

Washington (April 29, 2003). A total of 79 persons attended these open houses/public hearings. The Park Service received comments during these public hearings as well as more than 1,000 electronic mail messages, postcards, comment letters, and web-based comments from organizations and private citizens.

1.4.3 Final Environmental Impact Statement

Oral and written comments on the adequacy of the DEIS were obtained through the public review process and are responded to in this FEIS. Comments and responses are provided in appendix M. As specified in the response to comments, some comments resulted in revisions to the text of the environmental impact statement. The FEIS is filed with the U.S. Environmental Protection Agency and made available to the public. The availability of the FEIS is announced in the *Federal Register* and the notice of availability was published in October 2003.

1.4.4 Record of Decision

When an environmental impact statement is prepared, the ultimate choice of an alternative, mitigation measures, and the decision rationale are documented in the record of decision. Publication of the record of decision will follow a 30-day no-action period after release of the FEIS.

1.5 ISSUES OF CONCERN RAISED DURING SCOPING

1.5.1 Summary of Issues and Topics Evaluated in This Environmental Impact Statement

Issues and impact topics identified during the scoping process form the basis for environmental analysis in this document. A brief description is provided for each issue and impact topic. Issues and topics considered, but not addressed in this document, also are identified. "Chapter 5. Consultation and Coordination" provides more details regarding NPS and public scoping meetings and consultation with other federal and state agencies. The issues of concern raised during scoping regarding topics to be addressed in this environmental impact statement include the following:

Soundscape.

- Vessel noise could unacceptably alter the natural soundscape of the park.

Air Quality.

- Increases in vessel quotas could increase the particulate and pollutant load entering the air column and have a detrimental effect on air quality by increasing, thus changing the air quality, visibility, and the presence of haze.
- Increases in vessel quotas could increase the stack emissions and could result in detrimental effects to human health and the environment.

Water Quality.

- Increases in vessel quotas increases the potential for unauthorized releases of marine debris, petroleum, graywater, sewage, oil, ballast, photographic chemicals, dry cleaning solutions, and cleaning solvents. The unauthorized release of marine debris and other contaminants may degrade water quality.
- Increasing the vessel quota increases the potential of small and large oil spills. Current technology is inadequate to clean up oil spills in ice-filled waters.

- Vessels other than large cruise ships may not have the capacity to hold and treat waste. Possible increases in these types of vessels in park waters could result in increased discharges of waste, resulting in degradation of the marine environment.
- The park's zero discharge policy for cruise ships means that the ships are dumping waste outside the park, resulting in possibly more degradation of the marine environment outside the park than otherwise might occur.

Threatened and Endangered Species.

- The sight and noise of vessel traffic alter marine mammal behavior; therefore, any increase in the number of vessels would further disrupt marine mammal behavior.
- Vessel wakes could cause onshore waves that startle sleeping humpback whales.
- Varying vessel speeds need to be evaluated to determine the appropriate speed to protect whales and minimize the effects on threatened and endangered species.
- Increases in vessel traffic could result in increased whale/vessel collisions, and whale mortality or injury could result from such collisions.
- Humpback whales feeding in Bartlett Cove could be disrupted by vessels operating in this area. Vessel requirements should be evaluated to determine if they are effective in protecting whales.

Marine Mammals.

- The sight and noise of vessel traffic alter marine mammal behavior; therefore, any increase in the number of vessels would further disrupt their behavior.
- Varying vessel speeds need to be evaluated to determine the appropriate speed to protect and minimize the effects on whales in non-whale waters.
- Increases in vessel traffic could result in increased whale/vessel collisions, and whale mortality or injury could result from such collisions.
- Whales feeding in Bartlett Cove could be disrupted by vessels operating in this area. Vessel operating requirements should be evaluated to determine if they are effective in protecting whales.

Marine Birds and Raptors.

- The presence of vessels in the marine environment can alter marine bird behavior. Harlequin ducks in Dundas Bay could be disturbed by vessel traffic.
- Waves from vessel wakes could swamp marine bird nests that are in low-lying areas, thus reducing reproductive success and altering marine bird feeding behavior.
- Private and charter vessels that offload visitors onshore could disturb bird colonies, specifically at McBride Glacier, as well as nesting arctic terns and mew gulls in other breeding locations, thus reducing reproductive success.

Marine Fishes.

- Airborne contaminants from ship stacks could be deposited in the marine environment and enter the marine food chains, causing fish mortality through ingestion or dermal contact.
- The presence of artificial light from vessels could alter behavior of marine fish.
- Waves generated by wakes and prop wash could increase turbidity and degrade fish habitat.

- Invasive species on hulls of ships or in unauthorized releases of ballast water could be introduced into the marine environment of the park and could displace native marine fishes.

Coastal/Shoreline Environment and Biological Communities.

- Vessel wakes could erode portions of the shoreline.
- Traffic at popular drop-off locations could be changed, resulting in increased physical disturbances and disturbance of intertidal communities.
- Waves could alter the behavior of terrestrial mammals that feed, roam, or sleep on the shoreline.
- Invasive species on hulls of ships or in unauthorized releases of ballast water could be introduced into the marine environment of the park, which could displace native species and alter ecological functioning.

Cultural Resources.

- Air and water pollution could defile elements of Glacier Bay sacred to the Huna Tlingit, including the glaciers, mountain goats, and harbor seals.
- Waves generated from vessels could erode portions of the shoreline, thus changing the geological composition of the shoreline, and possibly exposing anthropological and archeological resources present in interstadial geologic layers, including preglacial forests.
- Increase in traffic at popular drop-off locations could increase physical disturbances and potential vandalism of anthropological resources.

Visitor Experience.

- The presence of large cruise ships could diminish the experience of visitors from smaller vessels because of the visual effects and loss of wilderness experience.
- Vessel noise could intrude on visitor solitude in Glacier Bay.
- The presence of vessels may provide a backcountry user with a greater sense of security knowing that help is nearby if an emergency occurs.
- The presence of vessels may scare wildlife and thereby diminish the experience of visitors expecting to see wildlife.

Vessel Use and Safety.

- Increasing vessels or vessel speed could increase the risk of vessel-vessel and vessel-marine mammal collisions.
- A 10-knot vessel speed restriction could decrease the maneuverability of large vessels, causing an increased risk to the ship and to visitor safety.
- Smaller vessels are more maneuverable than larger vessels and should be allowed to travel at faster speeds because they could avoid most potential hazards.
- Waves generated from larger vessels could swamp kayaks or small vessels on the water and cause serious injury to the occupants.
- Increasing the user-friendliness of the operating requirements could increase the possibility that vessel operators would adhere to the rules and decrease the possibility of accidents and/or violations of regulations.

- Cruise ships and tour vessels should have strict protocols and routes to minimize the risk of vessel groundings that could cause resource damage or risks to visitor safety.

Wilderness Resources.

- An increase in vessel quotas could allow more people to experience a wilderness area intimately. In addition, the wilderness would be more accessible.
- An increase in vessel quotas could diminish the value of the wilderness by increasing the sense of crowdedness.
- The presence of large vessels could diminish the wilderness values.
- Increases in off-vessel activity could result in more trash and degradation of the terrestrial environment.

Local and Regional Socioeconomics.

- Increasing the vessel quota for private and charter vessels and providing access to Dundas and Taylor Bays could improve local economies and lifestyles. Revenues generated from local wildlife viewing and sightseeing charter and tour vessels could replace loss of livelihood resulting from the Glacier Bay commercial fishing phase-out.
- Increasing the number of permits allocated to local owners and operators could benefit the local economy.
- Increasing the vessel quota for tour vessels could benefit the economy of local communities by providing additional entries to local operators. Increased restrictions on local resident access could have detrimental effects to local economies.
- Increasing the vessel quota for private, locally based vessels would benefit inn and lodge operators by increasing their access to Glacier and Dundas Bays for their guests.
- Some people perceive that tourism in Southeast Alaska is leveling out and fewer independent travelers are coming to the park. These conditions, if true, may alter demand and the type of visitor experience preferred.
- The number of charter vessel operators is increasing, which could result in increased demand for permits.

Cumulative Effects. NEPA mandates that agencies consider all potential effects, including those considered cumulative, as defined in CEQ NEPA regulation 40 CFR 1508.7. A cumulative effect is the effect on the environment that results from the incremental impact of the action when added to the other past, present, and reasonably foreseeable future actions. Existing actions/projects and reasonably foreseeable actions that may contribute to cumulative effects are described in chapter 4.

1.5.2 Issues Considered but Eliminated from Detailed Analysis in This Environmental Impact Statement

The scope of this environmental impact statement is necessarily focused on motorized vessel use. Comments related to management of the following resources and topics are considered outside the scope of this document:

- **Land-based activities.**
- **Allocation of cruise ship or tour or charter vessel permits.** This will be addressed in accordance with NPS regulations and policy.
- **Deep benthic environments in Glacier Bay and Dundas Bay.** The deep benthic environments within this area are not likely to be affected by cruise ships or other vessel

activities addressed in this environmental impact statement. These habitats occur well below the depth at which they might be affected by vessel wakes, oil spills, or other activities related to vessel traffic. While vessel noise likely would reach these habitats, most deep benthic animals have no known sensory apparatus for hearing. Additionally, attenuation of the vessel noise with depth is likely to decrease noise levels to below the level at which crabs or other deep benthic animals are affected.

- **Restrictions to the backcountry or to providing access into the backcountry (i.e., off-vessel areas).** The park's backcountry management plan will address where vessels may land and where they may offload passengers.
- **Kayak quotas and operating requirements.** This environmental impact statement addresses only motorized vessels. Kayak quotas and operating requirements will be addressed in the park's backcountry management plan.
- **Commercial fishing.** Issues concerning commercial fishing are addressed in the commercial fishing compensation plan and the commercial fishing environmental assessment (NPS 1998). Vessel use associated with commercial fishing is evaluated in the cumulative effects sections of this document.
- **Administrative vessel use.** Administrative vessel use is not within the scope of this environmental impact statement. Administrative vessel use is determined by the superintendent, as necessary, to ensure visitor safety; respond to emergency situations; and otherwise implement the park's mission, purposes, and values.
- **Invasive species.** At this time, no marine invasive species are known to have colonized the waters of Glacier Bay National Park and Preserve, but little data has been collected within Glacier Bay, so the actual extent of invasive species is unknown. Still, the potential for major introductions of invasive species into Glacier or Dundas Bays appears to be low. The Alaska Department of Fish and Game, in a recent publication (Fay 2002), listed the invasive species they consider the greatest threats to Alaska. The only two species that might be carried on cruise ships and/or other vessels are the European green crab (*Carcinus maenas*) and the Chinese mitten crab (*Eriocheir sinensis*). Both make some use of marine waters, but are primarily estuarine or freshwater species. Both crabs could possibly reach Glacier Bay or Dundas Bay as larvae on the hulls of cruise ships, but the most likely method of transport is north-moving oceanographic currents. None of the cruise ships or other vessels entering Glacier Bay or Dundas Bay discharge ballast water to the environment, unless during a catastrophic event; therefore, ballast water is not a likely source of invasive species. Compliance with U.S. Coast Guard discharge regulations of bilge water is likely to keep this potential source of invasive species from being introduced into Glacier and Dundas Bays.

1.6 FEDERAL PERMITS, LICENSES, AND ENTITLEMENT NECESSARY TO IMPLEMENT THE ACTION

No permits are required for the Park Service preferred alternative (alternative 6). Implementation of a vessel quota and operating requirement alternative would require the Park Service to promulgate regulations, revising 36 CFR 13.65.