

Draft Legislative Environmental Impact Statement

Harvest of Glaucous-Winged Gull Eggs by the Huna Tlingit in Glacier Bay National Park Alaska

Lead Agency: National Park Service

This draft legislative environmental impact statement (LEIS) responds to legislation enacted in 2000 (P.L. 106-455) which directs the NPS to determine whether the harvest of glaucous-winged gull eggs could be authorized in Glacier Bay National Park. The LEIS describes three alternatives for managing a traditional harvest.

Glacier Bay National Park is the traditional homeland of the Huna Tlingit who traditionally harvested eggs at gull rookeries in Glacier Bay prior to, and following, park establishment in 1925. Egg collection was curtailed in Glacier Bay in the 1960s as both the Migratory Bird Treaty Act and NPS regulations prohibited the activity. The loss of legal access to gull eggs in Glacier Bay has affected the physical, cultural and spiritual well being of the Huna Tlingit.

Alternative 1 (No Action) would not propose legislation to authorize gull egg harvest in Glacier Bay National Park. Alternative 2 would propose legislation to authorize harvest of glaucous-winged gull eggs at two designated locations on a single date. Alternative 3 would propose legislation to authorize harvest of glaucous-winged gull eggs at several designated locations in Glacier Bay National Park on two separate dates. The NPS and the Hoonah Indian Association would prepare an annual harvest plan to ensure that park resources and values were protected.

Alternative 1 (No Action) would result in continued negative impacts to the culture and life ways of the Huna Tlingit. Alternatives 2 and 3 would result in some reduction in the number of glaucous-winged gull eggs hatched in the park. None of the alternatives would impact other colonial nesting birds, harbor seals, or Steller sea lions using areas near gull colonies or the wilderness values of the park.

Upon completion of the final LEIS, the Regional Director will sign and implement a record of decision that determines whether limited harvest could occur and describes how any authorized harvest would be managed to protect park resources and values.

The comment period on the draft LEIS will extend through March 6, 2009. Comments should be submitted to:

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EXECUTIVE SUMMARY

The National Park Service (NPS) proposes to authorize the limited collection of glaucous-winged gull eggs in Glacier Bay National Park by Huna Tlingit tribal members. This Legislative Environmental Impact Statement (LEIS) was prepared as required by the National Environmental Policy Act (NEPA) of 1969 and regulations of the Council of Environmental Quality (CEQ; 40 Code of Federal Regulations [CFR] 1500). It describes a reasonable range of alternatives, the existing conditions, and contains a detailed analysis of environmental consequences of the alternatives.

PURPOSE AND NEED FOR ACTION

Glacier Bay National Park is the traditional homeland of the Huna Tlingit people who traditionally harvested eggs at gull rookeries in Glacier Bay prior to, and following, park establishment in 1925. Egg collection was curtailed in Glacier Bay in the 1960s as both the Migratory Bird Treaty Act and NPS regulations prohibited the activity. The loss of legal access to gull eggs in Glacier Bay has negatively affected the physical, cultural and spiritual well being of the Huna Tlingit.

In the late 1990s, the NPS agreed to explore ways to authorize the traditional collection of gull eggs within Glacier Bay. Legislation enacted in 2000 (P.L. 106-455; Appendix I) further directed the NPS to determine whether customary egg harvest practices could be authorized in Glacier Bay National Park. The purpose of this LEIS is to respond to Section 4 of P.L. 106-455 and to propose a traditional harvest strategy, cooperatively produced by the NPS and the Hoonah Indian Association (HIA).

THE ALTERNATIVES

The NPS is considering three alternatives designed to achieve the objectives and needs described in the previous section, a No-Action Alternative and two alternatives which would authorize limited traditional harvest of glaucous-winged gull eggs.

Alternative 1: No Action

Under Alternative 1 (No-Action), the harvest of glaucous-winged gull eggs in Glacier Bay National Park would not be authorized. The No-Action Alternative provides a baseline for evaluating the impacts to park resources that would result from the action alternatives.

Alternative 2: One Annual Harvest Trip, Two Locations

Alternative 2 would propose legislation to authorize harvest of glaucous-winged gull eggs at up to two designated locations on a single pre-selected date on or before June 9 of each year.

The NPS and the HIA would prepare an annual harvest plan by May 1 of each year. The harvest plan would list all suitable harvest locations based on annual monitoring and harvest history and would identify up to two sites from which the HIA could harvest eggs.

Alternative 3: Two Annual Trips, Several Locations (NPS Preferred Alternative and Environmentally Preferred Alternative)

Alternative 3 would propose legislation to authorize harvest of glaucous-winged gull eggs at several designated locations in Glacier Bay National Park on two separate dates. The first harvest would occur on or before June 9th; a second harvest at the same sites would occur within nine days of the first harvest. The logistics of vessel transportation (travel between Hoonah and Glacier Bay, travel within Glacier Bay, harvest time at sites) would limit the number of sites that could be visited in a given day. Depending on weather and other conditions, as well as the sites selected, harvest would likely occur at three to four sites.

The NPS and the HIA would prepare an annual harvest plan by May 1 of each year. The harvest plan would list all suitable harvest locations based on annual monitoring and harvest history and would identify the sites from which the HIA could harvest eggs.

Actions Common to all Action Alternatives

Harvest locations, method of harvesting, group size, and monitoring activities would be similar for both alternatives.

Harvest Location: The Superintendent could identify any of the following sites for harvest: Boulder Island, Flapjack Island, Lone Island, Geikie Rock, Graves Island (Outer Coast), Hugh Miller islet, Margerie Glacier, Mt. Wright, Muir Inlet cliffs, Muir Inlet shoreline (between Riggs and Muir glaciers), Sealers Island, Sebree Island, South Marble Island, Sturgess Island, and Tlingit Point islet. The list above may be added to as information on new colonies becomes available. If vegetational succession in nesting areas diminishes nesting populations, the Superintendent could remove such sites from the list of potential harvest locations.

In general, harvest sites would be selected based on:

1. Size of colony – larger colonies are preferred.
2. Distance from Hoonah – sites closer to Hoonah are preferred.
3. Other species present, potential for disturbance – sites that do not support other nesting birds and/or are not marine mammal haul outs are preferred.
4. History of colony including:
 - Productivity – sites with high productivity are preferred.
 - Recent egg harvest or disturbance – sites that have not been disturbed recently are preferred.
 - Age of colony – older colonies are preferred.
5. Safety – sites that are less steep and provide easier foot access are preferred.
6. Accessibility by vessel – sites that can be easily accessed by vessel without disturbing other wildlife are preferred.
7. Visitor use – areas of reduced visitor use are preferred.

Annual Harvest Plan, Harvest Methods, Group Composition and Size: Each year, the NPS and the HIA would jointly prepare a harvest plan. The plan would identify suitable harvest sites and would include, at a minimum, the proposed date(s) of harvest, vessel(s) to be used to access harvest sites, tentative itinerary for harvest date(s), harvest locations, and names of harvesters. Information in this plan would be used to prepare any necessary park permits including regulatory exemptions to CFR 36 13.1178.

The HIA would assign harvesters to search sections of the colonies. Harvest locations and access pathways would be delineated to minimize contact with other bird colonies and to ensure that harvesters moving through a colony would not be visible to hauled out marine mammals. Harvesters would locate nests with eggs and check eggs for pipping or star-fractures which indicate developing chicks. No eggs would be taken from nests with pipping or star-fractured eggs. All eggs would be harvested from other nests regardless of the number of eggs in the nest. Harvesters would tally the number of nests located and harvested from (the number of nests with 0, 1, 2, 3, and 4 eggs). Harvesters would make only one pass through each colony and would move steadily through nesting areas to reduce disturbance. No time limit in the colony would be imposed on harvesters. Resting, eating, etc. would take place on beaches or outside nesting areas to reduce disturbance. The total number of eggs harvested in a particular location, on a particular day, or in a particular year would not be regulated.

Harvest groups would include up to twelve enrolled tribal members identified by the HIA. One official representative (from the NPS and/or the HIA) would accompany the group to gather harvest data and otherwise assist the group. The Superintendent may authorize additional participants/observers to join the group, but these individuals would remain on the beach and/or on the vessel to minimize disturbance in the breeding colonies.

Monitoring: Monitoring protocols would be established to help the NPS determine population and harvest trends and identify impacts to park resources. Monitoring would occur before, during and after harvest activities. On-site activities would be documented in a trip report prepared by the HIA and submitted to the Superintendent following each trip. The trip report would include:

- Date of trip and number of harvesters
- Number of eggs taken from nests with one to four eggs as well as number of nests with no eggs located
- Number of pipped, star-fractured, or predated eggs and number of hatched chicks in nests located
- Number of marine mammals hauled out at harvest location; number of animals leaving the haul out and entering the water before, during or immediately after harvest activities; behavioral changes including increased alertness or increased aggressive interactions
- Other species present
- Visitor interactions

In addition to monitoring that would take place during the harvest, annual monitoring would assist the Superintendent in making annual decisions regarding harvest locations and would ensure that harvest activities are not impacting park purposes and values. The monitoring plan would include, but not be limited to:

- Sea lions and harbor seals. The number of marine mammals hauled out at South Marble Island and other potential egg harvest sites would be monitored annually using visual counts.
- All avian species. Prior to harvest, a vessel-based survey of South Marble Island and other potential egg harvest sites would tally the number of all bird species seen.
- Glaucous-winged gulls. Biologists would conduct a survey of nests (tallying numbers of nests with 0, 1, 2, 3, 4 eggs or chicks) and note evidence of predation.
- Visitor Experience. The NPS would monitor the number of positive and negative comments to NPS staff about egg harvest activities.
- Cultural. The HIA would monitor the number of individuals participating in egg harvest and how eggs are used (consumed at home, at celebrations, distributed in community, distributed outside of community).

In addition to annual monitoring, a three-year study of gull productivity is recommended. The study would include an assessment of egg laying phenology, predation pressure, and early reproductive success in a subset of the South Marble Island colony (or other location).

AFFECTED ENVIRONMENT

Physical Environment

Glacier Bay National Park encompasses a recently deglaciated fjord surrounded by vegetated upland habitat as well as glaciers, ice fields, and recently exposed barren rock. With the exception of some lowlands in Glacier Bay's southeastern and southwestern margins, much of the entire area was under ice or ice-generated outwash about 250 years ago. The outer coast of the park extends 100 miles along the Pacific Coast and is exposed to rough seas and frequent Pacific storms.

Numerous islands dot the Bay, many of which consist largely of barren rock with occasional clumps of herbaceous vegetation; such islands provide suitable nesting habitat for glaucous-winged gulls and other cliff and ground nesting birds. South Marble Island, located in the central portion of Glacier Bay, is dominated by dense spruce forest in the western half of the island and grassy rounded hilltops and steeply sloped cliffs in the eastern half. A small, partially vegetated islet connected only at low tide extends from the southern end of the island.

Biological Environment

Glaucous-winged Gull Population: Glaucous-winged gulls are colonial nesters, nesting on cliffs, grassy slopes, and bare flats often on small islands. They are "indeterminate layers," responding to the loss of eggs by laying more. However, because egg production is energetically costly for

both females and males (who feed females during laying and incubation), relaying may affect egg quality, chick survival, productivity rates, and adult fitness.

Other Cliff/Ground Nesting Bird Populations: Glacier Bay supports a number of other cliff/ground nesting bird species that often nest near glaucous-winged gull colonies including black oystercatchers, black-legged kittiwakes, common murre, horned and tufted puffins, pelagic and double-crested cormorants, and pigeon guillemots.

Steller Sea Lion Population: The western stock of Steller sea lions is listed as “endangered” and the eastern stock is listed as threatened. Sea lions from the eastern U.S. stock are most likely to enter Glacier Bay, although members of the western stock have been observed within Glacier Bay. Steller sea lion numbers have been increasing in Glacier Bay since formal monitoring began in 1989. Sea lions haul out on South Marble Island and near other glaucous-winged gull nesting areas.

Harbor Seal Population: Although harbor seal numbers have been stable or increasing throughout much of Southeast Alaska, the Glacier Bay population has declined by as much as 75 percent from 1992-2002. Harbor seals haul out on or near islands which also support glaucous-winged gull colonies.

Human Environment

Wilderness: Under the Alaska National Interest Lands Conservation Act (ANILCA), 2,658,186 acres (1,075,730 hectares) of the park’s total 3,283,168 acres (1,328,651 hectares) are congressionally designated as part of the National Wilderness Preservation System. All of the potential gull egg harvest sites, including South Marble Island, lie within designated wilderness.

There is little evidence of human settlement or activity in Glacier Bay wilderness. Importantly, Glacier Bay wilderness provides unique opportunities for visitors to experience solitude and unconfined recreation in a largely pristine environment. With the exception of commercial and sport fishing effects, ecological processes proceed, for the most part, without interference from humans.

Ethnographic Resource (Huna Tlingit Gull Egg Harvest Practice): The Huna Tlingit have gathered gull eggs in their traditional homeland of Glacier Bay since glacial retreat exposed suitable nesting habitat for gulls. Within the larger context of their traditional seasonal round of food harvest, the collection and consumption of gull eggs holds significance for a variety of reasons. The harvesting of eggs signaled the start of a new year; provided opportunities for families to bond; served as a context in which Tlingit values, morals and ethics could be passed down to youth; tied the Huna people to their beloved homeland of Glacier Bay; and served as a unique element in the Huna tribes’ identity.

ENVIRONMENTAL CONSEQUENCES

Direct, Indirect and Cumulative Effects

This LEIS considers direct, indirect, and cumulative effects.

- Direct effects are those that result from the action and occur at the same time and place.
- Indirect effects are those reasonably foreseeable effects that are caused by the action but that may occur later and not at the location of the direct effect.
- Cumulative effects are the incremental effect of an action when added to the effects of past, other present, or reasonably foreseeable future actions. Cumulative effects can result from individually minor, but collectively significant, actions taking place over time.

The effects of each action alternative were evaluated against the No-Action Alternative.

Effects Threshold

Thresholds provide a measurement of how an action would influence the existing environment. Thresholds consider the geographic area of effect, the severity of the effect, and the duration of the effect. Each resource topic discussion includes a threshold effects determination. In general:

- Negligible effects may or may not cause observable changes to natural conditions; regardless, they do not reduce the integrity of a resource.
- Minor effects cause observable and short-term changes to natural conditions, but they do not reduce the integrity of a resource.
- Moderate effects cause observable and short-term changes to natural conditions, and/or they reduce the integrity of a resource.
- Major effects cause observable and long-term changes to natural conditions, and they reduce the integrity of a resource.

Biological Environment

Glaucous-winged Gull Population: The analysis of effects of harvest on glaucous-winged gull reproductive success uses a mathematical model developed by Stephani Zador following two years of data collection on gull reproduction on South Marble Island. Data from Zador (2001) and Zador et al. (2006) to calculate the number of nesting pairs (expressed as the number of nests), number of eggs harvested, total numbers of eggs laid (including first and second clutches) and hatching success.

Alternative 1 (No-Action) would not authorize gull egg harvest and would have no direct, indirect, or cumulative effects on glaucous-winged gulls and would not contribute to cumulative effects on the species.

Alternative 2 would authorize one harvest trip to two locations and would result in as many as 284 harvested eggs; 1,166 eggs are expected to hatch throughout Glacier Bay, female gulls would lay approximately 177 more eggs than in Alternative 1 (No Action), and approximately 56 fewer chicks would be hatched than in Alternative 1 (No Action). Across all nesting areas, this alternative would yield 4.5 percent fewer chicks than Alternative 1 (No Action); the alternative would produce 6.7 percent fewer chicks on South Marble Island and Lone Island. This alternative is not expected to have measurable effects on the reproduction of glaucous-winged gulls. Approximately 36 percent of adult gulls would expend energy in protracted laying but would not be physiologically affected. Limited human disturbance associated with foot and vessel traffic would not affect gull populations.

Alternative 3 would authorize harvest at several colonies on two separate dates. This alternative would yield as many as 856 eggs to harvesters, 954 eggs would hatch throughout Glacier Bay, female gulls would lay approximately 410 more eggs than in Alternative 1 (No Action), and approximately 267 fewer chicks would be hatched than in Alternative 1 (No Action). Across all nesting areas, this alternative would yield 22 percent fewer chicks than Alternative 1 (No Action). Alternative 3 is expected to have minor to moderate effects on the reproduction of glaucous-winged gulls. Adult gulls would expend energy in protracted laying but would not be physiologically affected. Limited human disturbance associated with foot and vessel traffic would not affect gull populations.

Other Cliff and Ground Nesting Bird Populations: Ground nesting marine birds are vulnerable to human disturbance; repeated disturbance can result in reduced productivity or total abandonment of nest. Glaucous-winged gull colonies are frequently adjacent to other cliff and ground nesting birds.

Because Alternative 1 (No Action) would not authorize harvest activities, there would be no direct, indirect or cumulative effects on cliff and ground nesting birds. Because gull nesting habitat is typically separated from the nesting areas of other cliff and ground nesting birds and human presence in any one area would be limited in each of the action alternatives, Alternatives 2 and 3 would have negligible direct, indirect, and cumulative effects on cliff and ground nesting bird populations.

Steller Sea Lion Population: Steller sea lions are susceptible to human disturbance associated with foot and vessel traffic. Human disturbance can disrupt daily activities and redistribute animals within and among haul out sites. Severe, consistent disturbance could result in reduced reproductive success and increased stress and vigilance levels.

Because Alternative 1 (No Action) would not authorize harvest activities, there would be no direct, indirect or cumulative effects on Steller sea lions. Because vessels associated with harvest activities would not be permitted to approach hauled out marine mammals closer than 100 yards and harvesters would be required to remain out of view of hauled out animals, the direct, indirect and cumulative effects of Alternatives 2 and 3 on Steller sea lions are expected to be negligible.

Harbor Seal Population: Studies in Glacier Bay have shown that harbor seals can be disturbed off haul outs by commercial and private vessels and their wakes.

Because Alternative 1 (No Action) would not authorize harvest activities, there would be no direct, indirect or cumulative effects on harbor seal populations in Glacier Bay. Because vessels associated with harvest activities would not be permitted to approach hauled out marine mammals closer than 100 yards and harvesters would be required to remain out of sight of hauled out animals, the direct, indirect and cumulative effects of Alternatives 2 and 3 on harbor seals are expected to be negligible.

Human Environment

Wilderness: Alternative 1 (No Action) would have no direct, indirect or cumulative effects on wilderness in Glacier Bay as harvest activities would not be authorized. Because harvest would not involve any permanent structures, would not result in any lasting or visible human impacts, would not alter the natural processes in Glacier Bay, and would not affect opportunities for solitude and unconfined recreation, the effects of Alternatives 2 and 3 would be negligible.

Ethnographic Resource (Huna Tlingit Gull Egg Harvest Practices): Alternative 1 (No Action) would continue to deny the Huna Tlingit access to, and use of, an ethnographic resource important to the survival of the communities' cultural system. The alternative would preclude an important opportunity to participate in a meaningful relationship with their homeland, would prevent young people from learning about this important cultural tradition as well as other Tlingit stories, ethics and morals typically conveyed on egg harvesting trips, and would ultimately result in the loss of the practice as no young people would have the knowledge or interest in egg harvest practices. This alternative would have moderate to major negative effects on the ethnographic resource associated with traditional egg harvesting practices.

Alternative 2 would allow twelve tribal members the opportunity to gather gull eggs in Glacier Bay using traditional harvest methods. This alternative would restore an essential phase in the traditional seasonal rounds, would allow a small number of tribal members to interact in a meaningful way with their traditional homeland, and would provide the opportunity for a small number of young people to spend time with elders learning about traditional egg harvest practices as well as other Tlingit cultural life ways, stories, and ethics. However, over time the positive effects of the alternative would diminish as only a few young people could participate in egg harvest and consumption. In the short term, this alternative would restore and protect an ethnographic resource with moderate positive effect on the resource. However, over a 20-year time period, the positive effects of the alternative are expected to diminish and would ultimately result in a minor positive effect when combined with the negative effects of other prohibitions on cultural activities.

Alternative 3 would authorize harvest of gull eggs at several locations on two separate days in Glacier Bay, allowing as many as 24 tribal members to gather gull eggs using traditional harvest methods. The alternative would restore an essential phase in the traditional seasonal rounds, would allow a great number of tribal members to interact in a meaningful way with their traditional homeland, and would provide opportunities for a great number of young people to

spend time with elders learning about traditional egg harvest practices as well as other Tlingit cultural life ways, stories, and ethics. Because as many as twelve young people each year could participate, the positive effects of the alternative would be sustained over time. This alternative would restore and protect an ethnographic resource in both the short and long term, having a moderate to major positive effect on the ethnographic resource.

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