource protection purposes.



Other installations would be limited to those needed for essential communication and/or research purposes. All installations and structures in wilderness would be subject to a minimum requirements analysis.

Wilderness Waters - Déili Aanká (Land of the Sheltered Area)

The Wilderness Waters Zone consists of the following:

- most wilderness waters within the park
- waters of McBride Inlet
- the majority of the wilderness waters surrounding the Beardslee Islands, including Secret Bay and Hutchins Bay
- waters of Adams Inlet, Rendu Inlet, Hugh Miller Inlet, Scidmore Bay, Charpentier Inlet, and Upper Dundas Bay

The Wilderness Waters Zone is managed to provide opportunities for solitude and primitive and unconfined recreation and to maintain its undeveloped character. Visitors to this zone would have the opportunity to experience natural marine ecosystems. Human influence on

the ecosystem is extremely rare compared to other marine areas, and special management considerations to protect wilderness character exist within these waters.

Waters not included in the Wilderness Waters Zone include wilderness waters that are proximate to the Frontcountry Zone (2019 frontcountry management plan) and waters between Strawberry and Young Islands, which are included in the Frontcountry Access Zone.

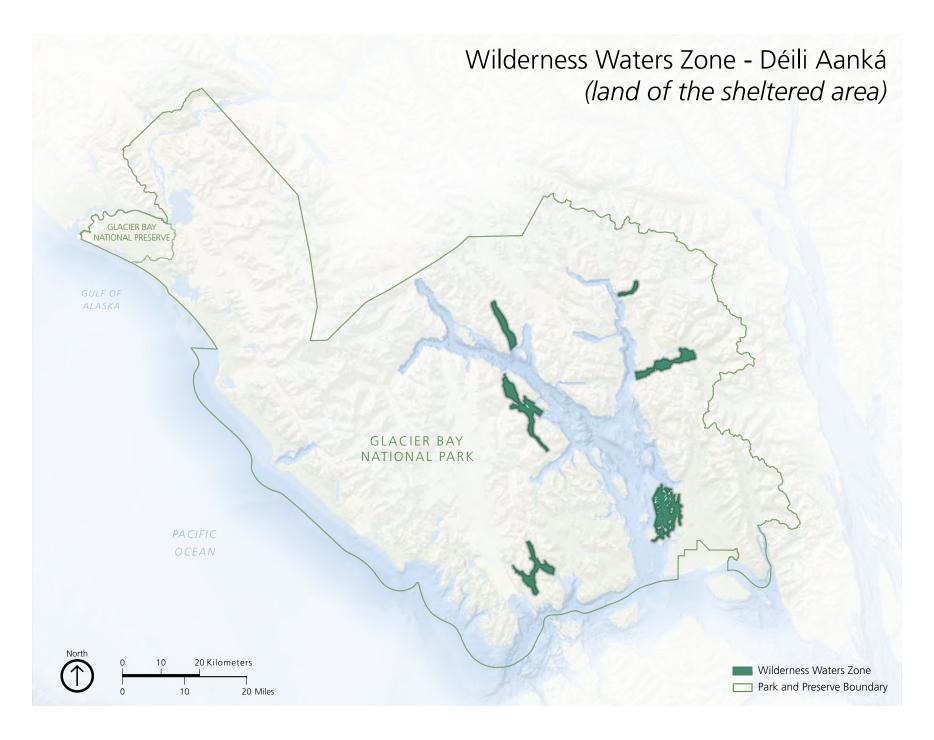


Figure 9. Wilderness Waters Zone

Desired conditions for this zone are as follows.

Natural and cultural resources. Occasional light and noise from distant vessels outside this zone and shore-based camping may affect dark night skies and the natural soundscape, but impacts would be occasional and temporary. Maintaining the quality of the underwater soundscape is prioritized. Natural processes within the marine ecosystem continue with minimal human influence. Impacts to natural resources from visitor use are temporary, and human effects on animal distribution, abundance, and behavior are too slight to be biologically significant.

Visitor experience. Visitors have the opportunity to experience solitude, challenge, and self-reliance in this zone. Although visitors may see or hear other vessels within this zone, close contact with other vessels would be rare. During certain times of year for specific locations, close contact with motorized craft would be absent because of periods regulated for nonmotorized use. Encounters with other visitors and groups are low, and evidence of visitor-caused impacts is minimal. This zone allows visitors to experience remote wilderness waters in areas that are less impacted by visitor use than many of the main travel routes. Access is provided by small craft (kayaks and other small boats). To facilitate remote and wild experiences, commercial services are limited.

Facilities development. This zone is largely devoid of development. Floating structures or permanent structures (e.g., docks, signs, navigational aids) are not considered in this zone. Other facilities or installations are limited to those needed for essential communication and research purposes. All installations and structures in wilderness would be subject to a minimum requirements analysis.

Glacier Access - Sít' Niyaadéi Aaní (Land Traveling to the Glacier)

The Glacier Access Zone includes areas where glaciers are more accessible by ordinary means of travel, including by foot, vessel, plane, or other methods. This includes areas in the vicinity of tidewater glaciers that are easily accessible for vessels to offload visitors and have the terrain suitable for hiking experiences. This zone includes the following:

• lands within 1 mile of the mean high tide line surrounding Reid, Lamplugh, Tarr, McBride, Riggs, and Johns Hopkins Inlets, Fern Harbor, and the Brady Icefield.

Glacial areas excluded from this list (such as La Perouse and Grand Plateau) are not considered "more accessible to ordinary travel," even through float plane traditional access is allowed under ANILCA.

This zone experiences some of the most concentrated use in the park, with visitors arriving primarily by boat at specific drop-off locations close to tidewater glaciers. Areas within the Glacier Access Zone would have safe marine vessel approaches and provide access to glacial features. The zone provides for overnight use and access to glaciers with greater allowances for commercially guided group excursions within sight and sound of other parties. Visitors should expect to encounter others within this zone. The Glacier Access Zone is managed to

support a range of high-quality immersion experiences in a dynamic landscape, protecting wilderness character while also providing access to the glacial environment, as specified in the park's enabling proclamation.

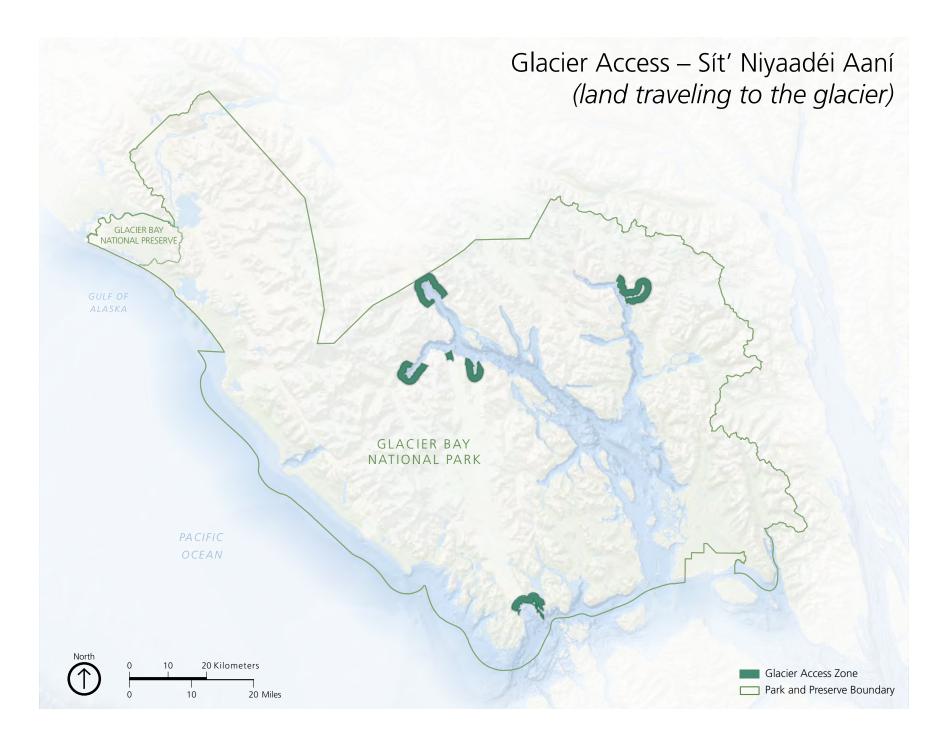


Figure 10. Glacier Access Zone

Desired conditions for this zone are as follows.

Natural and cultural resources. Light and soundscapes may be occasionally impacted by visitor use, including vessels and campers. Resource impacts from trails and campsites are likely; however, these impacts would remain proximal to areas of high use. Because of overnight uses, such as camping, wildlife displacement could be long term on a seasonal basis.

Visitor experience. Visitors should expect to find some elements that indicate higher-use areas, such as informal trails. Areas in this zone are remote. To facilitate access to glaciers, commercial services are accommodated at greater levels so that visitors can experience the shoreline on guided excursions. Visitors should expect to see the implementation of a variety of management tools to ensure high-quality visitor experiences and resource protection. Kayaker or backpacker drop off could occur in this zone if conditions were favorable. Encounter rates with other visitors would likely be high, especially during drop-off and pick-up times. Visitors may also see and hear more boats than in the other zones in addition to the presence of more formal and informal trails and campsites. Visitor information could be available both before and during the visitor experience (e.g., experiencing the park with a guide or having information provided on board a vessel). Management actions that concentrate people to reduce resource impacts could be considered. Park staff actively manages impacts from visitors in this zone and issues guidance as needed to protect critical resources. Primary activities in this zone include hiking, camping, and kayaker or backpacker drop off.

Facilities and development. Because of relatively high visitor use levels, the development of primitive campsites and trails or designation of camping areas could be considered for resource protection purposes, should informal campsites and trails begin to cause resource

damage or begin to negatively impact desired conditions. Other facilities would be limited to those needed for essential communication and research purposes. All installations and structures in wilderness would be subject to a minimum requirements analysis.

Frontcountry Access – Aan Xán (Near Town)

The Frontcountry Access Zone consists of lands and waters that are proximate to the Frontcountry Zone (2019 frontcountry management plan). Two options are available for the geographic extent of this zone.

Option 1 includes the following:

- waters east of Strawberry Island and North of Young Island as well as the waters of the Beardslee cut connecting Bartlett Cove with the southeastern portion of the Beardslee Islands
- lands from the frontcountry boundary into the Bartlett Lake area and the Bartlett River corridor

• the Point Gustavus area outside the frontcountry area within the park

Option 2 includes the following:

- lands described in option 1
- an approximately 2.5-mile-wide parcel of land from the park boundary north of the frontcountry area east to the Towers Trail area and in the Falls Creek and Excursion Ridge area.

Commercial services are limited in this zone because of frontcountry proximity. Informal, visitor-created trails and/or campsites may be visible because of higher levels of use within this zone. Intentionally developed trails or routes would be considered to facilitate wilderness access.

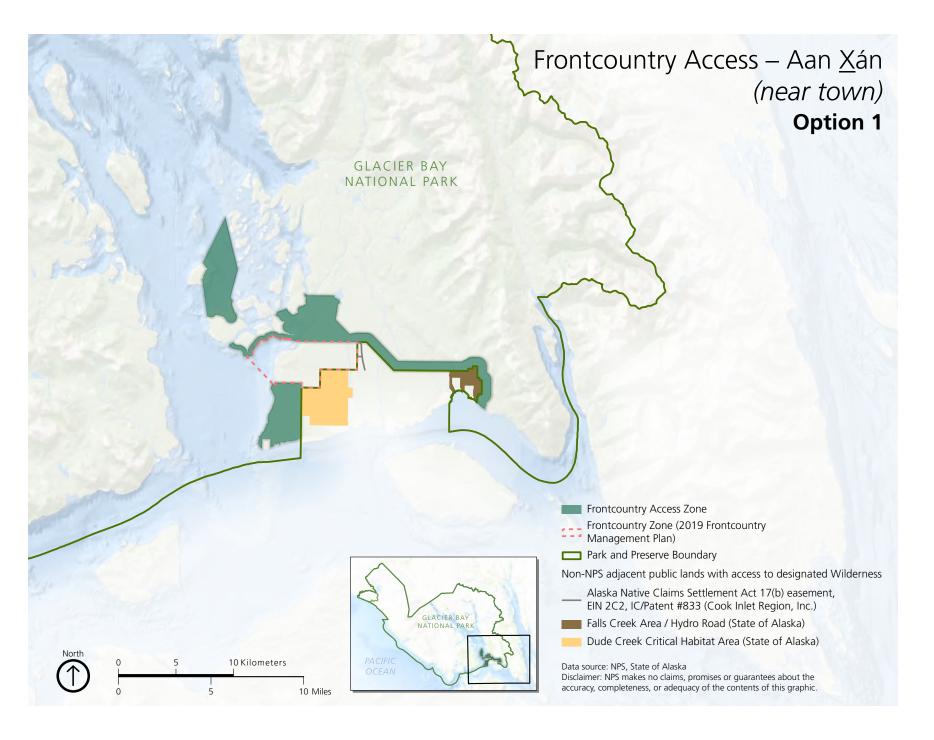


Figure 11. Frontcountry Access Option 1

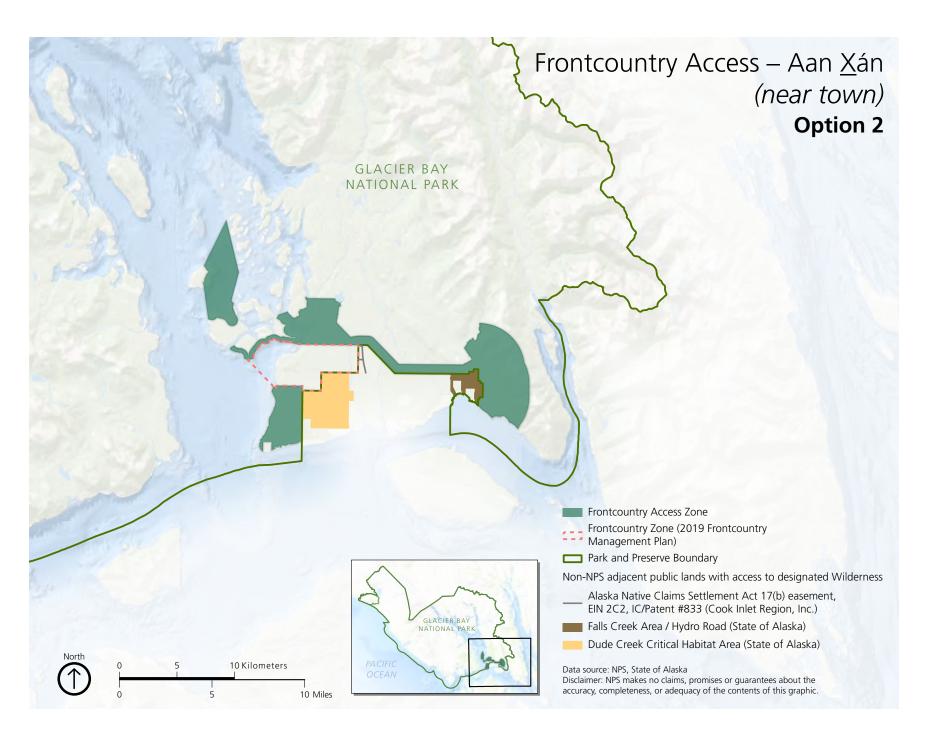


Figure 12. Frontcountry Access Option 2

Desired conditions for this zone are as follows.

Natural and cultural resources. Desired conditions for natural and cultural resources would largely be the same as the Shoreline Access Zone. Limited resource impacts from informal or visitor-created campsites and both informal (visitor created) and primitive trails may occur due to higher levels of visitor use.

Visitor experience. This zone would be approachable primarily through developed trail and trailhead access originating outside wilderness, including reserved public rights-of-way. This zone is also accessible by road or by vessel from the frontcountry. The zone would be available to visitors who may not be able to experience the park through commercial means. Because of the proximity to the Frontcountry Zone (2019 frontcountry management plan), commercial services would be infrequent. This zone would be managed as a gateway to wilderness experiences and may include formal and informal trails, cairns, or other navigational aids and hike-in camping opportunities that provide access to wilderness. Trailheads and associated amenities (e.g., parking, signs) would be outside designated Wilderness. Encounters with other visitors are likely. Recreational experiences within this zone would be supported by trails and routes. Trails could fall into one of several trail classes; however, primitive trails would be used whenever possible. Overnight use through dispersed camping is permitted; primitive campsites would only be considered for the protection of natural and cultural resources.

Facilities and development. Development within this zone would be limited to intentionally developed trails or routes that would facilitate visitor access to backcountry and wilderness areas adjacent to Gustavus and Bartlett Cove while protecting critical resources. The purpose of these trails would be to provide access to the wilderness from areas proximate to the Frontcountry Zone (as defined in the frontcountry management plan). Designated camping areas or primitive campsites would be considered only for the purposes of resource protection. Other installations would be limited to those needed for essential communication and research purposes. All installations and structures in wilderness would be subject to a minimum requirements analysis.

CHAPTER 3: MANAGEMENT STRATEGIES AND ACTIONS

INTRODUCTION

This chapter identifies management strategies and actions that will be used to achieve and maintain the desired conditions related to the preservation of wilderness character and the associated visitor uses in wilderness. A strategy is a general direction or course, and the actions are the specific steps that may be taken to move the strategy forward. This chapter will also suggest management strategies that resolve issues described in chapter 1. The strategies and actions are organized by topic area. The strategies and actions in this section apply to the Wilderness Lands and Wilderness Waters Zones from the general management plan (see the general management plan for zone descriptions). This plan further refines those two zones into smaller management zones within the wilderness lands and waters zones as described in chapter 2. These actions and strategies will provide for the protection of vast and pristine wilderness lands and waters while placing an emphasis on exploration, challenge, and self-reliance. All the strategies and actions in this section will be used to achieve and maintain desired conditions related to wilderness, natural and cultural resource conditions, facilities and infrastructure, and the visitor experience.

In some cases, "corrective actions" have been identified. These actions are included to provide management guidance for what actions could be taken if desired conditions and wilderness values are not being maintained.

Through this planning effort, park staff, informed by preliminary public comment, developed multiple approaches for the management of the park's wilderness. The options all focus on a wild and challenging backcountry experience; however, there are some differences in approaches, primarily under the "Trails, Routes, and Itineraries" and "Camping and Overnight Use" sections. Both approaches stay true to desired conditions for wilderness experiences. Options will be analyzed in an environmental compliance document, and the park will produce a decision document to show the option chosen.

Note to Readers

Under "Trails, Routes, and Itineraries" in table 1, two management options are presented. These two options only apply to the Frontcountry Access Zone. These management options reflect two key differences in visitor experience, particularly in areas proximal to the frontcountry of the park (Bartlett Cove and surrounding areas). One of the options proposes frontcountry proximate wilderness trails that enable day use trips from Bartlett Cove into adjacent designated Wilderness, targeted to those who may not otherwise be able to access this experience because of, for example, physical conditions or the lack of equipment, time, or backcountry skill. A second option proposes new, road-accessible, overnight hiking opportunities that enable visitors who are not kayakers the opportunity for self-directed, noncommercial wilderness overnight hiking opportunities through Class 2 trails in a rugged setting aimed at overcoming barriers, such as cost, specialized skills, equipment, and local knowledge. The National Park Service will use comments from this civic engagement period, along with any other updated analysis, to identify which option will be carried forward for the final plan.

DESCRIPTION OF MANAGEMENT ACTIONS BY ZONE

Management Actions Common to All Zones

Focused messaging. Visitor information and education would include an emphasis on wilderness, Leave No Trace, and themes associated with Tlingit Homeland. The park will provide education on the importance of interstadial wood and impacts of burning as part of its visitor orientation and education described in chapter 2.

Backcountry registration system. To preserve wilderness character, the park would implement a registration system for commercial and private mountaineering trips, as well as other backcountry camping. Registration would be required for all overnight wilderness use. This registration would be required year-round.

Historic structures. Previous planning documents applied National Register of Historic Places criteria prioritized location, design, setting, materials, and workmanship for the integrity of historic structures. As a result, native cabins, which are relatively common, were mistakenly determined as having a "low historical significance" and were not identified as having significant feeling and association with descendant communities and Tlingit populations. Native cabins in the park should be included in a cultural landscape inventory because they are eligible for the national register under criterion A and criterion D. The park would review currently recorded historic structures for intact and significant value to Tlingit Homeland. The structures not associated with Homeland values and having a low historical significance would remain managed by benign neglect. Whereas structures that are found to have a high association with Homeland and a high historical significance would be reclassified as ethnographic resources associated with Tlingit Homeland and managed according to the ethnographic resource section.

Several structures associated with Tlingit Homeland values were inadequately evaluated for historical significance during the general management plan process and require reassessment. Following reevaluation, these structures may not be appropriate for benign

neglect (as described in the general management plan) and may qualify as ethnographic resources. Structures not associated with Tlingit Homeland values and included in the List of Classified Structures for management under a benign neglect policy are noted as not having a formal determination of eligibility for the national register. Therefore, to define "low historic significance," the park would define historic significance in consultation with the state historic preservation officer before continuing to manage historic structures through a benign neglect policy. Structures that are assessed as having high association with Homeland and a high historical significance would be reclassified as ethnographic resources associated with Tlingit Homeland and managed according to the ethnographic resource section.

Ethnographic resources and traditional cultural properties. In addition to recording and nominating the traditional cultural properties and other ethnographic resources within the park, ethnographic resources would be entered into the Cultural Resource Inventory System – Ethnographic Resources (CRIS-ER) database or equivalent future database. Further, structures, archeological sites, and other features that are part of traditional cultural properties or themselves eligible as ethnographic resources would be managed as ethnographic resources, even if they are previously recorded in the List of Classified Structures. Site-level management recommendations, including types of potential actions and priorities of the action alternatives, would be determined and entered into the CRIS-ER database for future management decisions at the time the resource is entered.

Cemeteries. The park would develop a cemetery management plan to meet the legal obligations as stated in the American Indian Religious Freedom Act and the Native American Graves Protection and Repatriation Act. This legal obligation can be met through the cooperative development of management guidance for cemeteries within Glacier Bay. This action would allow consultation on the proper path forward for these cemeteries, which was not undertaken in 1984, and propose specific management strategies most suited to each individual cemetery considering its location and significance.

Corrective Management Actions Common to All Zones

Management Action Progressions

The National Park Service is committed to providing visitors to the park with reasonable access for wilderness recreational activities, traditional activities, and for other purposes as described in previous chapters. The National Park Service would generally allow independent travel by any legal means and would encourage access to the park and preserve by means of facilities (e.g., trails and marked routes) and services (e.g., commercial air taxi and guide services) as described in desired conditions for zones (chapter 2), the actions below, and in "Appendix B: Extent Necessary Determination."

If it becomes necessary to proactively manage travel in any area to achieve desired future resource and social conditions for an area, to reduce visitor conflict, or to protect visitor safety, the National Park Service would use the least restrictive mechanism or "tool" necessary to accomplish the goal. The National Park Service need not wait for conditions to match or exceed standards before taking management action; an expectation that conditions would exceed standards is sufficient to mandate a response. Restrictions and closures would

be accomplished consistent with the process outlined in 36 CFR 13.50 and/or other relevant regulations. Below is a list of tools that may be used to manage access, when necessary, arranged in rough order from the least restrictive to the most restrictive. The park superintendent is free to pick whichever tool is required as long as the "least restrictive" criterion is heeded. There is no implication that the tools must be tried in the listed order and a failure elicited before trying the next one. Some tools are included in other actions outlined in more detail further in this chapter.

Education. The National Park Service would provide printed material, public presentations, targeted presentations to user groups, and Internet-based programs with the goal of actively involving visitors in helping the park achieve the standards for all management areas.

Increased enforcement of existing regulations. The National Park Service would prioritize resources to increase enforcement efforts for existing regulations to assist in achieving standards for management areas.

Voluntary measures. The National Park Service would ask visitors to restrict their use voluntarily. Examples of such measures could include voluntary registration, use of low-impact equipment, and avoidance of certain areas of the park or avoidance of areas during particular seasons or times of day. Voluntary registration would not require a permit and could be accomplished by trailhead register, phone or radio call-in, or the Internet.

Required registration. The National Park Service would require visitors to register. Visitors would be issued a permit that provides information about park rules and conditions for use necessary to protect park resources. Permit conditions could include minimum impact travel and camping requirements and resource protection requirements; however, a registration process would not limit the number of visitors or the type or amount of access. Registration is a means to gather information about visitor use levels and to ensure visitors receive necessary resource protection and safety information.

Requirements governing means of access. To achieve management area standards, the National Park Service would place requirements on the means of access potentially including designated routes to concentrate use impacts, the use of specific technologies or access modes to mitigate impacts, and strategies to stagger or disperse access to help achieve desired conditions.

Management of commercial activity. The National Park Service would adjust concession contracts and other commercial use permits to govern use levels or direct authorized commercial activity to locations, seasons, or times of day as necessary to achieve management area standards.

Regulate numbers of visitors. The National Park Service would establish quotas for visitor numbers in areas of the park when the volume of use is high enough that other mechanisms are unlikely to achieve desired conditions. Visitors would be required to register and carry a permit, and the number of available permits may be limited.

Temporal restrictions. The National Park Service would restrict access to particular times of day, days of the week, or other unit of time, or the duration of access could be limited.

Temporary and permanent closures. Using the appropriate authorities, the National Park Service would temporarily or permanently close areas to all types of visitor use or to specific modes of access.

In addition, the following specific actions would be considered if monitoring indicates that desired conditions are not being achieved or maintained. These actions would also be implemented in descending order if determined to be necessary:

- Concessioners would be required to break and move camps between trips, and all campers would be required to be out of sight and sound of other parties.
- Employ additional camper drop-off locations to protect resources. In locations where
 concentrated use causes resource impacts such as vegetation trampling, visitorcreated trails, or wildlife displacement, the park would consider rotating and adding
 drop-off locations. This may also be necessary to achieve desired experiences for
 overnight users, encouraging camper dispersal using additional drop-off locations or
 dedicated camper boats.
- Group size could be reduced from the current limit of 12. This would be done as needed only when monitoring indicates that it is necessary for resource protection.
- Consider designating day use-only areas. If desired conditions are not being met, day use areas may be designated.

Additional corrective actions may be required to address specific situations and conditions not previously addressed.

Management Actions by Zone

Remote Wilderness Zone - Yáa Shaadéi Aaní

This zone includes the most remote interior of the park and most of the outer coast shoreline. No actions are being proposed in this zone beyond those common to all zones.

Shoreline Access Zone - Yán XNáxn

This zone includes shoreline access within most of Glacier Bay proper as well as along the shores of Icy Strait, Cross Sound, lower Dundas Bay, the southern outer coast to Palma Bay, and the shores of Lituya Bay. Only corrective management actions are proposed within this zone.

Corrective Management Action

New trail development. Within this zone, the park would consider the development of new, primitive trails if needed for resource protection purposes.

Wilderness Waters Zone - Déili Aanká

This zone includes most wilderness waters within the park. The following action would continue to maintain solitude.

Management Actions

Application of nonmotorized waters. ANILCA authorizes the use of certain motorized transportation modes in Alaska designated Wilderness. The park would continue the current management practice of seasonal designations of periods of nonmotorized use within certain waters (as outlined in park regulations) to provide for a diversity of high-quality visitor experiences while recognizing that vessel quotas and operating requirements would address and manage any changes in the management of motorized and nonmotorized vessels.

Actions and Strategies Considered but Dismissed from Inclusion in This Plan

Strategic stream crossings to facilitate beach hiking. Maintained stream crossings would require significant construction and maintenance. That level of maintenance would be difficult to commit to except for the crossings on the Point Gustavus route, which would have primitive, natural aids to crossing as described in the frontcountry management plan.

Beach biking routes. Designating beach biking routes could impact the wilderness quality of unconfined recreation and would not contribute to the desired condition of maintaining a sense of self-reliance and challenge.

Designating water routes. Designating water routes could impact the wilderness quality of unconfined recreation and would not contribute to the desired condition of maintaining a sense of self-reliance and challenge.

Cabins and shelters. While ANILCA allows public use cabins and shelters in designated Wilderness, Glacier Bay has no history of them. Recent social science indicates that visitors prefer no developed amenities in park wilderness (NPS 2021). Data also show low utilization rates for southeast public cabins and shelters. Other considerations in not pursuing cabins and shelters in the backcountry include the unique safety concerns of a dynamic marine setting and the steep costs and operational demands relative to public benefit. Further explanation on cabins and shelters is provided in chapter 2.

Banning campfires along shoreline. Banning campfires would limit personal freedom in wilderness (primitive and unconfined recreation) while not necessarily preventing damage to interstadial wood. The park would provide education in camping orientation.

Glacier Access - Sít' Niyaadéi Aaní

The Glacier Access Zone includes areas that accommodate intense pulses of visitor use and, at times, high-use levels. The following management strategies have been identified to maintain desired conditions.

Management Actions

Focused use areas. The park would identify and manage two or three locations proximal to glaciers as focused use areas.

Vessel time limits. The park would consider time limits for tour vessels using focused use areas. Actions would be considered to encourage dispersal of tour vessels throughout the park.

Corrective Management Actions

The following actions would be considered if monitoring indicates that desired conditions are not being achieved or maintained. These actions would be implemented in descending order if determined to be necessary:

Rotate focused use areas. The park would select specific locations that would provide visitor access to the glacial environment while maintaining desired conditions. These locations would vary over time, depending on resource conditions and visitation patterns/desires.

Access to periglacial areas. Routes or trails would be designated on periglacial areas. These areas include transitory and temporary sites that present visitors with the opportunity to access tidewater glaciers, per the park's enabling legislation. These are early successional areas and are very dynamic.

Frontcountry Access Zone - Aan Xán

The Frontcountry Access Zone is managed to provide for a range of visitor experiences proximal to the Frontcountry Zone. Two options for management of this zone are being proposed (table 1). The following management strategies have been identified to provide high-quality wilderness experiences within this zone.

Management Actions Common to Both Options

Access to the Towers Trail/Bartlett Lake. The Towers Trail, which provides access to the wilderness and Bartlett Lake from the edge of the community of Gustavus, would be maintained. The park would address the transportation and parking issues associated with this trail. Options being considered include trailhead parking on NPS land through a wilderness boundary adjustment, trailhead parking on NPS land acquired through purchase or gift, or trailhead parking within the road right of way.

Point Gustavus route. The Point Gustavus hike along the shoreline would maintain its rugged feel, only being marked by a few well-placed stones or small modifications to aid stream crossing. This action has been pulled forward from the frontcountry management plan.

Application of nonmotorized waters. ANILCA authorizes the use of certain motorized transportation modes in Alaska designated Wilderness. The park would continue the current management practice of seasonal designations of periods of nonmotorized use within certain waters (as outlined in park regulations) to provide for a diversity of high-quality visitor experiences while recognizing that vessel quotas and operating requirements would address and manage any changes in the management of motorized and nonmotorized vessels.

Sustainable trails. Use applicable frontcountry management plan trail best practices and guidance, including those specific to sustainable trail methods and considering the dynamic successional landscape.

Corrective Management Action Common to Both Options

Consider designating day use-only areas. If desired conditions, particularly in the Frontcountry Access Zone, were not being met, day use areas may be designated.

Table 1. Management Actions for the Frontcountry Access Zone by Option

Action Topic	Option 1	Option 2
Trails, Routes, and Itineraries – Dei	 No new trails would be considered under option 1. This would encourage individual exploration and wayfinding to explore Glacier Bay's wilderness. The trail from Bartlett Cove to Bartlett Lake would be maintained as more of a route than a trail to provide for more primitive experiences. Routes are minimally maintained and involve navigation. 	 Development of new trails — Under option 2, the development of trails to provide access to the wilderness from the frontcountry would be considered. Trails may fall into one of several trail classes; however, primitive trails will be prioritized wherever possible. Specifically, the park would develop a trail from the Falls Creek area of Gustavus up Excursion Ridge. This would provide visitor access through the forested slopes to the ridge above treeline. The park would collaborate with landowners, the city of Gustavus, and stakeholders to establish trail connectors and parking that support appropriate public access to NPS backcountry trails, using clearly defined trail class and management objectives, screening for impacts to sensitive resources, and applying sustainable trails development methods. The trail from Bartlett Cove to Bartlett Lake would be removed to focus trail maintenance resources on other trails, including maintaining access to Bartlett Lake via the Towers Trail. The park would create visitor information to facilitate hiking to Point Gustavus.
Camping and Overnight Use – Xei uwaxéi	_	Through the development of primitive camping options, trails and routes as described previously, the park will provide additional overnight opportunities for visitors.

CHAPTER 4: WILDERNESS CHARACTER MONITORING

Monitoring changes and trends in wilderness character is important for several reasons:

- to comply with the statutory mandate of the Wilderness Act to preserve wilderness character,
- to fulfill agency policy (NPS *Management Policies 2006*; Director's Order 41: *Wilderness Stewardship*, section 6.2), and
- to improve wilderness stewardship.

The Wilderness Act states that wilderness areas "shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character" NPS *Management Policies 2006* states, "Management will include the protection of these (wilderness) areas, for the preservation of their wilderness character . . ." (NPS 2006a). Because the majority of the park is federally designated Wilderness, monitoring wilderness character is essential to protect the properties that make Glacier Bay National Park unique.

Wilderness character is defined as the combination of biophysical, experiential, and symbolic ideals that distinguishes wilderness from other lands. The five qualities of wilderness character (highlighted in "What Is Wilderness Character") include untrammeled, undeveloped, natural, solitude or a primitive and unconfined type of recreation, and other features of value (NPS 2022). Together, the five qualities compose an integrated ecological and social system of wilderness at Glacier Bay National Park (see "Wilderness Character Narratives for Glacier Bay Wilderness" for a description of the five qualities).

The five qualities of wilderness character capture the intent Congress put forth in the Wilderness Act as well as the guidance in NPS Management Policies 2006. Both point to monitoring conditions and long-term trends in wilderness character. Keeping It Wild 2: An Updated Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System (USFS 2015) was used as a guide in this process. The purpose of the Keeping It Wild 2 framework is to improve wilderness stewardship by providing managers with a tool to assess how wilderness character is changing over time. Monitoring wilderness character through this framework is integral to meeting the goals and objectives of this plan.

The overall approach of this monitoring framework is to

- 1. choose a set of measures that are relevant, cost-effective, and tied to preserving wilderness character;
- 2. periodically collect data to assess trends in these measures; and
- 3. use these trends to assess and report on the overall trend in wilderness character.

This national monitoring framework offers a consistent means for documenting the status and trends in wilderness character and guiding wilderness management within a wilderness area. Under this monitoring strategy, trends in wilderness character are classified as upward (positive), downward (negative), or stable. These trends are both nationally consistent and independent of the unique aspects specific to any given wilderness; therefore, trends in wilderness character can be compared between wilderness areas or across regions.

At the time of this publication, Glacier Bay National Park started developing a park-specific monitoring strategy that staff will refine and test as this plan is implemented. Initial monitoring would determine if the measures accurately measure the conditions of concern and if the standards truly represent the minimally acceptable condition. Park staff may decide to modify the measures or standards and revise the monitoring program if better ways are found to measure changes in wilderness character. Most of these types of changes should be made within the first several years of initiating monitoring. After this initial testing period, adjustments would be less likely to occur. Finally, if conditions change appreciably, park staff may need to identify new measures to ensure that wilderness character desired conditions are achieved and maintained. Once the strategy is fully refined, it will be incorporated as a supporting appendix of this document and shared with the public.

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APPENDIX A: RELATED PLANNING AND LEGISLATIVE CONTEXT

RELATED PLANS

General management plan (1984). This general management plan sets the overall direction for the management of natural and cultural resources, visitor use, land protection, and facility development. The plan establishes management zones, addresses wilderness through land protection, and sets desired conditions for use and development by zone.

Vessel quotas and operating requirements environmental impact statement (2003). This plan addresses the continuing demand for motorized watercraft access into Glacier Bay proper and Dundas Bay in a manner that protects park resources and values and provides for a range of high-quality opportunities for visitors to the park. This plan includes quotas and operating requirements for four types of motorized watercraft (cruise ships and tour, charter, and private vessels) within Glacier Bay and Dundas Bay in Glacier Bay National Park.

"Final Legislative Environment Impact Statement on the Harvest of Glaucous-Winged Gull Eggs," by the Huna Tlingit (2010). This environmental impact statement responded to the Glacier Bay Resource Management Act of 2000 (PL 106–455) in which Congress directed the National Park Service to determine whether egg harvest could occur in the park without impacting gull populations. The National Park Service proposed to authorize limited harvest of glaucous-winged gull eggs under a management plan cooperatively developed by the National Park Service and the Hoonah Indian Association, the federally recognized tribe of the Huna Tlingit. The preferred alternative (alternative 3) proposed an annual harvest, on two separate dates, at up to five locations. Criteria for selecting sites for harvest, timing of the harvest(s), methods of and limitations to harvest, harvest group size, access to sites for harvest, monitoring of the harvest, and potential impacts to other resources were investigated and described.

Foundation statement (2010). The park significance statements as outlined in the 2010 foundation statement, include a focus on scientific studies, intact ecosystems, succession, wilderness, marine ecosystems, Tlingit ancestral homelands, and the visitor experience.

Bear-human management plan (2013). To provide for the safety of visitors and to maintain a wild and free-ranging bear population as part of the park natural ecosystem, this document provides a consistent bear management program, with guidance on education and enforcement, elimination of 30 anthropogenic/human food sources, and closures.

Wilderness character narrative (2015). This document is a positive and affirming description of what is unique and special about the Glacier Bay Wilderness.

Resource stewardship strategy (2018). This strategy articulates long-range desired natural and cultural resource conditions and strategies to achieve park purposes and implement relevant plans, laws, and policies.

Frontcountry management plan (2019). The frontcountry management plan supplements both the 1984 both the 1984 general management plan and the 1997 Bartlett Cove Comprehensive Design Plan. The frontcountry management plan establishes a long-term,

comprehensive management direction for Bartlett Cove and adjacent frontcountry areas of Glacier Bay National Park. As the only developed area of the park, the 7,120-acre frontcountry area provides core visitor services and NPS administrative facilities. Management direction covered by the plan includes visitor opportunities for the area, commercial services, resource management, and park operations, and facilities, including the historic Glacier Bay Lodge and Huna Tribal House.

Specific to this backcountry and wilderness management plan, the 2019 plan provides the following direction, acknowledging the interconnected relationship between nonwilderness and wilderness.

- The plan describes the essential services and facilities needed to support backcountry visitor trips into wilderness.
- Bartlett Cove serves as a portal to premium wilderness experiences, including for frontcountry visitors who, due to time, skill, lack of equipment, or cost, may not otherwise have the opportunity to experience the premium wilderness character of Glacier Bay National Park—one of its founding purposes. Thus, the plan provides specific direction to guide welcoming frontcountry visitors to experience a taste of designated Wilderness while protecting wilderness character in a quality and immersive wilderness setting. To this end, the frontcountry plan describes a network of developed trails and wilderness access routes originating from Bartlett Cove into designated Wilderness, with guidance and best practices not repeated in this backcountry and wilderness management plan but incorporated by reference.
- The plan stresses the importance of more fully using the 7,120-acre frontcountry area for land-based excursions and includes developing trails that welcome commercial groups (in contrast with designated Wilderness areas with commercial tour and other restrictions to mitigate wilderness character impacts).
- The plan recognizes how frontcountry management decisions and activities outside wilderness may affect wilderness character nearby, with best practices detailed to help manage wilderness holistically as a park resource and mitigate impacts (e.g., natural sound, scenic views, night skies, encounter rates) consistent with NPS *Management Polices* 2006 (6.3.5) that states "All management decisions affecting wilderness must be consistent with the minimum requirement concept."

Legislative Context

The following legislation applies to this backcountry and wilderness management plan.

1925 Enabling proclamation. By Presidential Proclamation 1733, President Calvin Coolidge established the Glacier Bay National Monument for these purposes:

• "... 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;

- the region is said by the Ecological Society of America to contains a great variety of forest covering consisting of mature areas, bodies of youthful trees that 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;
- 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
- 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."

1939, 1943, 1955, and 1978 Monument expansions and exclusions. The Glacier Bay National Monument was expanded for enhanced management and protection of the park purpose, followed by subsequent withdrawals for national defense, agricultural, and settlement purposes.

1980 Alaska National Interest Lands Conservation Act. In 1980, Congress enlarged and redesignated the monument as Glacier Bay National Park. This plan and its actions are consistent with the 1980 act that designated Glacier Bay as a national park for the benefit, use, education, and inspiration of present and future generations, associated with its nationally significant natural, scenic, historic, archaeological, geological, scientific, wilderness, cultural, recreational, and wildlife values (PL 96–487, section 101a). Management direction, strategies, and actions in this plan support the intent of Congress, as codified in ANILCA title VII, section 701(3) and implemented by section 1317, to dedicate 2.6 million acres of Glacier Bay National Park to the preservation of wilderness character and values, as defined by the 1964 Wilderness Act (PL 88–577).

Finally, because ANILCA and NPS regulations do not authorize subsistence uses in Glacier Bay National Park (codified in 36 CFR, part 13), the plan is not expected to significantly restrict or increase competition for ANILCA title VIII subsistence resources on federal public lands within the broader region.

2014 Huna Tlingit Traditional Gull Egg Use Act (PL 113–142). This act authorized the collection of eggs of glaucous-winged gulls within Glacier Bay National Park by members of the Hoonah Indian Association, not more than twice each calendar year at up to five locations within the park.

Archeological resources. Archeological resources within Glacier Bay have been, and continue to be, largely managed according to federal laws and policies, including the National Historic Protection Act, the Archaeological Resource Protection Act, and the National Environmental Policy Act, with a host of others (e.g., the Native American Graves Protection and Repatriation Act, American Indian Religious Freedom Act.) These laws will continue to be the basis for the management and protection of archeological resources.

APPENDIX B: EXTENT NECESSARY DETERMINATION FOR COMMERCIAL SERVICES IN THE GLACIER BAY WILDERNESS

INTRODUCTION

The purpose of this appendix is to apply law and policy to analyze the appropriate role of specific guided commercial services in Glacier Bay National Park designated Wilderness. This analysis, known as an extent necessary determination (determination), specifies:

- where commercial service providers have an important role in enabling wildernessdependent experiences, and
- conversely, where self-guided opportunities preserve the characteristic qualities of the wilderness visitor experience that emphasize solitude, challenge, self-reliance, and opportunities for discovery and exploration in untracked and remote places.

The 1964 Wilderness Act, section 4(c), prohibits commercial services in designated Wilderness, except commercial services under section 4(d)(6) that:

- are proper for realizing the recreational or wilderness purposes of the area
- are compatible with the designated Wilderness (including unit purposes, law, and policy)
- necessitate commercial support (but only to the degree required)

This appendix is a determination to analyze Wilderness Act 4(d)(6) appropriate guided opportunities for the public use and enjoyment of Glacier Bay designated Wilderness. Following this introduction and key background, the determination is presented using a four-part format prescribed by policy and law.

In its application, this appendix will provide analyses that inform management decisions about commercial services consistent with backcountry and wilderness management plan objectives and prescribed zoning, while recognizing the following limitations and caveats:

- As conditions change and new information becomes available, the National Park Service reserves the right to reevaluate any aspect of these analyses, and on that basis, to adjust commercial services.
- A determination of need does not imply that a commercial activity will be authorized for all locations.

- This document does not fully address the effects (e.g., social, physical) of existing and proposed commercial uses, and decisions regarding the appropriate types and levels of commercial use in particular locations will be accomplished in compliance, or is already covered under existing compliance, with the National Environmental Policy Act.
- Guided activities will only be authorized to the extent consistent with the Wilderness Act's direction to preserve wilderness character.

BACKGROUND ESSENTIAL TO THE ANALYSIS

The Wilderness Act of 1964 (16 USC 1131–1136; PL 88–577) secured for our nation an enduring resource of wilderness. Wilderness areas included in the national wilderness preservation system are to be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness and to ensure that the wilderness character of these areas is preserved.

In order to achieve these goals, the Wilderness Act (the act) includes a series of prohibitions related to particular activities in its prohibition of certain uses section (section 4 [c]). The act has absolute prohibitions on commercial enterprise and permanent roads, and also general prohibitions, with qualified exceptions on temporary roads, use of motor vehicles, motorized equipment and motorboats, landing of aircraft, mechanical transport, and structures and installations. With regard to commercial services in wilderness, section 4(d)(5) states that "Commercial services may be performed within the wilderness areas designated by this Act to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas." The "purposes" referred to in section 4(d)(5) are those enumerated in section 4(b), which states that "... wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use." These purposes are rarely, if ever, discrete; that is, a recreational activity would commonly involve scenic or educational pursuits or even both.

In addition to the Wilderness Act, the National Park Service's management of wilderness areas is guided by NPS *Management Policies 2006* (section 6.4.4) and Director's Order 41: *Wilderness Stewardship*, section 7.3. The management policies state that commercial services, such as guiding, "... contribute to public education and visitor enjoyment of wilderness values or provide opportunities for primitive and unconfined types of recreation may be authorized if they meet the 'necessary and appropriate' tests of the National Park Service Concessions Management Improvement Act of 1998 and section 4(d)(5) of the Wilderness Act..., and if they are consistent with the wilderness management objectives contained in the park's wilderness management plan, including the application of the minimum requirement concept." The application of the "minimum requirement" concept to commercial services is reemphasized in Director's Order 41, which also provides that allocations between commercial and noncommercial uses should be subject to public comment through a public planning process.

Necessary and Appropriate Criteria for Commercial Services help parks determine which commercial visitor services will enhance the visitor experience without negatively

impacting the park's resources or its ability to carry out its mission. They allow a park to identify which services may be considered for a commercial use authorization (CUA) or a concession contract. The determination that a service is necessary and appropriate may change over time. An operation, once considered necessary for visitor enjoyment, can become redundant because of the availability of similar out-of-park services. Likewise, an operation once considered appropriate might have unintended impacts to park resources and/or achieving desired conditions. Evaluating commercial services through the lens of necessary and appropriate criteria is the first step in the extent necessary determination process, which is an additional filter for evaluating commercial services per the Wilderness Act of 1964.

Appropriate Criteria

Appropriate criteria help to answer the question, "Can the park authorize this service without compromising the reason it is a unit of the national park system?" These criteria provide insight into the critical components of the park and visitor service, while also describing the potential negative impacts of commercial services the park must prevent. All commercial services—whether a commercial use authorization or concession contract—must meet *all* appropriate criteria to operate in the park. Conversely, a park unit is not required to add a commercial visitor service if that service meets the appropriate criteria.

Appropriate criteria:

- are consistent with the park purpose and significance
- are consistent with laws, regulations, and policies
- do not compromise public health and safety
- do not cause unacceptable impacts to park resources or values
- meet the desired conditions of the backcountry and wilderness management plan and other relevant park planning documents, and do not create unacceptable impacts to the fundamental resources and values of the park that are unable to be mitigated.
- do not unduly conflict with other park uses and activities
- do not exclude the general public from participating in limited recreational opportunities

Necessary Criteria

Necessary criteria help to answer the question, "Why is this service important for the park?" These criteria describe how a commercial service could enhance the visitor experience and further the goals and mission of the park. Necessary criteria are unique to NPS concession contracts: while commercial use authorizations do not need to meet any necessary criteria, concession contracts must meet *at least one* necessary criterion to operate in the park.

Necessary criteria:

- contribute to visitor understanding and appreciation of a park's purpose and significance
- enhance visitor experiences consistent with park purpose, significance, and the desired conditions of the park's fundamental resources and values
- assist the National Park Service in managing visitor use and educating park visitors
- provide an essential service or facility not available within a reasonable distance from the park

Relationship to the Backcountry and Wilderness Management Plan

The extent necessary determination was prepared in conjunction with the backcountry and wilderness management plan (the plan) using an interdisciplinary approach that included wilderness managers, commercial services staff, and resource and visitor use specialists. The scope of this determination aligns with the scope of the backcountry and wilderness management plan, meaning it focuses only on backcountry and designated Wilderness lands and waters within Glacier Bay National Park and does not include Glacier Bay Preserve or Alsek River rafting activities. Through the process of preparing this determination, the National Park Service considered both the potential short-term and long-term effects of commercial services activities within the park's wilderness.

The determination is an integral component of the backcountry and wilderness management plan, as commercial services provide various opportunities for visitors to the park to navigate to and explore wilderness and backcountry areas of the park. The extent necessary determination for commercial services in the Glacier Bay Wilderness is a process that used key elements of wilderness character, desired conditions for these elements, and analyzed impacts to determine the overall amount of use that is appropriate in wilderness. Finally, this analysis determined the proportion of this use that may be supported by commercial visitor services, while ensuring the preservation of wilderness character.

As with other aspects of visitor use management planning, the strategies for the backcountry and wilderness management plan for Glacier Bay National Park preserve wilderness character, as required by the Wilderness Act, while offering a reasonable range of choices about the future of the wilderness and will be analyzed in a subsequent document as required by the National Environmental Policy Act.

Relationship to the Vessel Management Plan

The National Park Service will be updating the vessel quota operating requirements (VQOR) from 2003 and will provide opportunities for public review and comment in the future. The plan evaluates the type, number, and behavior of vessels that may enter and travel through Glacier Bay proper and surrounding waters annually. Of the vessels being evaluated within this planning effort (cruise, tour, charter, private, administrative use, and nonmotorized), four of them operate through commercial services (cruise, tour, and charter, as well as some kayak nonmotorized use). The VQOR scope includes on-water motorized and nonmotorized vessel management only; however, given that these commercial operators may also provide guided activities in the backcountry and wilderness area of the park, this determination

analysis will serve as a guidance document to commercial operators that use these vessels to transport guides and clients to backcountry and wilderness lands for commercially guided recreational activities.

PURPOSES FOR WHICH THE GLACIER BAY WILDERNESS WAS ESTABLISHED

Presidential Proclamation 1733

Glacier Bay National Monument (now included in the national park) was established in 1925 by presidential proclamation. The purpose of the monument was to preserve an area significant for:

- "... 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."
- "... 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..."
- "... a unique opportunity for the scientific study of glacier behavior and of resulting movements and developments of flora and fauna..."
- "... 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."

Alaska National Interest Lands Conservation Act (ANILCA)

The Glacier Bay Wilderness was established for recreational and other purposes by the passage of the Alaska National Interest Lands Conservation Act of 1980. The Alaska National Interest Lands Conservation Act provides special provisions, such as motorized access, which is not allowed in wilderness areas elsewhere in the wilderness preservation system; however, the overarching mandate of the 1964 Wilderness Act—to preserve wilderness character—remains. Section 101 of ANILCA describes the primary purposes for Alaska conservation areas, and section 202 describes the expansion and redesignation of Glacier Bay National Monument:

Section 101:

- (a) "In order to preserve for the benefit, use, education, and inspiration of present and future generations certain lands and waters in the State of Alaska that contain nationally significant natural, scenic, historic, archeological, geological, scientific, wilderness, cultural, recreational, and wildlife values, and units described in the following titles are hereby established.
- (b) It is the intent of Congress in this Act to preserve unrivaled scenic and geological values associated with natural landscapes; to provide for the maintenance of sound populations of, and habitat for, wildlife species of inestimable value to the citizens of Alaska and the Nation, including those species dependent on vast relatively

undeveloped areas; to preserve in their natural state extensive unaltered arctic tundra, boreal forest, and coastal rainforest ecosystems; to protect the resources related to subsistence needs; to protect and preserve historic and archeological sites, rivers, and lands, and to preserve wilderness resource values and related recreational opportunities including but not limited to hiking, canoeing, fishing, and sport hunting, within large arctic and subarctic wildlands and on free flowing rivers; and to maintain opportunities for scientific research and undisturbed ecosystems."

Section 202:

"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 generically 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 Alsek River, fish and wildlife habitats and migration routes, and a portion of the Fairweather Range including the northwest slop 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."

In addition to terrestrial areas, ANILCA also designated some of the marine waters of the park as wilderness. An internal NPS planning process also identified eligible wilderness in the waters of the East Arm of Glacier Bay and Alsek Lake. In accordance with NPS *Management Policies 2006*, these eligible areas are to be managed in a manner that will not "diminish the wilderness eligibility of an area possessing wilderness characteristics," and "management decisions will be made in expectation of eventual wilderness designation" (6.3.1). Title 11 of ANILCA provides for public use of motor vessels in some of these waters but does not guarantee motorized access for commercial or other administrative uses; the National Park Service has discretion in regulating commercial and administrative activities to ensure their use complies with the Wilderness Act.

EXTENT NECESSARY DETERMINATION FOR COMMERCIAL SERVICES IN WILDERNESS

Part I: Activities That Are Proper for Realizing the Recreational or Other Purposes of Wilderness

For a commercial service to meet the extent necessary test to occur in designated Wilderness, the service or activity must be determined as proper for realizing designated Wilderness purposes based on the Wilderness Act of 1964. Any activity that occurs in designated Wilderness must first be of a type that does not violate the prohibitions of section 4(c) on the use of motor vehicles, motorized equipment or motorboats, the landing of aircraft, other forms of mechanical transport (except in Alaska as modified by ANILCA), and no structure

or installation of structures. National Park Service *Management Policies* 2006 6.4.3 states that recreational uses in wilderness will be of a nature that

- enables the areas to retain their primeval character and influence;
- protects and preserves natural conditions;
- leaves the imprint of man's work substantially unnoticeable;
- provides outstanding opportunities for solitude or primitive and unconfined types of recreation; and
- preserves wilderness in an unimpaired condition.

Section 4(d)(6) of the Wilderness Act authorizes commercial services that are proper for realizing wilderness purposes. A determination on whether an activity is proper or appropriate for realizing a wilderness purpose is best informed by considering the following statements:

- Is the activity consistent with laws, policies, and regulations?
- Is the activity consistent with the purpose and significance of the park?
- Does the activity impact park resources or values?
- Does the activity fulfill one of the purposes of wilderness (recreational, scenic, scientific, educational, conservation, or historic)?
- Is the activity compatible with desired conditions for wilderness character?

In addition, the backcountry and wilderness management plan has established goals, desired conditions, and objectives for the future management of Glacier Bay designated Wilderness. The plan seeks to provide opportunities for and encourage public use and enjoyment of wilderness in accordance with the Wilderness Act and other laws and policies. This determination identifies those activities as proper for realizing the recreational or other purposes of wilderness should contribute to achieving and maintaining desired conditions.

For the zone descriptions and associated desired conditions of Glacier Bay designated Wilderness, please refer to "Chapter 2: General Management Direction." Desired conditions within designated Wilderness parallel those stated in the Wilderness Act as it defines the qualities of wilderness character. Refer to *Keeping it Wild 2: An Updated Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System* (USFS 2015) for definitions of wilderness character qualities.

The following activities are analyzed in this determination and will complement stand-alone extent necessary determinations for other commercial activities in Glacier Bay National Park designated Wilderness (including tour vessel, charter vessel, day use kayak, kayak overnight, and Alsek rafting and boating):

- A. Guided mountaineering (year-round)
- B. Guided on-snow travel
- C. Guided watercraft (human-powered only)
- D. Guided hiking (day use only)
- E. Guided overnight use (camping, hiking/backpacking)
- F. Guided air taxi landings
- G. Guided sportfishing (freshwater)
- H. Guided sportfishing (marine)

Two additional activities are analyzed in part I of the determination but dismissed from further analysis, recognizing that these are managed under other authorities:

- commercial and guided filming
- · commercial and guided photography

Part I begins with a description of the activity and current public use (not specific to commercial services) and then analyzes whether the activity is proper for realizing wilderness purposes.

A. Mountaineering (Year-Round)

Mountaineering consists of summiting a mountain, often by climbing, using specialized equipment such as ropes, harnesses, and carabiners to assist the climb. Mountaineering within the Fairweather Range typically occurs in April and May, when conditions are most ideal for summitting, also creating a greater likelihood of overlapping parties seeking to summit simultaneously. In addition to the Fairweather Range, mountaineering occurs in other locations throughout the park, including Rendu Glacier and the Chilkat Range. Popularity of mountaineering within the park has decreased due to plant succession, glacial retreat, emerging landscapes, and changing recreational uses.

Specific to commercial mountaineering, post-ANILCA planning to implement Glacier Bay designated Wilderness identified a unique opportunity to provide one of the few noncommercial climbing opportunities in North America within designated Wilderness. As a result, it determined Mount Fairweather would be "closed to commercial mountaineering." In 2002, following requests from commercial operators to provide mountaineer services, the superintendent allowed minimal guided mountaineering for the 2003 season to grant park management staff time to gather information related to visitor demand for this activity and potential impacts to the ethnographic resources of the Fairweather Range. Starting in 2003, two guided mountaineering trips in the Fairweather Range were authorized each year until 2012. Commercially guided climbing was authorized "in order to evaluate the need and appropriateness of the service in preparation for a new backcountry management planning process" (NPS 2002). Since 2012, commercially guided climbing has been authorized on a case-by-case basis in the Fairweather Range.

Mountaineering trips are often supplemented with aircraft use for transportation into and out of the park, and commercial guides will hire one of the air taxi operators that currently hold a permit. Park staff noted that previous guided excursions entered through the northeast side of the park, mountaineered, rafted down to the marine water, and then kayaked to Bartlett Cove. However, this type of trip has not occurred in a long time.

While mountaineering is a proper use for achieving the purpose of the Glacier Bay Wilderness, the extent to which it is necessary is evaluated in parts 3 and 4 of this appendix.

B. On-Snow Travel

This activity is inclusive of recreational activities, such as human-powered snow sports and including by board (e.g., skiing, snowboarding), snowshoeing and hiking on snow, and considering potential other emerging recreational uses as they arise. The towing of persons on skis, sleds, or other sliding devices by motorized vehicles is prohibited except in the ANILCA additions, including the Glacier Bay Preserve.

Specific to commercially guided on-snow travel, areas east of the Fairweather Range traditionally have not authorized this activity to facilitate certain visitor experiences emphasizing self-reliance. Per current CUA stipulations, a maximum of three guided on-snow travel trips and three guided ski touring trips are authorized per company per year.

The activity of on-snow travel is deemed proper for realizing the public purpose of the Glacier Bay Wilderness. The extent to which it is commercially necessary specific to backcountry and wilderness management plan zoning is evaluated in parts 3 and 4 of this appendix.

C. Watercraft (Human-Powered Only)

Human-powered watercraft is inclusive of activities in which visitors use a vessel, in conjunction with oars, paddles, poles, pedals, or cranks, to navigate through water. Human-powered watercraft activities may depart from land, entering designated Wilderness waters by water through the Beardslee Cut out of Bartlett Cove (as tide conditions allow, which is growing more limited due to isostatic rebound) or off of a marine vessel. Glacier Bay National Park marine designated Wilderness is the only place in Alaska in the national park system that offers this rare opportunity for human-powered travel in marine wilderness waters with seamless connections to freshwater (estuaries, rivers, streams, outwashes) and shorelines also in designated Wilderness. This opportunity makes for an incomparable and immersive wilderness experience. On the Outer Coast and other remote wilderness areas, where freshwater streams are under NPS jurisdiction, packrafting is growing in popularity as a human-powered activity in which visitors backpack to a water source carrying an inflatable raft and then paddle up or downstream or use the raft to ford across. The activity often combines hiking, overnight use, and paddling.

Specific to commercial operations, guided kayak services are a traditional service area within Glacier Bay National Park, both as an overnight extended trip option, and as a day use opportunity based in the park frontcountry. In recent years, park staff has also noted emerging recreational uses, such as stand-up paddle boarding. A stand-up paddleboard allows users to stand or kneel on a large board and paddle from one location to another.

While the activity currently does not support overnight use due to lack of storage, it has increased in popularity for day use.

Kayaking and rafting are long-standing uses of the Glacier Bay Wilderness and serve as the main form of nonmotorized access for independent travelers. Other emerging human-powered watercraft activities, such as paddle boarding and packrafting, also enable marine wilderness and freshwater exploration. Thus, these activities are considered proper in helping achieve the recreational purposes of wilderness.

D. Hiking (Day Use Only)

No established trails exist in most of the Glacier Bay Wilderness, so the majority of hiking occurs either on wilderness shorelines surrounding wilderness waters, or, for most of the park, along the edge of designated Wilderness (the boundary is mean high tide). People also seek to hike in areas devoid of vegetation that inhibits free movement and allows access up to vantage points, especially around tidewaters and glacial environments, scenic viewpoints, and wildlife viewing hot spots. The following areas of the park are most popular for day use hiking: Gloomy Knob, Lamplugh Glacier, Reid Inlet, McBride Inlet, Fern Harbor forelands, and Dundas Bay. Hiking was a more popular activity in 1980 than it appears to be now, as successional advances in vegetation have made formerly accessible terrain challenging to travel through. People access areas for hiking through a variety of means. Hiking only accessible by water or in remote areas features human-powered watercraft, private boat, charter boat, tour vessel, day boat, and small plane.

Wilderness hiking also originates from Bartlett Cove, primarily on trails (Bartlett River Trail, Bartlett Lake Trail) or from beaches, where walking is relatively easy (Point Gustavus route). Originating from outside the frontcountry (and on non-NPS land), wilderness hiking tends to focus on areas accessible by Gustavus roads, primarily on the Towers Trail (17B easement) but also on primitive social and animal trails or where backcountry navigational skills are required (from the Dude Creek Critical Habitat Area, from the Falls Creek Hydroelectric Project Corridor, and proximate to the Salmon River).

Specific to commercial services, hiking tours within Glacier Bay National Park are defined as guided walking and sightseeing tours that occur within the same day. Currently, day hiking occurs without a guide in areas of the park near Bartlett Cove and during trips when a motorized vessel anchors and its passengers hike on land above mean high tide in designated Wilderness. Near Bartlett Cove, guided day hiking is authorized only in the Frontcountry Management Zone, such as on the Forest Trail, Tlingit Trail, and Campground Trail, and will be authorized on future planned trails (Coopers Notch Trail and Inner Lagoon Trail). Guided day hiking is not authorized past the designated Wilderness boundary (Bartlett River Trail, Bartlett Lake Trail, Towers Trail, Point Gustavus route, and Excursion Ridge).

While day hiking is a proper activity within Glacier Bay to help visitors experience the recreational purposes of wilderness and provide opportunities for solitude, the extent to which it is necessary in designated Wilderness proximate to the frontcountry is evaluated in parts 3 and 4 of this appendix.

E. Overnight Use (Camping, Hiking/Backpacking)

Overnight use may apply to many of the activities listed previously and consists of carrying necessary supplies with the intent of establishing temporary overnight camps on wilderness lands. Overnight use does not involve the use of improved campground facilities. Although most of the activities included in this section may be offered as day use-only activities (excluding mountaineering), they may also be combined with overnight camping.

Specific to commercial services, overnight use may occur in tandem with the following activities:

- A. Mountaineering (year-round)
- B. On-snow travel
- C. Watercraft (human-powered only)
- D. Hiking
- E. Airplane/air taxi landing (as transportation support of authorized overnight uses, and where passengers leave the air taxi as described in CUA stipulations)
- F. Sportfishing (freshwater)
- G. Sportfishing (marine)

Overnight use is a necessary and appropriate activity within Glacier Bay National Park due to the vastness of the park and the type of activities visitors participate in during their trips. Overnight use allows visitors to experience wilderness and backcountry within the park through backpacking trips, kayaking, mountaineering, on-snow travel, and other activities. These experiences are unique and consistent with purposes of wilderness because they allow visitors to witness the educational, scientific, and recreational purposes of wilderness.

This determination will consider the extent to which overnight use is necessary within the Glacier Bay Wilderness, and the evaluation will apply to all commercial operators that provide this activity in conjunction with other recreational activities.

F. Air Taxi Landings

Airplane landings in designated Wilderness are an appropriate activity within Glacier Bay National Park due to the vastness of the park and range of proper wilderness activities it enables visitors to participate in during their trips, including many described in this appendix.

ANILCA authorizes fixed-wing aircraft landings and take offs in Alaskan designated Wilderness areas, except as prohibited under section (4)c of the Wilderness Act (helicopter and rotary-wing aircraft landings, take offs, and dropping off or picking up material and supplies). Under park-specific restrictions, floatplane landings and transiting in Glacier Bay (including designated Wilderness) is managed seasonally to offer a range of visitor experiences, including recreational opportunities in nonmotorized settings. Also, while the National Park Service does not manage airspace, the Federal Aviation Authority guidance for

"Noise-Sensitive Areas" (Circular 91-36D Visual Flight Rules) applies, and section 1110(a) of ANILCA specifically authorizes the secretary of the interior to issue "reasonable regulations" to protect the "natural and other values" of the affected area. This section also authorizes the secretary to close an area otherwise open to these types of motorized vehicles for such "special access" if, after notice and a hearing in the vicinity of the affected area, the secretary finds that such use would be "detrimental to the resource values of the unit or area."

Specific to commercial services, an air taxi is a plane in which the majority of the passengers on the flight must either be dropped off or picked up from a day trip or overnight stay and passengers do not remain within the airplane while on the ground. These planes may be either wheeled or floatplanes (seaplanes). Under CFR 13.1180, seaplanes are not considered a motor vessel within Glacier Bay National Park. Currently, seaplanes may dock at the Bartlett Cove Public Use Dock only within designated areas. Under 36 CFR 13.1180, seaplanes are prohibited during varying seasons in locations throughout the park. Please refer to the Code of Federal Regulations for more information or current CUA air taxi stipulations.

Because the activity of airplane landings provides visitor access to the park in designated Wilderness under ANILCA (unlike wilderness areas in the rest of the United States), it is deemed proper for realizing the public purpose of the Glacier Bay Wilderness. This determination will consider the extent to which air taxi use is necessary within the Glacier Bay Wilderness, including in conjunction with other commercial activities.

G. Sportfishing (Freshwater)

Freshwater fishing in Glacier Bay designated Wilderness meets the recreational purposes of wilderness and offers an intimate experience that can deeply connect people with the aquatic environment, surrounding scenery, and intact ecosystems. This opportunity is available extensively throughout the region and Alaska and consists of primarily hike-in sportfishing opportunities along streams. Motorboats and kayaks also access freshwater streams for fishing.

While many streams in designated Wilderness only attract very dispersed and periodic use, concentrated sportfishing on spawning streams (by all user types, guided and public users) can pose concerns about impacts to the natural and solitude qualities of wilderness due to

- easy access by boat (from marine waters) or trail (Bartlett River) to many freshwater systems
- the potential for highly localized activity, including on small and newly emerging glacially influenced creeks with small populations of species that can be easily targeted
- a greater potential during fish spawning runs for bear-human conflicts
- wildlife displacement or habituation
- motorboat noise and wakes, which may occur from boat use by commercial or noncommercial users

This activity may also help fulfill the educational purpose of wilderness through guide interpretation to educate visitors on Leave-No-Trace principles, federal and state regulations, and fish history and ecology. Further, specific to fish stocks and streams, the following protections are in place to protect the natural quality of wilderness character:

- National Park Service law and policy identifies that the agency must leave park resources and values unimpaired and defines when harvesting plants and animals is allowed.
- A master memorandum of understanding exists between the National Park Service and the Alaska Department of Fish and Game with a collaborative sustainable fisheries management framework.
- Protective federal and nonconflicting State of Alaska laws, including superintendent authority, address threats to park resources or values.

Specific to bear-human conflicts, the following protections are in place to protect the natural quality of wilderness character:

- Bear management plan (2013)
- Bear-specific content in concessioner orientations and operating conditions
- Compendium regulations on proper fish handling to reduce habituation and wildlife displacement

Addressing the wilderness quality of solitude, a range of limiting conditions currently reduce concerns around concentrated freshwater sportfishing activity in Glacier Bay National Park designated Wilderness. These conditions include park remoteness, the expense of a visit, limited prime season services (transportation, guiding, and rentals), required equipment (boat for marine access), and NPS-regulated marine vessel quotas to protect park wildlife and other resources while providing a range of recreational opportunities for park visitors. Lastly, the park uses a variety of measures to disperse users, set limits on group sizes, manage specific delivery modes to reduce concentrated use, prohibit vessel access within a certain distance of salmon streams, and discourage site damage on sensitive stream banks and tidal estuaries.

Specific to commercial services, recognizing that commercial ventures can concentrate use and site damage on sensitive stream banks and tidal estuaries and reduce wilderness character qualities, including solitude, only specific historic operators (prior to 1979) are allowed to provide this service.

Freshwater fishing is a proper activity for realizing the recreational purpose of wilderness at a limited scale (such as within VQOR quotas and allowable catch limitations) in which the dispersion of users and mitigations minimize natural disturbances or impairment of resources. The extent to freshwater fishing is necessary in designated Wilderness is evaluated in parts 3 and 4 of this appendix.

H. Sportfishing (Marine)

Glacier Bay National Park is the only place in Alaska and the national park system with marine designated Wilderness, making it a rare opportunity regionally and nationally. In this context, guided marine or saltwater sportfishing meets the recreational purposes of wilderness. Sportfishing consists of primarily motorized vessel-supported angling in designated Wilderness marine waters, including catch-and-release angling and angling for the harvest and consumption of targeted species (within legal fishery catch limits). Moreover, unlike freshwater sportfishing in which Glacier Bay opportunities are more comparable to other opportunities in the region and state, marine wilderness outside the park does not exist, and, therefore, guided fishing in marine wilderness is not available outside of the park. Glacier Bay is a marine sportfishing destination of national acclaim for its

- attractive species for angling and eating, including halibut and a variety of salmon
- exceptional fish sizes and quantities, in stark contrast to fisheries elsewhere, in part due to Glacier Bay-specific measures to protect marine abundance (commercial fisheries buyout, vessel quotas, and capacity management).
- immersive, uncrowded boating experiences consistent with park general management plan directions that "balance forms of access and use to obtain a feeling of the ruggedness and wildness of this dynamic landscape and the solitude" (NPS 1984) as set forth in park vessel quotas and operating requirements.
- a scenic setting combined with stringent coastal and marine environment protections that showcase how pristine marine ecosystems look and function

Concentrated marine sportfishing within Glacier Bay National Park (by all user types, guided and public users) can pose concerns about impacts to the natural and solitude qualities of wilderness due to

- easy access by boat
- limited marine wilderness concentrating the use of marine sportfishing
- potential for wildlife displacement or habituation
- motorboat noise and wakes, which may occur from boat use by commercial or noncommercial users

As a marine angling destination attractive to guided and private users, Glacier Bay waters have several existing limitations that reduce the likelihood of unacceptable impacts to park resources and values (including to natural and solitude qualities within the park's approximately 53,000 acres of marine designated Wilderness):

• Use is highly dispersed, with marine angling opportunities extensively available in nonwilderness and nonpark areas nearby.

- The activity has limited participation in wilderness waters due to seasonal park regulations that limit the use of motorized vessels in certain park waters to provide a diversity of visitor experiences.
- National Park Service-regulated marine vessel quotas protect park wildlife and other resources while providing a range of recreational opportunities to park visitors.

This activity may also help fulfill the educational purpose of wilderness through guide interpretation to educate visitors on Leave No-Trace principles, federal and state regulations, and fish history and ecology. Further, specific to fish populations, the following protections are in place to protect the natural quality of wilderness character:

- National Park Service law and policy identifies that the agency must leave park resources and values unimpaired and defines when harvesting plants and animals is allowed.
- The International Pacific Halibut Commission (IPHC) sustainable fisheries management protections under the international Halibut Treaty of 1923 is supported by IPHC population sampling and monitoring within Glacier Bay National Park waters.
- A master memorandum of understanding exists between the National Park Service and the Alaska Department of Fish and Game with a collaborative sustainable fisheries management framework.
- Protective federal and nonconflicting State of Alaska laws, including superintendent authority, address threats to park resources or values.

Specific to commercial services, guided marine sportfishing within designated Wilderness traditionally has been required to limit group sizes to match the scale of noncommercial users and to disperse visitors and reduce concentrated fish harvest.

Marine fishing is deemed proper for realizing the recreational purpose of wilderness, with mitigations to minimize natural disturbances or impairment of resources, and at a modest scale (i.e., within charter vessel class passenger limits, VQOR quotas, allowable catch limitations).

Activities Dismissed from Further Analysis

Two additional activities are analyzed in part I of the determination but dismissed from further analysis, recognizing that these activities are managed under other authorities:

Commercial and Guided Filming

While the Wilderness Act defines filming as a commercial service within wilderness, a recent finding from *Price v. Barr* (January 2021) required the National Park Service to update its guidance on commercial filming permits. Currently, special use permits are required for commercial filming opportunities within national parks, and park management should evaluate requests on a case-by-case basis. However, when permits are granted, operating

guidelines will be included to preserve wilderness character and prohibit motorized equipment, as necessary.

Commercial and Guided Photography

Guided photography is currently not a commercially authorized use within the Glacier Bay Wilderness; however, the activity currently occurs within the Bartlett Cove developed area along the following trails: Forest Trail, Tlingit Trail, Campground Trail, and to the wilderness boundary on the Bartlett River Trail and Point Gustavus route.

The activity may include supplemental educational opportunities, such as workshops in nature or carrying art easels, to teach photography and painting. Commercially guided photography as a stand-alone activity is currently not authorized within the Glacier Bay Wilderness because it is not necessary for realizing the purposes of wilderness. However, this activity, when paired with others such as hiking, may enhance the educational and scenic purpose of wilderness. Therefore, the activity may be offered in conjunction with other commercially guided activities, and operators must follow all regulations and guidelines.

Part II: Aspects of Wilderness Activities that May Necessitate Commercial Support

Part II of the analysis sets up the framework for considering the extent to which these forms of commercial service support are necessary, which depends on a number of factors. The framework evaluates six broad categories that are listed below. This analysis considers what the park seeks in terms of self-reliant experiences as opposed to novice or introductory experiences, and the range of social and environmental conditions that can be provided while preserving wilderness character. This determination represents a comparative and qualitative analysis of the relevant wilderness factors and determines whether commercial services are necessary and if so, the number of commercial services that are necessary. At the same time, this broad analysis does not represent the totality of services that may be considered when considering commercial services and operating conditions in designated Wilderness.

Glacier Bay's wilderness presents an inherently challenging environment for traveling to and throughout. To be conducted safely and in a manner that preserves wilderness character, wilderness activities often require specialized skills, knowledge, or equipment. Particularly in Glacier Bay, such activities may require technical skills, safety practices associated with exposure and environmental factors, and special equipment for which knowledge of the dynamic landscape and marine conditions can make trip and itinerary choices safer and more rewarding. Visitors to wilderness vary in their ability to conduct these more specialized or technical wilderness activities. Therefore, when parks choose to provide opportunities for these types of visitor activities, some level of commercial support may be necessary.

Specialized Skills or Knowledge

For some wilderness visitors the need for, or lack of, specialized skills or knowledge can be a barrier to engaging in that activity. A commercial service may support a visitor activity by providing or teaching the skills or knowledge that are needed to engage in a proper wilderness activity. This support may take the form of guiding, in which the outfitter/guide

provides the necessary skills or knowledge to the individual or group participating in the activity. A commercial service may also take an instructional form, in which the outfitter/guide teaches an individual or group the necessary skills or knowledge so that they may independently participate in the activity in the future. In the latter case, the level of instruction may range from basic or introductory wilderness skills and knowledge to advanced technical skills and knowledge. Guides and instructors are also able to provide local knowledge that can make a wilderness trip safer and more rewarding for visitors who are unfamiliar with a wilderness area.

Specialized Equipment or Services

Wilderness activities may require specialized equipment or services that cannot be provided by all wilderness visitors who wish to engage in a certain activity. Regarding specialized equipment, the expense, care, or space required for that equipment may be too great for some wilderness visitors to provide without support from a commercial service provider. Visitors may wish to try out an activity before making the financial commitment to purchase equipment. Some visitor trips may require services, such as the transporting of equipment or supplies that cannot be provided without commercial support. For each activity that has been determined to be proper for the recreational or other purposes of wilderness, this analysis will discuss the specialized equipment or services that may necessitate commercial support.

Special Safety Concerns

Wilderness activities may involve special safety concerns that cannot be managed by all wilderness visitors without commercial support. The National Park Service does not attempt to eliminate the risks inherent in wilderness travel or those associated with participation in wilderness activities. However, for some visitors, a commercial provider may be a necessary means of managing those inherent risks or may be a means to acquire the requisite knowledge to manage those risks independently in the future. For each activity that has been determined to be proper for the recreational or other purposes of wilderness, the analysis will discuss the special safety concerns that may necessitate commercial support.

Special Resource Concerns

Wilderness activities may involve the potential for impacts to wilderness resources. A commercial service provider may be a means to ensure that activities are conducted in appropriate locations and in a manner that mitigates or minimizes resource impacts. For each activity that has been determined to be proper for the recreational or other purposes of wilderness, the analysis will discuss the special resource concerns that may necessitate commercial support. Also, specific to Glacier Bay National Park, explicit protection is also needed for sensitive historic, cultural, and ethnographic resources specifically recognizing the centuries-old and rich cultural traditions of indigenous people and other residents to lands now managed as wilderness, including living and evolving Tlingit cultural connections to their Homeland.

Other Contributions that Support Wilderness Purposes

Commercial services most often support wilderness visitors in their recreational activities, but they may also independently or cooperatively support scenic, scientific, educational, historic, or conservation objectives.

Introductory Experiences

Commercial service providers can give assistance to visitors who lack the experience or confidence to attempt a wilderness adventure on their own. These types of trips can introduce a diverse public to a variety of ways to experience their public lands. Commercial service support can build confidence in visitors and lead to more self-reliant wilderness trips in the future. Introducing novice visitors to their publicly owned wilderness can provide rewarding experiences, build support for long-term wilderness preservation, and improve wilderness education.

Part III: Commercial Services That Are Necessary for Each Proper Activity

This section uses the categories provided in part II to analyze the aspects of activities identified as proper in part I that may necessitate commercial support to achieve wilderness purposes. This analysis framework focuses on outstanding opportunities for solitude or a primitive and unconfined type of recreation—recognizing that many forms of recreation enjoyed by the public do not require a wilderness setting and are more appropriate in other venues (like the frontcountry or on a day boat), where risks can be minimized, and visitor comfort, convenience, and social settings (including a greater tolerance for crowding) are emphasized. Further, unlike many wilderness areas, Glacier Bay National Park offers people of all ages and abilities opportunities to experience wilderness from the outside looking in (surrounded by and deeply experiencing a wilderness landscape at a safe distance from the deck of a cruise, a tour, or a smaller vessel or from Bartlett Cove shorelines).

A conclusion regarding the necessity for commercial services is made for each activity within the wilderness management zones in Glacier Bay National Park. The use of commercial services in wilderness will only be permitted when they allow visitors to use and enjoy wilderness in a manner that is consistent with the preservation of wilderness and its associated desired conditions. The amount and extent of commercial services that will be allowed in each management zone is addressed in part IV.

Table B-1a. Reasons That Commercial Support Is Necessary for Mountaineering and On-Snow Travel

Activity	A. Guided Mountaineering (Year-Round) B. Guided On-Snow Travel				
Specialized skills or Knowledge	Route finding, wayfinding, use of equipment for protection, orienteering, knowledge of environmental and weather hazards, understanding of rock and ice conditions, Leave No Trace practices, ski or other on-snow travel skills, winter survival, avalanche awareness, and leadership.				
Specialized equipment or services	Ropes, climbing equipment and aids, ice axes, crampons, skis, snowshoes, and survival equipment (e.g., avalanche beacons, shovels).				
Special safety concerns	Minimize risk through education, training, and ensuring safe and Leave No Trace practices. Knowledge of safe routes and mountain conditions, winter survival, winter route finding, and avalanche awareness.				

Activity	A. Guided Mountaineering (Year-Round) B. Guided On-Snow Travel				
Special resource concerns	Mountaineering access and social trails, knowledge of what is allowed and what is prohibited (e.g., fixed anchors) including laws to protect cultural resources (no cairns on mountain tops, restricted access to sacred sites including cave karst systems). Proper disposal of human waste, knowledge of sensitive plant species.				
Other contributions	Mountaineering, particularly along the Fairweather Range, is a primitive form of recreation and may be considered a traditional value of wilderness to be immersed in a natural setting. Guide acknowledgement of and respect for Tlingit Homeland, its cultural and ethnographic resources, and authentic tribe-approved cultural interpretation.				
Introductory experiences	This service supports an introductory experience for a less common but proper wilderness activity.				
Conclusion	Mountaineering and on-snow travel activities are proper for realizing the public purposes of wilderness. The high-level skills, specialized equipment, safety issues, and knowledge required for this activity listed in this table are barriers that may impede the ability of some visitors to realize the values inherent in a wilderness experience. Commercial support for these activities may include introductory experiences for novice visitors and further foster stewardship.				

Table B-1b. Reasons That Commercial Support Is Necessary for Human-Powered Watercraft and Day Hiking

Activity	C. Guided Watercraft (Human-Powered Only) D. Guided Hiking (Day Use Only)				
Specialized skills or knowledge	Wayfinding, kayak, orienteering, the use of tide charts and maps for marine navigation, appropriate food storage in wilderness, wilderness first aid, sanitation and waste disposal, leadership, and Leave No Trace practices.				
Specialized equipment or services	Proper use of kayak and safety equipment. Access to rubber boots and raingear and other equipment to protect from inclement weather and sea conditions.				
Special safety concerns	Marine environment, challenging open water crossings, wildlife encounters, orienteering/wayfinding, wilderness first aid, cold water emergency rescue, weather.				
Special resource concerns	Avoid bird nesting areas, marine mammal haul-outs, and other sensitive areas. Knowledge of sensitive natural and cultural resources, including of tribal protocol and protective laws pertaining to cultural features and sites.				
Other contributions	Introductory experiences and guided trips can lead to a better visitor understanding of wilderness character, purposes, and values, and assist the public in being capable and confident to appropriately experience their public lands and wilderness lands and waters. Guide acknowledgement of and respect for Tlingit Homeland, its cultural and ethnographic resources, and authentic tribe-approved cultural interpretation.				
Introductory experiences	Provide people with the necessary skills to engage in self-reliant recreation.				
Conclusion	Day hiking and human-powered watercraft activities are proper for realizing the public purposes of wilderness. The skills, equipment, and safety issues listed previously are barriers that can impede the ability of some visitors to realize the values inherent in a wilderness experience. These factors necessitate some level of commercial support for these recreational activities. The availability of commercial support may also enable introductory wilderness experience opportunities.				

Table B-1c. Reasons That Commercial Support Is Necessary for Overnight Use

Activity	E. Guided Overnight Use			
Specialized skills or knowledge	Route finding, wayfinding, use of equipment for protection, orienteering, knowledge of environmental and weather hazards, Leave No Trace practices, bear knowledge, and safety practices.			
Specialized equipment or services	Communication devices capable of establishing two-way communication, park backcountry orientation, understanding of bear habitat, and measures to preserve the natural environment.			
Special safety concerns	Minimize risk through education, training, and ensuring safe and Leave No Trace.			
Special resource concerns	Allows for appropriate wilderness equipment to be utilized (e.g., food storage containers, tents, etc.) and proper disposal of human waste. Knowledge of sensitive natural and cultural resources, including of tribal protocol and protective laws pertaining to cultural features (village sites, grave sites, sacred features like caves, karsts, and cairns).			
Other contributions	Allows visitors to carry supplies to reach various zones of wilderness and/or extend their stays beyond one day to more thoroughly immerse themselves in a wilderness experience. Allows visitors to experience wilderness from the land and to access tidewater glaciers. Guide acknowledgement of and respect for Tlingit Homeland, its cultural and ethnographic resources, and authentic tribe-approved cultural interpretation.			
Introductory experiences	This service supports an introductory experience for a proper wilderness activity.			
Conclusion	Overnight use is an activity that is proper for realizing the public purposes of wilderness and possess attributes that necessitate commercial support for other proper activities in Glacier Bay Wilderness, including kayaking, hiking, mountaineering, on-snow travel, and fishing.			

Table B-1d. Reasons That Commercial Support Is Necessary for Air Taxi Landings

Activity	F. Guided Airplane/Air Taxi Landings				
Specialized skills or knowledge	Pilot skills and experience, aeronautical decision-making, understanding of weather conditions, knowledge of Federal Aviation Administration (FAA) requirements.				
Specialized equipment or services	Specialized equipment includes the plane itself, certifications may be necessary, spill kit onboard, and communication devices onboard.				
Special safety concerns	Follow US Department of Transportation hazmat guidelines for proper handling, transportation, and storage of hazardous materials.				
Special resource concerns	Proper methods for transporting hazardous materials such as stove fuel or bear spray; air quality; alpine species sensitive to overflight noise (mountain goat kidding areas between May 1 and June 15 and winter habitat between November 15 and April 30), preservation of wilderness character; and cultural resources near landing areas.				
Other contributions	Air taxi landings help facilitate other activities that achieve the recreational purpose of wilderness and provide access to remote areas of the park.				
Introductory experiences	This service supports an introductory experience for a less common but proper wilderness activity.				
Conclusion	Air taxi landing is proper for realizing the purposes of wilderness. such as recreational, scenic, educational, and scientific. Air taxi landing facilitates activities that occur in remote areas of the park, such as the Fairweather Range or interior areas that may be difficult to access or take long periods of time. The high-level skills, specialized equipment, safety issues, and resource concerns identified in this table demonstrate the necessity for commercial service operators to help provide wilderness experiences to Glacier Bay visitors.				

Table B-1e. Reasons That Commercial Support Is Necessary for Freshwater Fishing

Activity	G. Guided Sportfishing (Freshwater)			
Specialized skills or knowledge	Wayfinding and the use of tide chart maps for marine navigation and knowledge of park regulations (including for nonmotorized marine waters). Wilderness character stewardship and fishing conservation ethics recognizing that fishing is one of a few extractive uses that are allowed in wilderness. Knowledge of fish species (ability to identify).			
Specialized equipment or services	Fishing equipment, a vessel to access hike-in points for freshwater streams (marine shorelines, Bartlett River Trailhead), or to access upstream fishing locations.			
Special safety concerns	Marine waters with dangerous conditions and changing tides, human-wildlife conflict, environmental and weather conditions.			
Special resource concerns	Guides and visitors must be aware of any species that may be threatened or endangered throughout the park and rules to reduce bear habituation. Dispersed use, restricted use, and closures may occur to mitigate effects to species and to reduce any impacts to wildlife displacement. Knowledge of sensitive natural and cultural resources, including of tribal protocol and protective laws pertaining to cultural features and sites.			
Other contributions	Fishing is a primitive form of recreation that can lead to increased self-reliance. Guided services can provide education on the appropriate methods and regulations for fishing and encourage fishing conservation ethics and leave-no-trace principles. Guide acknowledgement of and respect for Tlingit Homeland, its cultural and ethnographic resources, and authentic tribe-approved cultural interpretation.			
Introductory experiences	This service supports an introductory experience for a proper wilderness activity.			
Conclusion	Freshwater fishing is an activity that is proper for realizing the public purposes of wilderness and possesses some attributes that necessitate commercial support in Glacier Bay Wilderness (travel by floatplane or motorboat to reach remote freshwater streams to participate requires specialized skills and knowledge, uses specialized equipment, and involves safety and environmental concerns). Guided services can provide education on the appropriate methods and regulations for fishing and encourage fishing conservation ethics and Leave No Trace principles.			

Table B-1f. Reasons That Commercial Support Is Necessary for Marine Fishing

Activity	H. Guided Sportfishing (Marine)				
Specialized skills or knowledge	Wayfinding and the use of tide chart maps for marine navigation. Knowledge of park regulations (including for nonmotorized waters). Wilderness character stewardship and fishing conservation ethics recognizing that fishing is one of a few extractive uses that are allowed in wilderness.				
Specialized equipment or services	Communication device capable of establishing two-way communication, fishing equipment, measures to preserve the natural environment, a vessel for navigating the water.				
Special safety concerns	Fast and cold waters with dangerous conditions, human-wildlife conflict, changing tides, environmental and weather conditions.				
Special resource concerns	Guides and visitors must be aware of any species that may be threatened or endangered throughout the park to mitigate wildlife displacement or habituation. Dispersed use, restricted use, and closures may occur to mitigate effects to species. Knowledge of sensitive natural and cultural resources, including of tribal protocol and protective laws pertaining to cultural features and sites. Impacts to wilderness character from vessel noise and operation should be reduced and mitigated.				
Other contributions	Fishing is a primitive form of recreation that can lead to increased self-reliance. Guided services can provide education on the appropriate methods and regulations for fishing and encourage fishing conservation ethics and Leave No Trace principles. Guide acknowledgement of and respect for Tlingit Homeland, its cultural and ethnographic resources, and authentic tribe-approved cultural interpretation.				
Introductory experiences	This service supports an introductory experience for a proper wilderness activity.				

Activity	H. Guided Sportfishing (Marine)
Conclusion	Marine fishing is an activity that is proper for realizing the public purposes of wilderness and possesses some attributes that necessitate commercial support in Glacier Bay Wilderness. The activity requires specialized skills and knowledge, uses specialized equipment, involves safety and environmental concerns, and natural resource concerns. Glacier Bay National Park is one of the few areas with designated marine Wilderness; consequently, the activity is not offered in areas outside of the park and is unique. Guided services can provide education on the appropriate methods and regulations for fishing and encourage fishing conservation ethics and Leave No Trace principles.

Part IV: Extent of Commercial Services Determined Necessary for Each Proper Activity in Wilderness

This section evaluates each proper activity in conjunction with the desired conditions and visitor capacities to determine the extent of commercial services that are proper throughout each zone. A visitor capacity analysis (on file at the park) identified the visitor capacity for specific areas of the park and was used to inform the commercial allocation associate for each proper activity. A conclusion is reached about the amount of overall level of use that may be commercially supported. Other mechanisms available for the management of commercially supported activities are discussed where relevant.

Current use levels for each activity do not necessitate daily monitoring. Park staff monitors commercial visitor services on an annual basis by reviewing CUA and concession contract activity reports. This monitoring of commercial use will continue annually to determine if any adjustments are necessary through an adaptive management strategy. All commercially guided activities will operate in a manner that is consistent with preserving wilderness character and policy.

The quality of visitor experience in the Glacier Bay Wilderness is deeply enhanced by standing on shore, kayaking the waters of the bay, traversing a glacier, or camping among the wild remote lands of Alaska. These opportunities allow visitors to intimately experience the sounds and scenery of the park. While many visitors to the park view wilderness from the deck of a boat, when one has the experience of comparing the immensity of a brown bear paw print to one's own hand or feel a connection to the indigenous people who have survived off the wilderness land for centuries, the experience can be profound.

To be consistent with the desired conditions set forth for natural and cultural resources, visitor use and experience, and the preservation of wilderness character, all groups within the Glacier Bay Wilderness will not camp on shore within sight and sound of other groups. Due to the popularity of recreational activities and particular locations in the glacial environment, topography, and weather, guided groups may encounter others. Encounter rates serve as an indicator that allow park management to better understand if desired conditions for visitor experience and wilderness character are being achieved. For more information, please see "Chapter 4: Wilderness Character Monitoring."

Table B-2 presents a high-level summary of activities that may be commercially guided within each management zone identified in chapter 2. The narrative rationale for each activity and applicable measures and standards are outlined under each respective activity.

Table B-2. Zoning and Commercial Services

Management Zone (see chapters 2 and 3 for detailed descriptions)	A. Guided Mountain- eering (Year-Round)	B. Guided On-Snow Travel	C. Guided Watercraft (Human- Powered Only)	D. Guided Hiking (Day Use Only)	E. Guided Overnight (Camping, Hiking/ Backpacking)	F. Guided Air Taxi Landing	G. Guided Sportfishing (Freshwater)	H. Guided Sportfishing (Marine)
Remote Wilderness – Aasgatú	Yes	Yes	No	No	Yes	Yes	No	No
Shoreline Access Outer Coast - Yán shooka Glacier Bay - Yán	Transitional	Yes	Yes	Yes	Yes	Yes	Conditional	No
Wilderness Waters – L'é Héen	*	*	Yes	*	*	No	Conditional	Yes
Glacier Access – Yinaadé S'ít	Transitional	Yes	Yes	Yes	Yes	Yes	Conditional	No
Frontcountry Access – Yinaadé Aaní	No	No	Yes	No	No	No	No	No

^{*}While no specific prohibition exists, the nature of the environment and the activity naturally preclude these activities.

A. Guided Mountaineering (Year-Round)

The activity of mountaineering is proper for realizing the public purposes of wilderness, and the park determined that commercial support was appropriate. This decision aligns with the management direction provided in the general management plan, which indicates that commercial services should facilitate visitor access in the least accessible areas of the park.

Guided mountaineering trips may occur within the Fairweather Range and along the Chilkat Range, which lies along the eastern border of the park and borders wilderness managed by the US Forest Service and Bureau of Land Management. Both of these mountain ranges, in addition to other areas of the park, lie within the Remote Wilderness Zone of the backcountry and wilderness management plan (see chapter 2). This zone includes the most interior regions of the park and lands that are greater than 1 mile from the shoreline of Glacier Bay proper and more than 0.5 miles from shoreline of Icy Strait and the Outer Coast. In the Shoreline Access and Glacier Access Zones, guided mountaineering is allowed as a "transitional" activity because guided groups need to trek through lands within this zone to reach their mountaineering destinations. During this excursion, guided mountaineering groups may stay overnight within these zones before or after their trip as they transition from Glacier Bay proper to interior lands. The provision of commercially guided mountaineering trips is consistent with desired conditions to promote intact ecosystems and self-reliance with limited commercial services to facilitate some visitor experiences. However, management of commercially guided mountaineering differs across these ranges for several reasons.

First, the geographic scope and proximity of the Chilkat Range to gateway communities, such as Juneau, Gustavus, and Haines, allow guides and clients to more easily access this area of the park compared to the Fairweather Range. In addition, Mount Fairweather is typically climbed during a narrow one- to two-month window in April and May, while the Chilkat Range is generally suitable for mountaineering during a longer period of time. Second, the Fairweather Range (*Yéik Yi Aaní*, Land of the Spirits)—and Mount Fairweather (*Tsalxaan* – Ground Squirrel/Marmot Land) in particular—hold specific cultural significance to the Huna Tlingit, particularly the T'akdeintaan Clan. The Fairweather Range is the place of origin of many tales from the Raven Cycle, which shape Tlingit cultural convention, and as its Tlingit place name suggests, the entire area is a deeply sacred place. Mount Fairweather and its foothills are associated with shamanic initiation and were used for this purpose into the 20th century. The area is suitable as a Traditional Cultural Property.

To ensure the protection of sensitive cultural resources through consultation with the Hoonah Indian Association, all mountaineering trips will be prohibited from entering Karst or other cave features within the park unless a specific permit is requested by the user and granted by the National Park Service. In addition, to preserve wilderness character and the natural and cultural resources within the park, no fixed anchors may be bolted unless for the reasons described in section 4(c) of the Wilderness Act. Also, prescribed education of the cultural significance will be done by all operators as a mitigating factor to address these sensitivities.

Through this analysis and the evaluation of current mountaineering use between commercial and private users, a commercial allocation for mountaineering within the Fairweather Range has been identified as six groups per year. No more than three guided mountaineering trips per year may be offered by each company. Within the Chilkat Range, commercial allocation for mountaineering is established as 12 groups per year. All group sizes are limited to 12 people, including the guide. Based on current conditions, and because these areas are primarily accessed via commercial service operators, the commercial allocation is established at 50% of total use. Simultaneous commercial trips will be prohibited within the same area (first-come, first-served) to preserve the wilderness experience of the area.

B. Guided On-Snow Travel

The activity of on-snow travel is proper for realizing the public purposes of wilderness and park staff determined that commercial support was necessary, to an extent, to provide visitor access to tidewater glaciers, which is in the park's enabling legislation. In addition, commercially guided on-snow travel, when paired with overnight use, may allow visitors to experience more remote and wild areas of the park that are less accessible to private visitors. These immersive experiences in wilderness present visitors with opportunities to feel extreme solitude in some of the most remote areas in the entire national park system.

Commercially guided on-snow travel is prohibited in the Frontcountry Access Zone, where commercial services are limited, and the Wilderness Waters Zone to protect wilderness character. Commercially guided on-snow travel is aligned with the desired conditions for the Remote Wilderness, Shoreline Access, and Glacier Access Zones and is permitted in these zones. Although the desired conditions for the Remote Wilderness Zone include limited commercial services, on-snow travel is often required for activities such as mountaineering. Where permitted, group size is limited to 12 people (including guides and clients) and must not remain longer than three consecutive nights in the same location. For this activity, location is defined as all points within a 2-mile radius of the campsite. A commercial allocation for the Remote Wilderness Zone is identified at 18 groups per year to be consistent with guided mountaineering in this zone, with no more than three annual trips provided by each company.

In the Shoreline Access Zone, where commercial services are likely to occur but visitor self-reliance is encouraged, only one commercially guided group at a time will be allowed within sight and sound of each other to provide guided on-snow travel. In the Glacier Access Zone, which accommodates higher use to allow visitors to experience shorelines, no more than four vessels providing commercially guided services will be allowed within sight and sound of each other to provide guided on-snow travel. Current measures and standards for encounter rates in this zone are no more than five groups per day. Based on current conditions and because these areas are primarily accessed via commercial service operators, the commercial allocation is 50% of total use on an annual basis.

C. Guided Watercraft (Human-Powered Only)

The range of activities offered via human-powered watercraft is proper for realizing the purposes of wilderness, as it allows visitors to experience nonmotorized waters and unique aspects of wilderness. Park staff determined that commercial support is appropriate in

certain zones to facilitate visitor experience and the achievement of desired conditions. Because this activity includes various potential vessels (e.g., kayak, stand-up paddleboard, packrafts), the park will review emerging uses and consider the need for commercial services on a case-by-case basis.

The activity is prohibited in the Remote Wilderness Zone, which consists predominantly of wilderness lands and provides limited commercial services to promote high levels of self-reliance among visitors. Commercial guiding for this activity is deemed necessary in the Shoreline Access, Wilderness Waters, Glacier Access, and Frontcountry Access Zones because these areas include wilderness and nonwilderness waters that can accommodate nonmotorized vessel use. The guided activity may only be offered where commercial services contracts authorize it (such as for kayak concessioners) or as an incidental mode of transportation under a commercial use authorization.

Within the Frontcountry Access Zone, commercially guided day trips must depart and return from the Bartlett Cove developed area, may not exceed 12 hours in length, and do not include overnight camping. Additionally, group size may not exceed 12 people, including guides. A commercial allocation in this zone will be established at no more than 4 groups at one time with an encounter rate of no more than 10 groups in one day.

For the remaining zones (Shoreline Access, Wilderness Waters, and Glacier Access), human-powered watercraft may only be offered where commercial services contracts authorize it (such as for kayak concessioners). Because these zones are primarily accessed via vessels providing commercial services, no more than four commercial vessels at a time will be allowed within sight and sound of each other. However, if, because of topography, weather, or logistics, each group cannot remain out of sight of each other, they will remain at least one-quarter mile apart. Group size may not exceed 12, including guides, within these zones. Overnight use may be provided to complement the human-powered watercraft activity throughout the park. Please refer to the overnight use section for the commercial allocation for these activities.

D. Guided Hiking (Day Use Only)

The activity of hiking is proper for realizing the purposes of wilderness, and the park determined that commercial support is appropriate in certain zones of the park to help achieve the desired conditions for visitor experience. Given the management direction that commercial visitor services would be provided for areas of the park that are remote and, therefore, difficult to access, guided hiking will not be permitted in the Frontcountry Access Zone. In addition, to manage for the preservation of wilderness character, guided day use hiking will not be permitted in the Remote Wilderness Zone. Guided hiking is not feasible within the Wilderness Waters Zone.

Commercially guided hiking may be provided on lands within 1 mile of Glacier Bay proper, within 0.5 mile of the Outer Coast, and along access to tidewater glaciers. These locations of the park typically receive the most concentrated visitor use and allow visitors to access tidewater glaciers, which is consistent with park legislation and the provision of commercial services helps the park achieve desired conditions for these zones.

Guided day hiking, outside of the Frontcountry Access zone, is predominantly offered in areas of the park that may only be accessed via tour and charter vessel operators, classes of vessels that have the potential to carry upward of 20,000 visitors annually (NPS 2019). These vessels are authorized to provide guided day hiking activities for a group size of up to 12 visitors. When these activities occur, groups must be out of sight and sound of each other and other wilderness groups to preserve wilderness character. However, if, because of topography, weather, or logistics each group cannot remain out of sight of each other, they will remain at least one-quarter mile apart.

Through this analysis and the evaluation of current day use hiking between commercially guided and private users, a commercial allocation for day use hiking has been identified for the Shoreline Access and Glacier Access Zones. In the Shoreline Access Zone, where commercial services are likely to occur that encourage self-reliance, only one commercial group at a time will be allowed in an area for guided day use hiking. In the Glacier Access Zone, which accommodates higher use to allow visitors to experience shorelines, no more than four commercial groups at a time will be allowed within sight and sound of each other for guided day use hiking. Within this zone, the measures and standards for encounter rates are no more than five groups per day.

E. Guided Overnight (Camping, Hiking/Backpacking)

Overnight use is proper for realizing the purposes of wilderness, and park management determined that commercial support is necessary in some zones of the park to help achieve the desired conditions for visitor experience. This activity may be offered in conjunction with other recreational activities, including, but not limited to, hiking, mountaineering, kayaking, and on-snow travel. If commercial operators provide any activity in conjunction with overnight use, they are subject to the requirements for that activity, as well as those for overnight use.

Except where authorized as a primary activity in concessions contracts (such as kayak concessioners), commercially guided overnight use will be prohibited in the Frontcountry Access and Wilderness Waters Zones. Similar to day use hiking, the Frontcountry Access Zone is proximate to frontcountry areas of the park that provide developed camping opportunities and overnight accommodations, while prohibiting camping outside established areas and within specified proximities; therefore, the activity is available within a reasonable distance. The desired conditions for the Wilderness Waters Zone indicate that visitors will have an opportunity to experience solitude, challenge, and self-reliance; therefore, use in this zone will be reserved for private and independent visitors to Glacier Bay National Park and activities of comparable scale and intensity as authorized in concessions (such as kayak concessioners). This authorized use does not imply that a commercial activity will be authorized for all other locations or at all times. Annual operating agreements in this zone will determine opportunities and limitations in coordination with ongoing wilderness character and encounter monitoring and may require an annual orientation to cover key stewardship topics (e.g., designated Wilderness, resource protection, state and federal take and reporting requirements).

To facilitate activities such as mountaineering in the Remote Wilderness Zone, which includes interior lands and remote areas of the park, guided overnight use is proper for achieving the public purpose of wilderness. Group size must not exceed 12 persons, including guides and clients. The commercial allocation for guided overnight trips is three groups per company per year. Because these areas are primarily accessed via commercial service operators, the commercial allocation is 50% of total use.

Commercially guided overnight use is permitted in the Shoreline Access and Glacier Access Zones, where commercial services are likely to occur and facilitates visitor access to tidewater glaciers and experience wilderness. Group size must not exceed 12 persons, including guides and clients and cannot remain longer than three consecutive nights at the same campsite, unless specifically authorized by the superintendent. Further, except as authorized in concessions contracts and operating requirements, commercially guided groups may only camp in the Glacier Access Zone during the first and last nights of their multiday trip. Groups engaging in activities within the interior lands, such as mountaineering, should not use the beach areas as base camp. The commercial allocation for guided overnight trips is three groups per company per year. Charter vessels, primarily hired to transport visitors, may not provide overnight transportation for more than 12 people per night per the vessel quota operating requirements.

To ensure the protection of sensitive cultural resources, all overnight trips will be prohibited from entering Karst or other cave features within the park unless a specific permit is requested and granted by the National Park Service in consultation with the Hoonah Indian Association. Prescribed education will address legal protections for sensitive cultural sites (e.g., gravesites, cairns, village sites) as a mitigating factor and make available authentic tribeapproved cultural interpretation resources and Tlingit Homeland acknowledgement statements to share with guests.

F. Guided Air Taxi Landing

The activity of air taxi landing is proper for realizing the public purposes of wilderness, and the park determined that commercial support was necessary in certain zones of the park. Commercially guided air taxi landing allows visitors to experience more remote and wild areas of the park that are less accessible to visitors, allowing for immersive experiences in wilderness to present visitors with opportunities for solitude. This decision aligns with the management direction provided in the general management plan, which indicates that commercial services should facilitate visitor access to the least accessible areas of the park.

Commercial air taxi landings are allowable in the Remote Wilderness, Shoreline Access, and Glacier Access Zones. In the Remote Wilderness Zone, guided air taxi landings are often used for mountaineering and/or on-snow travel groups to facilitate access to remote areas of the park. In the Glacier Access Zone, guided air taxi landings allow visitors to access the tidewater glaciers by ordinary means, as identified in the park's enabling legislation.

Similar to other commercial activities, group size must not exceed 12 persons, including guides and clients. All pilots are required to inform park staff where they land in the park by providing the latitude and longitude. Once an air taxi lands, pilots must follow requirements as identified in the Code of Federal Regulations. Air taxis are prohibited in wilderness waters

during seasonal closures, which includes Adams Inlet, Rendu Inlet, Hugh Miller complex, and waters within the Beardslee Island group except for the Beardslee entrance. In addition, guided air taxi landings are not permitted in the Shoreline Access and Frontcountry Access Zones. Air taxis may not land in the Frontcountry Access Zone because they have access to nonwilderness areas in Bartlett Cove and may use the dock. Per the Code of Federal Regulations, docking, tying down, or securing the aircraft to the dock for longer than 3 hours in a 24-hour period is prohibited.

Commercial allocation for guided air taxi landing must be consistent with the activities for which pilots are transporting visitors. In the Remote Wilderness Zone, commercially guided air taxi landings allow visitors to engage in the activities of mountaineering and on-snow travel; therefore, air taxi landings are subject to the same commercial allocation of 18 groups per year when services also provide mountaineering and on-snow travel (6 in Fairweather Range, 12 in Chilkat Range). If air taxi landings are dropping off passengers engaging in nonguided activities, they are subject to the allocation for such activities in the zone. In the Glacier Access Zone, commercial air taxi landings will be evaluated on a case-by-case basis to prevent regularly scheduled air service to Glacier Bay National Park and Preserve, which is currently not authorized. Simultaneous commercially guided air taxi landings within sight of each other will be prohibited to reduce potential for visitor conflict and preserve wilderness experiences. The vessel quota operating requirements plan will further identify commercial allocation for commercially guided air taxi landing among the marine waters of Glacier Bay National Park.

G. Guided Sportfishing (Freshwater)

Self-guided freshwater fishing opportunities in the Glacier Bay Wilderness are generally attainable without commercial guide participation, including for visitors representing a wide range of skill and ability levels. While commercial service providers may help transport visitors access freshwater streams, the activity of freshwater sport fishing does not necessitate commercial guides due to the ease of freshwater stream access. Another reason is the ability of guides to provide commercial services needed pretrip (e.g., provide specialized skills and knowledge and specialized equipment, alleviate safety and environmental concerns). In addition, freshwater fishing opportunities are available to visitors throughout southeast Alaska and in areas surrounding the park, such as Salmon River, Mud River, and Chicken Creek.

Guides leaving their clients at the wilderness boundary further benefits the wilderness experience for all users, enhancing both the natural qualities and solitude on these wild and often modest-sized systems.

For these reasons, guided freshwater sport fishing is not allowed in any zone except by historic operators. Specific historic operators (prior to 1979) are authorized to conduct guided freshwater fishing in designated Wilderness on the river system that flows into Dundas Bay for all five species of salmon and Dolly Varden, steelhead, and cutthroat trout under section 1307(a) of ANILCA (16 USC 1397[a]). Also, for clarification, this analysis does not pertain to guided fishing along the Outer Coast north and west of Lituya Bay or in the Glacier Bay Preserve (which is outside the scope of the planning effort).

At the same time, commercial contracts on a case-by-case basis may authorize guided freshwater sportfishing as a provisional and incidental (not primary) service in designated Wilderness that supports proper introductory wilderness experiences, except where limiting commercial services facilitates certain visitor experiences, including

- the Bartlett River (trail and water access above mean high tide) to enable frontcountry visitors who may not have access to other wilderness experiences a greater sense of solitude, remoteness, and self-reliance
- the Remote Wilderness Zone, to enable visitor experiences, where the likelihood of encountering other visitors is low, and to maintain self-reliance as a key component of the visitor experience

This provision does not imply that a commercial activity will be authorized for all other locations or at all times. Annual operating agreements will determine opportunities and limitations in coordination with ongoing wilderness character and encounter monitoring and may require an annual orientation to cover key stewardship topics (e.g., designated Wilderness, resource protection, state and federal take and reporting requirements). Finally, where applicable, this activity is subject to nonmotorized water park restrictions to provide a diversity of visitor experiences seasonally and Glacier Bay proper allocations determined by vessel quota operating requirements.

H. Guided Marine Sportfishing

Historically, throughout the management of national parks, fishing has been a primitive recreational activity that encourages visitors to experience solitude, primitive and unconfined recreation, and natural qualities of wilderness character. Guided marine sportfishing is proper for realizing the public purposes of wilderness, and guided services may help achieve the desired conditions for visitor experience.

Guided marine sportfishing is prohibited in the Shoreline Access and Glacier Access Zones because the primary purpose of commercial services in these locations is to provide visitor access to tidewater glaciers, which is a goal of Glacier Bay National Park as described in the enabling legislation. Off-vessel activities that facilitate this access include hiking and kayaking; guided fishing may potentially monopolize the public's ability to participate in these activities and could result in visitor conflict. In the Frontcountry Access Zone, commercial services should be limited as identified in the desired conditions (see chapter 2). Commercially guided marine fishing will continue to be allowed in the Wilderness Waters Zone with necessary restrictions in place. The activity has limited participation in wilderness waters due to seasonal park restrictions to provide a diversity of visitor experiences. Charter vessels may continue to provide guided marine sportfishing services; however, because these services occur within Glacier Bay proper, the allocation will be determined by vessel quota operating requirements.

APPENDIX C: CULTURAL RESOURCE STUDIES

ARCHAEOLOGICAL INVENTORY AND MONITORING IN GLACIER BAY NATIONAL PARK AND PRESERVE, WITH A NEW FOCUS ON CULTURALLY MODIFIED TREES (2013)

This inventory identified new archeological sites, updated the status and condition of previously recorded sites, and created new records for sites that had not been adequately recorded. The inventory identified 323 culturally modified trees and recorded stone cairns, as well as other structures such as camping platforms, canoe troughs, and storage pits within the park. Overall, the research presented in this study increased the number of recorded archeological sites in the park by 64%. The report also identified certain elements of concern, such as the need to record culturally modified trees before they die and decay, trespassing, vandalism, unauthorized ground disturbance, and the construction and pilfering of artifacts.

THE HOONAH TLINGIT CULTURAL LANDSCAPE IN GLACIER BAY NATIONAL PARK AND PRESERVE: AN ARCHAEOLOGICAL AND GEOLOGICAL STUDY (2013)

This report recorded the results of a 1995 interdisciplinary survey jointly conducted by the Smithsonian Institution, the National Park Service, and the University of Alaska Fairbanks under the auspices of the Systemwide Archeological Inventory Program in 1995 that examined Tlingit archeology, history, and settlement patterns. The researchers collaborated with the community of Hoonah to capture and understand the cultural landscape that lives on in memory, ancestral generations, oral tradition, and traditional place names. While the report did not suggest management actions, the study brought together material evidence, indigenous knowledge, and cultural practices to discuss settlement and adaptive patterns of ancestral Tlingit within Glacier Bay National Park and Preserve and to inform management decisions.

TLINGIT HOMELAND

Early park planning documents address Tlingit Homeland concerns peripherally, if at all. The 1984 general management plan did identify the need to collect archeological and ethnographic information for use by researchers and interpreters and spoke to the need to strengthen relationships in "neighboring communities with a significant population of native Americans." The plan did not, however, provide specific direction for managing the park as Tlingit Homeland. Early wilderness management proposals and documents also fail to mention any cultural resource concerns or management strategies and do not acknowledge that Glacier Bay encompasses Tlingit Homeland. Management direction for protecting Tlingit Homeland values focuses on continued efforts to document ethnographic resources, including resources previously misclassified as historic structures; facilitate and encourage ongoing, meaningful connection with ancestral places; and commemorate village or other sacred sites in appropriate ways. Homeland concepts, including land acknowledgments, would be embedded in all literature, orientation materials, and materials prepared by commercial service operators.





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 historic 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.

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Glacier Bay National Park and Preserve Alaska



