

**Errata Sheets for Glacier National Park's Environmental
Assessment to Conduct Additional Administrative Helicopter
and Fixed-Wing Flights in 2003**

Mitigation Measures

- Flights will maintain a distance of 2 km (1.2 mi) from known mountain goat cliffs, and other areas where mountain goats are observed during flights will be avoided as much as possible.
- Known grizzly bear seasonal concentration areas, such as the army cutworm moth sites on several mountain peaks, or the Apgar Range, will be avoided from July through September when possible. In addition, any grizzly bears observed during flights will not be approached.
- Helicopters would follow suggested flight paths away from sensitive areas.
- Flights would occur between one hour after sunrise and one hour before sunset if possible.
- The helicopters will fly at a minimum of ~~500~~ 2,000 feet AGL except when landing or taking off or when delivering supplies on a long-line.
- Fixed wing aircraft will fly at a minimum of ~~500~~ 2,000 feet AGL except when it is necessary to fly lower to gather information on species under observation.
- A flight manager would be assigned to each project to insure that conditions are met, safety is observed and that threatened and endangered species activity is monitored.
- No flights would be conducted at times and places that may interfere with grizzly bear den construction (mid September-mid November and during emergence in April-May).
- Flight paths would be designated so as to avoid open alpine meadows (other than in winter), where grizzly bears that are present would not have access to cover. If a low-level flight or landing is needed in an alpine area, and a bear is seen, the flight may be postponed depending on the judgement of the flight manager.
- When wolf den locations are known for 2003, low level flights in those areas would be postponed until after the critical denning period. This would be coordinated though the park's wildlife biologist.
- A buffer zone of 0.25 miles would be maintained around bald eagle nests for all flights except those involved in monitoring. Eagle nests would not be surveyed aerially during inclement weather to avoid chilling of the young in case birds are forced from the nest.
- Eagles on nests will be allowed to see the aircraft approaching if possible, to avoid startling birds off nests.
- When possible, a larger helicopter would be used to reduce the number of flights needed. A larger helicopter would be used on two of the projects discussed under Cumulative Impacts that reduce the total number of helicopter trips already planned from 31 to 25.

Cumulative Impacts

Cumulative impacts are determined by combining the impacts of the preferred alternative with other past, present, and reasonably foreseeable future actions. Therefore it was necessary to identify other ongoing or reasonably foreseeable future actions within Glacier National Park and, if applicable, the surrounding region. The following is a list of past, present and reasonably foreseeable future actions that could add to the impacts of the proposed actions over the affected area.

- Varying numbers of administrative flights have occurred annually for many years.
- Transport 100,000 lbs. of material by helicopter to Hidden Lake trail for boardwalk reconstruction at Logan Pass in late summer 2003. (Approximately 20 flights approved for a total flying time of 2-1/2 hours).
- Completion of Rehabilitation of Sperry Water Intake Project, late summer 2003. (4-8 flights approved that would be reduced to 2 by combining them with the Logan Pass boardwalk trail project).
- Emergency flights for search and rescue, road plowing and fire operations.
- Higher altitude commercial helicopter and fixed-wing tour flights.
- Flights by outside agencies (Montana Fish, Wildlife and Parks and Blackfeet Tribal Fish and Game) for research purposes.
- One fixed-wing flight in winter to research moose.
- Future flights to install and maintain upgraded radio towers.
- Future park wildlife monitoring flights.
- Apgar wastewater system rehabilitation. (no flights needed)
- Apgar water system rehabilitation. (no flights needed)
- Many Glacier Hotel reconstruction (spring and fall). (no flights needed)
- Belton Bridge reconstruction. (no flights needed)
- Going-to-the-Sun Road construction (3 flights in 2003).
- Proposed inholder access path construction near Lake McDonald Lodge. (no flights needed)
- Rehabilitation of numerous park buildings. (No flights needed)

Proposed Wilderness

The 1964 Wilderness Act (16 USC 1131 *et seq.*) provides for protection of wilderness for future generations. The NPS Management Policies for Wilderness Preservation and Management (1988) state that “the National Park Service will manage wilderness areas for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness. Management will include protection of these areas, the preservation of their wilderness character, and the gathering and dissemination of information regarding their use and enjoyment as wilderness. Public purposes of wilderness will include recreation, scenic preservation, scientific study, education, conservation, and historical use.”

The Wilderness and Backcountry Management Plan for Glacier (GNP 2003) defines wilderness as park lands that are essentially undeveloped or natural in character, at least 250 feet from established roadways and developed areas, and are located in the park’s natural zone. This encompasses the areas within Glacier that are proposed by park management to be included in the National Wilderness System as provided for by the Wilderness Act of 1964, and are managed as such, as required by NPS policy (NPS 1999c). This totals approximately 963,290 acres, or 95% of the park.

Glacier maintains over 746 miles of trails throughout the backcountry and proposed wilderness areas. Glacier’s trail system links approximately 60 backcountry campgrounds, and in 2002, 4,741 backcountry camping permits were issued. Management of natural resources in the backcountry zone will focus on protection and restoration of resources and natural processes. The proposed wilderness will offer outstanding opportunities for solitude and natural quiet. Natural processes will prevail (NPS 1999a).

In protecting wilderness, the NPS uses the “minimum tool” concept, meaning the park will select the minimum tool or administrative practice necessary to successfully and safely accomplish the management objective with the least adverse impact on wilderness character and resources (NPS 1988). Use of aircraft will be authorized in accordance with the park’s wilderness management plan only if determined by the superintendent to be the minimum tool needed by management to achieve the purposes of the area, or in emergency situations involving human health or safety or the protection of wilderness values.

Porcupine, Scalplock and Swiftcurrent Lookouts are located in proposed wilderness; Apgar Lookout and Granite Park Chalet are not. Some of the wildlife monitoring and research flights would be over proposed wilderness.

Proposed Wilderness

Alternative A: Conduct administrative helicopter and fixed-wing flights in 2003 (Preferred alternative)

Impact Analysis: Wilderness areas provide opportunities for solitude, natural quiet, and primitive or unconfined types of recreation. Use of helicopters and fixed-wing aircraft in the wilderness would have to meet the minimum tool requirement. Visitors to the backcountry could be displaced for short periods during flight operations to Porcupine, Scalplock and Swiftcurrent Lookouts. Aircraft would cause temporary noise disturbance in localized areas. Helicopter flights would follow suggested flight paths along roads (Figure 1) for the most part, departing from the road corridor only to reach the chalet and lookouts. Although noise could still be heard in proposed wilderness areas, following suggested flight paths would minimize the impacts of flights to proposed wilderness. Fixed-wing flights to monitor wildlife would occur over proposed wilderness, but fixed-wing aircraft are considered less intrusive than helicopters due to lower noise levels.

Cumulative Impact Analysis: With Alternative A, the proposed flights would add to the effects of flights to Logan Pass, emergency flights for search and rescue and fire operations, outside agency administrative flights, and commercial flights occurring over Glacier National Park in 2003, by extending the area and the length of time proposed wilderness is impacted by noise from aircraft.

Conclusion: Alternative A would have moderate, short-term localized adverse impacts on proposed wilderness due to noise and use of mechanical equipment in proposed wilderness. Cumulative effects would be minor, short-term, localized adverse impacts due to additional flights and construction projects occurring simultaneously.

Alternative A would not produce major adverse impacts on proposed wilderness whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of proposed wilderness as a result of the implementation of Alternative A.

Alternative B: (No Action)

Impact Analysis: The No Action alternative would mean fewer flights would be conducted over proposed wilderness. Radio towers would be accessed by foot or horseback, preferred methods of travel in the wilderness. Wildlife would be monitored from the ground, which would cause some disturbance in the proposed wilderness due to increased numbers of people in the backcountry.

Cumulative Impact Analysis: There would be no cumulative effects with the No Action alternative.

Conclusion: Alternative B would produce negligible to minor, short-term, adverse impacts on proposed wilderness due to disturbance associated with wildlife monitoring from the ground. There would be no cumulative effects.

Alternative B would not produce major adverse impacts on proposed wilderness whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would not be impairment of proposed wilderness as a result of the implementation of Alternative B.

Errata sheet to insert after page 48

Glacier National Park (GNP). 2003. Wilderness and backcountry management plan, West Glacier, MT.

National Park Service (NPS). 1999c. Reference Manual 41: Wilderness Preservation and Management. National Park Service.

National Park Service (NPS). 1988. Wilderness Preservation and Management; Chapter 6 in: Management Policies, National Park Service.

Figure 1.

Glacier National Park 2003 Flight Paths

