

L76-GLAC-03-019

Dear Friends:

Enclosed is Glacier National Park's (GNP) to *Construct an Access Path to Private Property on Snyder Ridge/ Environmental Assessment* (EA), located above Lake McDonald. This EA is also available on our website at www.nps.gov/glac for your review and comment.

In 1998 the two landowners of this jointly held private property informed park officials of their desire to build a nonresidential (storage) structure. Discussions have focused on alternatives to this construction and how, if construction occurs, impacts to resources could be limited. Many ideas and their feasibility have been explored since 1998, these are described in the EA. This EA has been prepared to describe the proposal and what led up to it, analyze the impacts of the proposal, and provide for public input.

GNP proposes to construct an access path across federal land to allow these landowners to transport building materials across federal property to their property. Materials would be transported by motorized all-terrain vehicle during the winter months to avoid trampling of vegetation and potential erosion of soils. Authorization for the use of this trail access would be short term by Special Use Permit.

This access path is proposed and recommended as the preferred alternative because it would have the least impact on park resources and would accommodate the private landowners. In comparison to other private land issues these landowners have deeded road access to their property (which they are willing to waive) and are not proposing a residential structure.

The public comment period ends November 28, 2003. Please send your comments to Glacier National Park, Attn: Snyder Ridge EA, PO Box 128, West Glacier, MT 59936 or electronically to glac_public_comments@nps.gov, Attention: Snyder Ridge EA.

The parks practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the record, which we will honor to the extent allowable by law. **If you wish us to withhold your address, you must state this prominently at the beginning of your comment.**

We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

Thank you for your continued support and interest in Glacier National Park.

Sincerely,

Michael O. Holm
Superintendent

Enclosure

National Park Service
U.S. Department of the Interior

Glacier National Park
Montana



*Construct an Access Path to Private Property on
Snyder Ridge/Environmental Assessment*

October 2003

Environmental Assessment

Construct an Access Path to Private Property on Snyder Ridge

Waterton-Glacier International Peace Park • Montana

SUMMARY

Two private landowners, with joint ownership, have been in consultation with the Superintendent at Glacier National Park since 1998 requesting permission for motorized access across park lands. They would like to transport building materials to their lot that lies above the Going-to-the-Sun Road near Lake McDonald for the purpose of constructing a non residential structure (storage shed). Although these property owners have deeded access from the Going-to-the-Sun Road up to their lot, a road has never been built. Glacier National Park would not support construction of such a road. To date the landowners have gone out of their way to explore other alternatives. They are requesting temporary motorized access across federal lands and in exchange have offered to transfer their deeded access rights to the National Park Service.

This environmental assessment has been prepared to describe the project and assess the impacts. Glacier National Park proposes to construct an access path across federal land to allow these landowners to temporarily transport building materials to their property. Material would be transported by motorized All-Terrain Vehicle. Authorization for the use of this trail access would be by Special Use Permit.

The property is 1,750 square feet in size and is located on Snyder Ridge ½ -mile southeast of Lake McDonald Lodge. Road access, as provided for in the owner's deed and the 1916 subdivision plat, has never been constructed. Currently, access to the property is obtained by driving approximately ½ mile up a National Park Service (NPS) narrow dirt administrative road, and walking about 75 yards to the property.

The Special Use Permit would include a clause whereby the owners vacate their right to construct their deeded access road in return for the Park allowing them to use the administrative road and the access path for the purposes of transporting building materials. The path would be traversed by ATV for one year, after which it would be rehabilitated, and the landowners would use the path to access the property only on foot.

The proposed access path would be located in a mature cedar-hemlock forest. Disturbance would include removal of numerous small hemlock and cedar trees (most less than two inches diameter) and the clearing of downed logs and stumps. No large trees would be removed. The path would be approximately 6 feet wide and 225 feet long.

Alternatives considered in this EA include: (1) construction of the path and issuance of a Special Use Permit to transport building materials (the preferred alternative); (2)

exchange of the subject parcel for other nearby property within the park where road access is already available; and (3) no action. Under the no action alternative the park would not issue a Special Use Permit. This action could result in the owners beginning construction of a road to the site as provided for in their deed. Purchase of the site by the government was considered but eliminated from further study because the landowners are unwilling to sell the parcel to the Federal government.

The preferred alternative would have no effect on air quality, aquatic species, archeological resources, energy requirements and conservation potential, environmental justice, ethnographic resources, park operations, prime and unique farmlands, proposed wilderness, socioeconomics, water quality, wetlands and floodplains, visitor experience, or wild and scenic rivers. There would be negligible to minor short-term impacts to natural soundscapes, soils, vegetation, wildlife, threatened and endangered species and species of concern, and private landowners within the park. Both the preferred and the no action alternatives could result in new surface disturbance on Snyder Ridge; however, the extent of surface disturbance under the preferred alternative would be far less than if the deeded road were constructed.

For each of the three alternatives evaluated, the likely outcome would be new development within the park on privately owned land. The impacts of such development would be cumulative in the sense that it would constitute an addition to the number of private structures in the park and would be new development in an area that currently is undeveloped.

If you wish to comment on this environmental assessment, please send your comments to the address below:

Glacier National Park
Attention: Access Path EA
P.O. Box 128
West Glacier, MT 59936

You may also transmit comments via e-mail to: glac_project_public_comments@nps.gov. This environmental assessment will be on public review for 30 days in accordance with the National Environmental Policy Act. This environmental assessment is also available on our website at <http://www.nps.gov/glac>. Please note that names and addresses of people who comment become part of the public record. **If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment.** We will make all submissions from organizations, businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses available for public inspection in their entirety.

At the conclusion of the comment period the NPS will either issue a notice of intent to prepare an environmental impact statement, or issue a finding of no significant impact.

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Background

Two landowners jointly own a 25- by 70-foot (1,750 sq. ft.) parcel of private land on Snyder Ridge approximately ½ -mile southeast of Lake McDonald Lodge (Figure 1). This parcel is a part of the “Glacier Villa Park Sites” subdivision that was platted in 1916 on lands that were in private ownership when the park was established. All but four of the Glacier Park Villa Site lots on Snyder Ridge have been acquired over the years by the National Park Service (NPS). None of the lots have structures or roads. The lot size is not large enough to accommodate water and a septic system under Flathead County regulations.

The deed for this subject lot allows for construction of a road as described in the subdivision plat map. This undeveloped access begins at the Going-to-the-Sun Road at a point near the entrance to the Lake McDonald Lodge parking lot and proceeds about 1½ mile up Snyder Ridge (Figure 2). Construction of this road would be subject to regulation by the National Park Service.

Currently, the landowners reach their property by driving approximately ½ mile up an NPS administrative dirt road that services a water tank and walking about 75 yards across federal land to the property on a foot path (Figure 3). These landowners are not willing to sell the property to the NPS, but they have been committed to working with the park to find a mutually agreeable solution that will satisfy their needs and protect park resources. In comparison with current and recent past experiences with issues related to private land, these landowners have deeded access to their property which they are willing to waive in return for temporary motorized access.

Purpose and Need for the Project

In 1998 the owners of Lot 2, Block 24 of Glacier Park Villa Sites informed park officials of their desire to build a nonresidential structure on their property. During the intervening years, discussions focused on alternatives to such construction and how, if construction occurs, impacts to the landscape could be limited. Since 1998, the owners have periodically camped on their property, and intend to continue to use the property in this manner. The objective of this project is to provide the landowners with temporary motorized access to their property so they can construct a non residential structure, without causing major impacts to park resources.

The legislation which established Glacier National Park addresses landowner rights by providing, “That nothing herein contained shall affect any valid existing claim, location or entry under the land laws of the United States or the rights of any such claimant, locator or entryman to the full use and enjoyment of his land” (NPS 1985). This statement clarifies that the establishment of the park did not nullify the right for holders of unpatented claims and homesteads to receive patent to their claimed lands.

Furthermore, they can continue to use these lands even though patent had not yet been granted. It does not limit the authority of the National Park Service to acquire lands within the park boundaries or the right to regulate land use. The Land Protection Plan (NPS 1985) states that protection of resource values and the right of the public to enjoy the park must receive priority if there is a conflict.

Alternative courses of action discussed with the landowners have included: purchase of the property by the NPS; exchange of the property for another NPS tract that currently

has road access; and exchange of the property for the temporary use of an NPS-owned structure. Because none of these alternatives were acceptable to both parties, discussions have returned to the landowners' desire for access across federal lands to construct a nonresidential structure on the property. The landowners have requested permission to construct a wider trail on federal land and use an ATV to haul building materials to the property. An EA is needed because the landowners have requested motorized access to the property and construction of this access would involve ground disturbance and clearing of vegetation. This EA analyzes the impacts of the federal action, providing the landowners access to the property. The future actions of the landowner are considered under cumulative effects.

Public Involvement

Scoping is an early and open process to determine the range of environmental issues and alternatives to be addressed in an environmental assessment. Glacier National Park conducted both internal scoping with appropriate National Park Service staff and external scoping with the public and interested and affected groups and agencies.

Internal scoping was conducted by the staff of Glacier National Park. This interdisciplinary process defined the purpose and need, identified potential actions to address the need, determined what the likely issues and impact topics would be, and identified the relationship, if any, of the proposed action to other planning efforts at the park.

In January 2003, a letter announcing that an EA would be prepared was mailed to private landowners within the park and to interested members of the public on the park's mailing list. The park also issued a press release (on January 13) informing the public of the proposed project and soliciting their comments. Two local newspapers subsequently carried articles regarding the access path.

A total of six letters, eight e-mails, and one newspaper editorial were received regarding the proposed access path. Seven commenters favored the access path, and five disagreed. One letter raised a number of resource concerns but did not specifically support or oppose the access path, and one email from a landowner inquired about access to their lot in that area. Concerns were raised about illegal activities on the property and surrounding federal lands. Those supporting the access path mentioned property owner rights and the owners' legal access. Those opposing expressed concerns about constructing an access path and allowing ATV use and the resultant impacts on the natural environment. Concerns were also expressed regarding the additional enforcement responsibilities that approval of the path and construction of the nonresidential structure would place upon the park. Several concerns were raised about impacts resulting from potential construction of the deeded road. The newspaper editorial supported the preferred alternative but criticized the NPS for not releasing the name of the landowner involved.

This environmental assessment has been placed on a 30-day public review. A press release was issued. The document is available on the internet and copies were mailed to private landowners within the park and interested publics on the park's mailing list. In addition, copies of the environmental assessment were sent to appropriate federal and

state reviewing agencies and Native American tribes (see “Consultation and Coordination” section).

Relationship of the Proposed Action to Previous Planning Efforts

The Land Protection Plan (NPS 1985) identified the lands which need to be in federal ownership to achieve management purposes and public objectives. The goal remains to acquire on a willing seller, willing buyer basis private property within the park. This goal is based on our mandate to protect and preserve park resources. The plan recommends that the NPS acquire in fee the four Glacier Park Villa Site tracts, including the property discussed in this EA, to avoid adverse effects to natural resources. The Land Protection Plan will be updated in the future but no schedule has yet been developed.

Impact Topics

Issues and concerns affecting the proposed action were identified by specialists in the National Park Service, as well as by the office of the Montana State Historic Preservation Officer (SHPO). Impact topics are the resources that could be affected by the alternatives. Specific impact topics were developed to ensure that alternatives were compared and analyzed using the most relevant topics. The following impact topics were identified on the basis of federal laws, regulations, orders, and National Park Service *Management Policies, 2001*, and from input by the SHPO. A brief rationale for the selection of each topic is given below, as well as the rationale for dismissing specific topics from further consideration.

Natural Soundscapes

Construction of an access trail and landowners’ use of an ATV would introduce unnatural sounds to the landscape. Therefore, natural soundscapes are included as an impact topic in this EA.

Soils

Construction of a trail for ATV use or construction of a road would cause soil and surface disturbance. Therefore, soils are included as an impact topic in this EA.

Vegetation

Access trail widening and use would result in the clearing of numerous small cedar and hemlock trees, as well as the trampling of such understory species as prince’s pine. Vegetation disturbance would also leave the area susceptible to invasion by exotic plants. Therefore, vegetation is included as an impact topic in this EA.

Water Quality

Water quality could be impacted if the deeded road was constructed to the property. Therefore, water quality is included as an impact topic in this EA.

Wildlife

The project is in an area of nearly pristine habitat for numerous wildlife species. Activities associated with trail construction would disturb wildlife in an area where human presence is infrequent. Therefore, wildlife is included as an impact topic in this EA.

Threatened and Endangered Species and Species of Concern

Federally listed threatened and endangered species and state listed wildlife species of concern are known to use the Snyder Ridge area. Therefore, these are included as an impact topic in this EA.

Ethnographic Resources

The Lake McDonald area has been identified as an area of ethnographic importance to the Confederated Salish and Kootenai Tribes of the Flathead Reservation. Ethnographic concerns of the Blackfeet Tribe are unknown in this area. Therefore, ethnographic resources are included as an impact topic in this EA.

Park Landowners

The proposal may cause other landowners with property in remote areas to request similar access. There are also other landowners in the Snyder Ridge area that could be affected. Therefore, park landowners are included as an impact topic in this EA.

Impact Topics Eliminated from Detailed Study

Air Quality

Very little dust would be stirred up and very few emissions would result from activities proposed in the preferred alternative. Impacts to air quality would be negligible, if any. Therefore, air quality was dismissed from further consideration in this EA.

Aquatic Species

There are neither aquatic habitats nor aquatic species present in the project area, and potential impacts to bull trout from construction of a road were considered under threatened and endangered species. Therefore, aquatic species were dismissed from further consideration in this EA.

Archeological and Historic Resources

An archeological survey of the site was conducted on July 8, 2003 by a park archeologist. No historic or prehistoric cultural resources were located; therefore archeological resources were dismissed as an impact topic from this document.

Energy Requirements and Conservation Potential

Activities in the proposed project would not measurably increase the amount of energy used in Glacier National Park. Therefore, this topic was dismissed.

Environmental Justice

Executive Order 12898, *General Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, requires all federal agencies to incorporate environmental justice into their mission by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. The preferred alternative would not have health or environmental effects on minorities or low-income populations or communities as defined in the Environmental Protection Agency's Environmental Guidance (1998). Therefore, Environmental Justice was dismissed.

Park Operations

National Park Service laws and regulations give Glacier National Park managers regulatory authority on privately owned lands within the park. This authority includes such activities as: life and safety, criminal activities, wildlife protection and waste disposal (36 CFR). While the park is concerned about the potential for improper food storage and waste disposal on the property which could lead to an increase in human-wildlife conflicts, the impacts on park operations would be negligible, therefore park operations were dismissed.

Prime and Unique Farmlands

In 1980, the Council on Environmental Quality (CEQ) directed that Federal Agencies must assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) as prime or unique. There are no "prime or unique farmlands" in Glacier National Park; therefore, prime and unique farmlands were dismissed as an impact topic in this EA.

Proposed Wilderness

The project area is outside of the proposed wilderness for Glacier National Park, therefore, this topic was dismissed from further consideration in this EA.

Socioeconomics

The proposed action would neither change regional land use plans nor impact local businesses or other agencies. The proposal would not have any measurable impact on socioeconomics in the area; therefore socioeconomic environment was dismissed.

Wetlands and Floodplains

There are no known wetlands in the immediate vicinity of this project and the project area is out of any floodplain; therefore, wetlands and floodplains were dismissed from further consideration in this EA.

Visitor Experience

The project area does not occur in an area frequented by visitors. It is off the park trail network, and the administrative road would remain closed to vehicular travel by the general public. The proposed access trail would not be visible from the Going-to-the-Sun Road or Lake McDonald. Therefore, visitor experience was dismissed.

Wild and Scenic River

The project area does not occur within or adjacent to a wild and scenic river corridor and would have no impacts on it; therefore wild and scenic river was dismissed.

ALTERNATIVES

Description of Alternatives

Three alternatives were identified for further evaluation and are discussed below. The alternatives that were considered but eliminated from detailed study are also briefly discussed.

Alternative A: Preferred Alternative

The preferred alternative is to clear a temporary access path across federal land to Lot 2, Block 24 of Glacier Park Villa Sites. This lot is located on Snyder Ridge to the east of Lake McDonald Lodge. The access path would be approximately 75 yards in length beginning at the NPS administrative road on Snyder ridge and terminating at the subject parcel (Figure 3). The path would be approximately 6 feet wide. There would be no associated road prism and no cut or fill required for construction of the path.

The path would traverse a mature cedar-hemlock forest having numerous small western hemlock (*Tsuga heterophylla*) and western red cedar (*Thuja plicata*) trees, downed and decaying logs, and tree roots. Approximately 1,350 square feet of cedar/hemlock forest would be removed. Uneven areas on the forest floor would be traversed by the use of sandbags and/or the construction of wooden ramps. Clearing the path using a combination of hand and power tools would take approximately two to three days. Smaller diameter trees could likely be cut using hand tools such as a hand saw to minimize disruption of natural soundscapes, but the larger material and logs and stump would likely be cut with a chainsaw. Power tools would not be used in the early morning or late evening when they are most likely to disturb wildlife in the area. The best time for path construction and use would be when the ground is frozen and covered with snow, or as a second alternative, in summer after the ground has dried thoroughly.

The access path would be used by the landowners to transport building material for a nonresidential structure. The NPS would issue a Special Use Permit authorizing the landowners to use the path to move building material to their property with an All-Terrain Vehicle. The access path would be intended only for temporary use by ATV. The Special Use Permit would terminate in one year and the access path would be rehabilitated back to a footpath. The footpath would continue to receive occasional use by the two landowners, their families, and guests.

The owners of Lot 2, Block 24 of Glacier Park Villa Sites do not intend to reside in the structure or install a water well or septic system on the property. The owners are in fact precluded from living in the structure without first receiving governmental approval for water and septic facilities. They have indicated to the park that their intended use is for camping only. The park assumes the landowner would remove human waste from the property.

Park regulations state (36 CFR, Section 7.3):

“no person shall occupy any building or structure intended for human habitation or use, unless such building is served by water supply and sewage disposal systems that comply with the standards prescribed by State and County laws, and regulations applicable in the County within whose exterior boundaries such building is located” The regulations further provide a two-step process: (1) approval of water and sewage systems by the state and county respectively and then, (2) application to the Park Superintendent for a permit after state and county approvals have been received and presented to the Superintendent.

Flathead County septic regulations state that it is a *“violation of these regulations to construct or maintain any dwelling or other occupied structure which is not equipped with adequate facilities for sanitary disposal of sewage.”* In the Definitions section of the regulations, *“Adequate facilities”* are defined to mean *“a subsurface sewage treatment system or other facilities approved by the Department”* (Sections 12 and 3 of Flathead County Regulations for Sewage Treatment Systems, Flathead City-County Board of Health, Environmental Health Services, January 1, 2002). The property is too small to accommodate a septic system.

Alternative B: Exchange parcel for property where road access is already available. Under this alternative, a lot of similar size (1,750 sq. ft.) would be “created” from federally owned land within the park and would be exchanged for the subject lot. Such a new lot would be located near lot 2, block 24 but with frontage on the park’s administrative road to the water tower, thus eliminating the need to construct an access path.

A new lot would be surveyed and its value appraised before proceeding with the exchange. Also, because the 2000 appraisal on Lot 2, Block 24 is now out-of-date, a new appraisal on this property would be completed before an exchange could occur. The value of the new lot, because it would have road frontage, might exceed the value of the subject parcel. Should such a difference in values occur, it may be necessary for the landowners to pay the government the difference.

Other required steps before a land exchange could occur would include: a hazardous material survey of both parcels, the filing of a notice of realty action, and a financial assessment of the benefits of the exchange to both the federal government and the landowner. Public participation, including Montana’s congressional delegation, would be an integral part of future analysis by the National Park Service should the land exchange alternative be chosen.

Alternative C: No Action

Under the no action alternative, the NPS would not clear an access trail or issue a Special Use Permit to the landowners for transport of material over Federal land. Landowners may then commence with construction of the road access provided for in their deed and in the subdivision plat. The road would begin at the Going-to-the-Sun Road across from the Lake McDonald Lodge, and would terminate at Lot 2, Block 24. The road would be approximately ½ mile in length, and up to 30 feet wide. Its approximate alignment is indicated on the plat map for the Glacier Park Villa Sites (Figure 2). The standards to which this road would be built (grade, width, switch backs, culverts) have not been determined. Department of Interior Solicitors advised the Park that the construction of such a road would be subject to reasonable regulation by the National Park Service. If

the other two landowners decided to build deeded road access to the road to Lot 2 could be extended by the other landowners.

Alternative A is the preferred alternative because it is the best way to resolve access to the property without causing unacceptable impacts to park resources. Although Alternative B appears to benefit the NPS, development along the administrative road could create more issues with access in the future. Alternative B is not preferred because access along the road could result in greater impacts to park resources and the property would more likely be developed for residential use.

Figure 1. Location of project area.

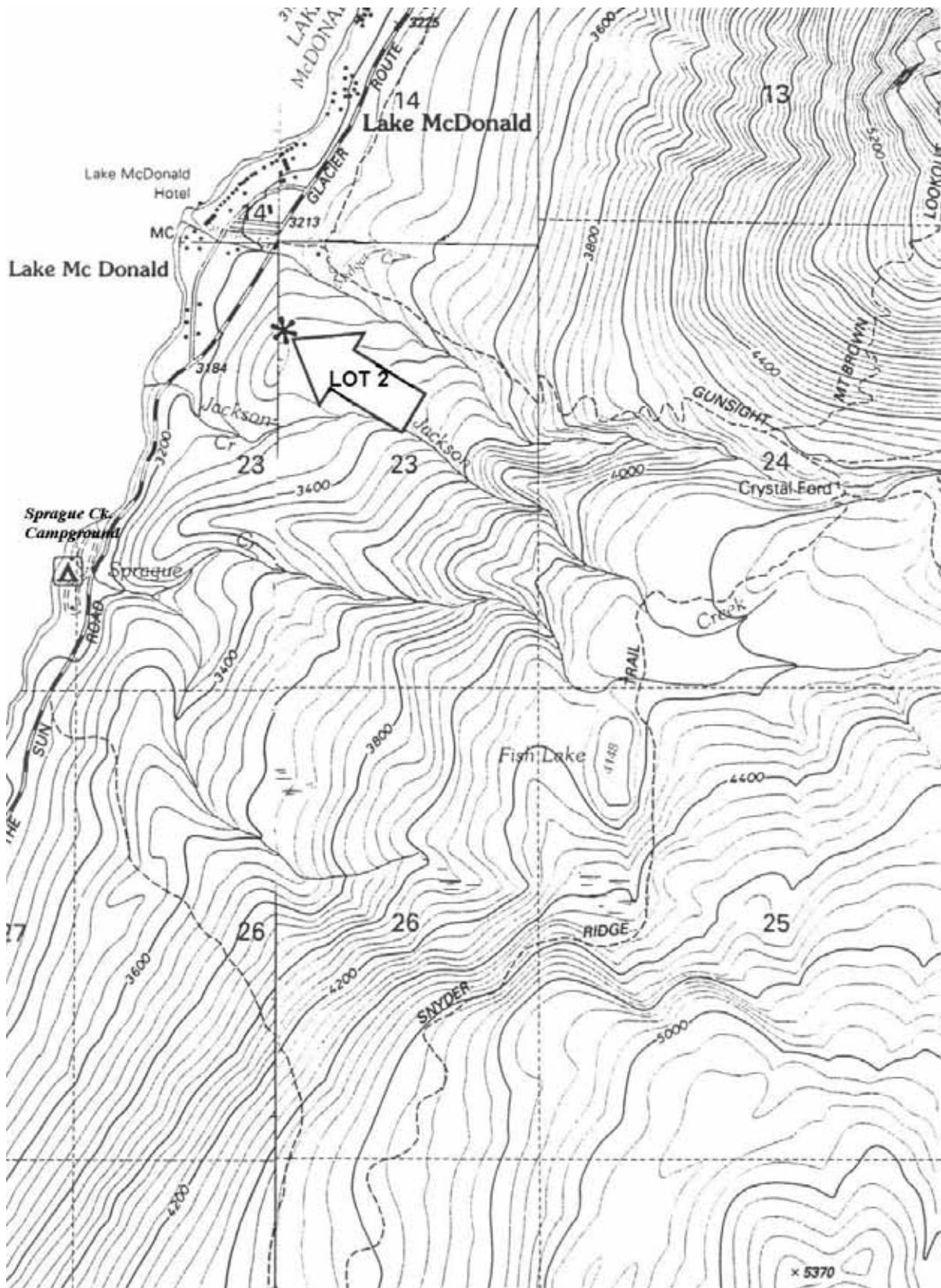


Figure 2. Aerial photo of Lot 2, Block 24, GNP Villa Sites

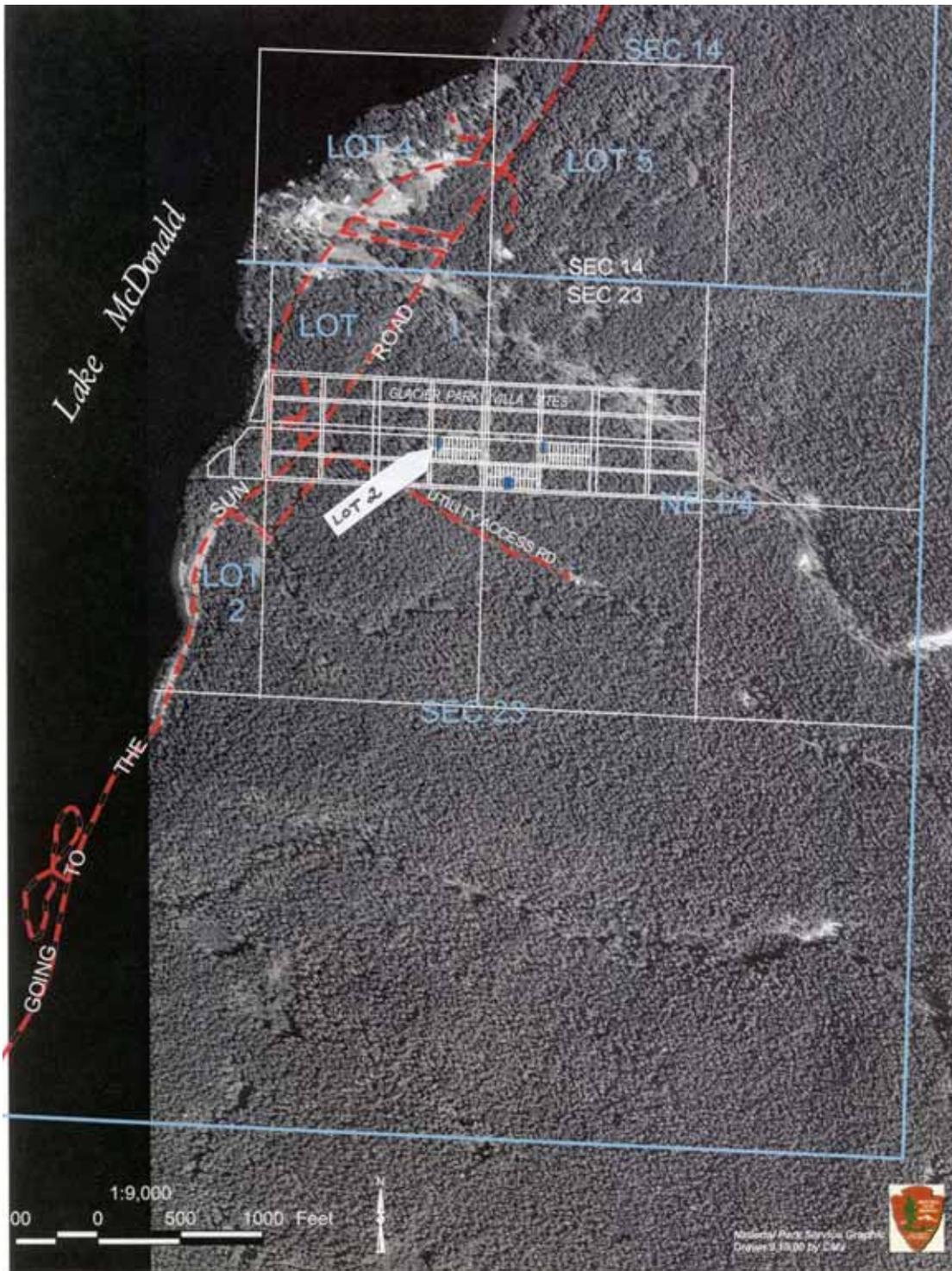
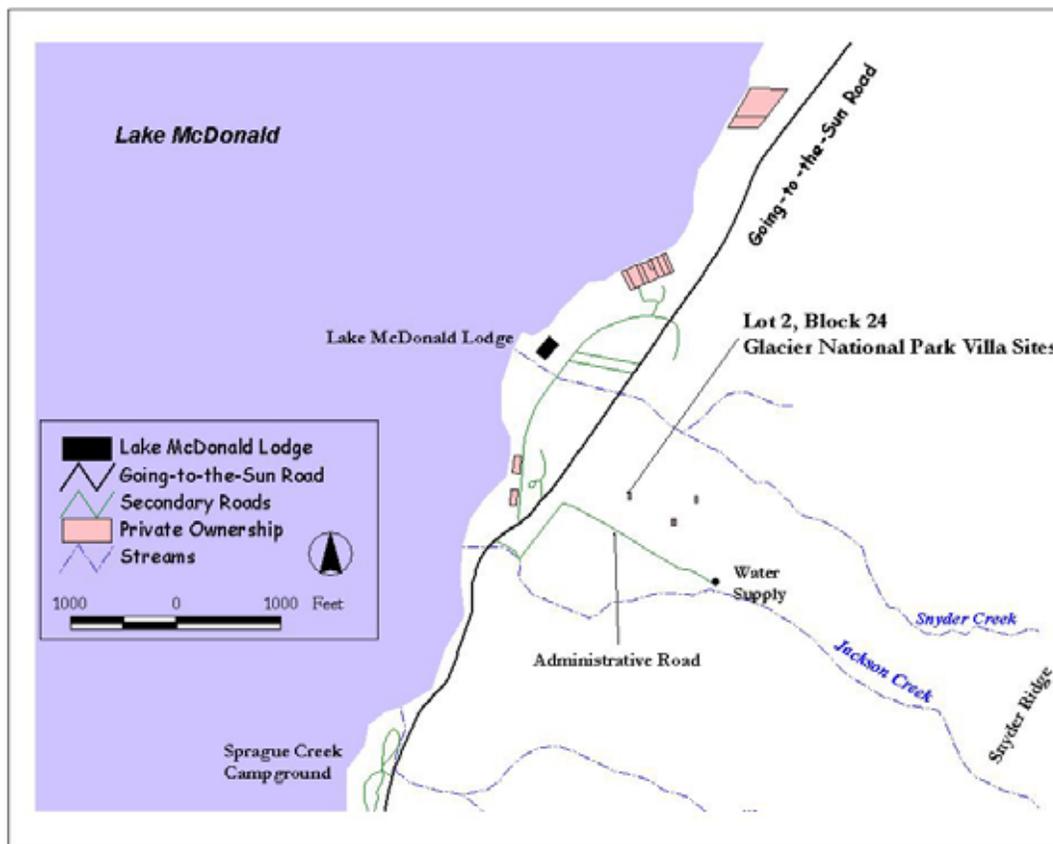


Figure 3. Existing Roads, Property and Development.



Alternatives Considered But Eliminated from Further Study

Purchase of the lot by the Federal government

NPS policy is to purchase privately owned land within Glacier National Park on a willing seller – willing buyer basis. In 1998, park officials indicated their desire to purchase this parcel (or purchase it as a part of an exchange) and the landowners agreed to allow an appraisal. The parcel was appraised in 1999 by a private-sector appraiser. After notification of the appraised value the landowners indicated that they were not willing to sell the parcel to the NPS. The 1999 appraisal expired in February 2002. In both 2001 and 2002, the landowners reiterated that they were not interested in selling their lot to the NPS but remained interested in a possible exchange.

Exchange the lot for federal property outside of the park

This requires identifying an available piece of land external to the park that is of approximately equal value. The exchange land must be administered by another Department of Interior agency and it must be located within Montana (*An Act of July 15, 1968; 82 Stat 356*). Department of Interior land managers responsible for lands near the park were not able to identify any suitable tracts.

Furthermore, land exchanges are complex and expensive. Some of the required steps include appraisals and hazardous material surveys of all involved properties, environmental analysis including an evaluation of the benefits to the federal government agencies and to the private landowner, and payments to equalize the values. Because of the low value of this 0.04 acre parcel, the expense involved in completing an exchange for property outside the park would likely be several times greater than the parcel's appraised value.

Because property outside the park could not be located, and because property is unlikely to be available in the near future, this alternative was dropped from further consideration.

Exchange the lot for the temporary use of an NPS owned structure

This alternative would involve exchanging fee title in the subject parcel for temporary use of a vacant NPS-owned cabin inside Glacier National Park. Such an action is inconsistent with existing policy and regulations for Glacier National Park (36 CFR 51) because, were the park to rent park owned cabins to the public, it would likely be precluded from offering such rentals only to specific members of the public. Lodging for visitors within Glacier National Park is handled by a concessionaire.

Use pack stock to haul materials to the site.

Using pack stock to haul in materials would likely have impacts to vegetation and soil as great as or greater than using a motorized ATV. Also, the trail would be difficult for stock animals to navigate with long logs, and creating a trail for stock to use would cause greater impacts than the proposed access trail. Therefore, this alternative was dismissed.

Environmentally Preferred Alternative

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that the “environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA Section 101:

- (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- (2) assure for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- (3) attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- (4) preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
- (5) achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
- (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.”

Alternative A, construct an access path to private property on Snyder Ridge, would meet the six criteria better than Alternative C, which could involve construction of the deeded road to Lot 2, Block 24 of Glacier Park Villa Sites. Alternative A would involve less ground disturbance and therefore less environmental degradation than Alternative C, consequently, Alternative A better meets criteria 1, 2, 3, 4, and 5. Alternative C, no action, could involve significant ground disturbance, and therefore does not meet any of the criteria as well as Alternatives A or B.

Alternative B, to exchange Lot 2, Block 24 of Glacier Park Villa Sites for another similar piece of land within the subdivision that currently has road access, would best meet criteria 1, 2, 3, 4, and 5 since a path would not need to be constructed and surface disturbance would be minimized.

The environmentally preferred alternative is Alternative B, to exchange Lot 2, Block 24 of Glacier Park Villa Sites for another similarly sized piece of land near this lot that currently has road access. Were this alternative chosen, surface disturbance would be minimized as new road or access trail construction would not be necessary. Downsides of such an exchange are mostly one of economics including the cost to the Federal government; the lengthy procedures required for processing an exchange; the likely disparity of appraised values and the resulting cost to the landowners; and the precedent set for other landowners to follow.

Alternative A is the NPS preferred alternative because it is the best way to resolve access to the property without causing unacceptable impacts to park resources. Alternative B is not preferred because it is not clear that this alternative would result in less environmental impact. If access to the property was along the administrative road, the landowners could develop the property more intensively, which could result in greater impacts to park resources.

Table 1: Summary of alternatives and whether each meets project objectives

| Alternative A – Preferred Alternative | Alternative B-- Land Exchange | Alternative C-- No Action |
|---|--|---|
| The preferred alternative would be to construct a path approximately 6 feet wide and 75 yards long and to issue a Special Use Permit for transporting of building materials to a private parcel using an ATV. This would meet the needs of the private property owner with a relatively small area of surface disturbance and at relatively low cost to the taxpayer. | This alternative would exchange the subject parcel for a nearby parcel within the park where road access is already available. This alternative would minimize the level of ground disturbance within the park, but would involve unknown costs to landowners, and easier access along the road could result in impacts to park resources. | Under the no action alternative the park would not issue a Special Use Permit for transport of building materials across Federal land. The owners may commence road construction to the site as provided for in their deed. The resulting land disturbance would be far greater than in the other two alternatives. |

Table 2: Comparison of Impacts and Alternatives

| Resource | Alternative A— Preferred Alternative | Alternative B— Land Exchange | Alternative C— No Action |
|----------------------------|---|---|--|
| <i>Natural Soundscapes</i> | There would be minor, short-term, localized adverse impacts to natural soundscapes due to use of chain saws and hand tools. Cumulative effects would be minor short-term, localized and adverse. | There would be no new impacts, and therefore no cumulative impacts, to natural soundscapes. | Although there would be no direct effects of no action, there could be major, short-term, localized adverse impacts on natural soundscapes if the landowners construct an access road to their property. Cumulative effects would be moderate, short-term, localized and adverse from construction of a road and a nonresidential structure. |
| <i>Soils</i> | There would be minor, site-specific, short-term adverse impacts to soils due to soil compaction and erosion. Cumulative impacts would be localized, negligible to minor long-term, and adverse. | There would be negligible to minor, site-specific, short-term, adverse impacts to soils. Cumulative impacts would be minor, localized, long-term and adverse if additional landowners were to make land exchanges and construct structures. | There would be no direct, short-term impacts on soils. There could be indirect moderate to major, long-term, localized adverse impacts if the road was constructed and if other landowners followed the precedent. Cumulative impacts would be localized, minor to moderate, long-term, and adverse. |
| <i>Vegetation</i> | There would be minor, short-term, site-specific, adverse impacts to vegetation due to clearing of the path and trampling. Cumulative effects from parking and construction of a nonresidential structure, and the possible development of other in-holding lots, would be minor, long-term adverse. | There would be no new impacts, and therefore no cumulative impacts, to vegetation. There would still be clearing of vegetation and construction of a nonresidential structure, causing adverse impacts to vegetation. | There would be no direct impacts to vegetation, but indirect impacts of road construction could be moderate, site-specific, long-term, and adverse. Cumulative effects would be long-term adverse, and minor from construction of a nonresidential structure, and moderate from possible development of other in-holdings. |

| Resource | Alternative A— Preferred Alternative | Alternative B— Land Exchange | Alternative C— No Action |
|--|---|--|---|
| <i>Water Quality</i> | There would be no new impacts to water quality. Cumulative impacts from construction of a nonresidential structure would be negligible, short-term, localized and adverse. | There would be no impacts, and therefore no cumulative impacts, to water quality. | Indirect effects of road construction on water quality would potentially be moderate, localized, long-term, and adverse. Cumulative effects from possible development of road access to other in-holdings would be moderate, long-term, localized and adverse. |
| <i>Wildlife</i> | There would be minor, localized, short-term adverse impacts to wildlife due to disturbance from path construction and loss of habitat. Cumulative impacts from development and other activities in the project area would be minor, localized, long-term and adverse. | Alternative B would have no direct impacts, and therefore no cumulative impacts, to wildlife. There would still be clearing of vegetation and construction of a nonresidential structure, causing adverse impacts to wildlife. | There could be moderate, long-term adverse impacts to wildlife due to road construction. Cumulative effects from construction of a nonresidential structure and possible development of other in-holding lots would be moderate, localized, long-term and adverse. |
| <i>Threatened and Endangered Species and Species of Concern</i> | There would be no effect to bull trout or westslope cutthroat trout. There would be negligible impacts to bald eagles, Canada lynx, and gray wolves. There would be minor, short-term, localized adverse impacts to grizzly bears. There would be minor long-term adverse impacts to species of concern. Cumulative impacts to grizzly bears would be minor, long-term, localized and adverse, and cumulative effects to bull trout, westslope cutthroat trout, Canada lynx, and gray wolves would be negligible to minor, short-term, localized and adverse. | There would be no direct impacts, and therefore no cumulative impacts, to threatened and endangered species and species of concern. There would still be clearing of vegetation and construction of a nonresidential structure, causing adverse impacts to listed species. | With road construction, there could be indirect moderate, long term, localized adverse effects on bull trout, westslope cutthroat trout, and grizzly bears; there could be minor to moderate long-term adverse impacts to Canada lynx, gray wolves and species of concern. Cumulative impacts to all species would be moderate, long-term, localized and adverse. |

| Resource | Alternative A— Preferred Alternative | Alternative B— Land Exchange | Alternative C— No Action |
|-------------------------------|--|--|--|
| <i>Ethnographic Resources</i> | There would be no effect on ethnographic resources, and no historic properties affected. There would be no cumulative effects. | There would be no effect on ethnographic resources, and no historic properties affected. There would be no cumulative effects. | There could be no effect on ethnographic resources, or effects could range up to major long-term adverse, depending on whether ethnographic resources were identified in the area and their visibility from the road. No cumulative effects are anticipated. |
| <i>Park Landowners</i> | There would be negligible to minor, long-term, adverse impacts to park landowners. Cumulative impacts would be minor, long-term and adverse. | There would be negligible to minor, long-term, adverse impacts to park landowners. Cumulative impacts would be minor, long-term and adverse. | If the road was constructed there would be major, adverse or beneficial impacts to park landowners. Cumulative impacts from possible development of other in-holding lots would be major, long-term, localized and adverse or beneficial. |

AFFECTED ENVIRONMENT

Natural Resources

Natural Soundscapes

Natural sounds in the project area include the sounds of running water, blowing wind, chattering birds, and many other sounds found in nature. The project area is approximately one-half mile from the Going-to-the-Sun Road, and currently experiences muted noise from traffic, the Lake McDonald Lodge and campground, motorboats on Lake McDonald, and helicopter and fixed-wing scenic air tours over the Park, as well as noise from NPS maintenance trips to the water tower. Mechanical noises, such as those produced by chainsaws and motorized vehicles, can drown out natural sounds on a temporary basis.

Soils

The soils on Snyder Ridge are classified as silty clay loam glacial soils (G2) or oxyaquic haplocryalfs (Dutton et al. 2001). The parent material is mainly glacial drift with very stony silty clay loam to sandy loam textures. These soils are deep, moderately well-

drained and are overlain by volcanic ash-rich wind deposits. The dominant vegetation on this soil type is productive, moist coniferous forest. The soil has high productivity and revegetation potential. It is rated low for road and trail construction due to silty textures, periodic wet conditions, and low surface rock content, making it susceptible to erosion when vegetation and litter are removed. The soil type is moderately susceptible to weed infestation when disturbed. Soils in the project area are typically moist to wet through the spring and later in the fall. A narrow foot path (about 1-2 feet wide) links the access road to the property. There has been minor compaction of soils along this foot path as a result of occasional use by the two landowners.

Vegetation

The project area is in western red cedar-western hemlock forest with trees representing a variety of age classes from seedling to mature overstory. The understory is represented by species such as huckleberry (*Vaccinium* spp.), spirea (*Spirea betulifolia*), snowberry (*Symphoricarpos albus*), twinflower (*Linnea borealis*), beargrass (*Xerophyllum tenax*), mountain lover, (*Paxistima myrsinites*), prince's pine (*Chimaphila umbellata*), and queencup beadlily (*Clintonia uniflora*). Mosses are common on the ground surface and on downed logs.

There are no known federally listed threatened or endangered plant species in Glacier National Park. Habitat for the federally threatened water howellia (*Howellia aquatilis*), a wetland dependent species, may be present in the park, but there are no recorded observations or potential habitat in the project area. Spalding's campion (*Silene spaldingii*), recently listed as a federally threatened species, has never been reported in the park, nor has potential habitat been identified. There is one plant species designated as a candidate species by the U.S. Fish & Wildlife Service, slender moonwort (*Botrychium lineare*). Slender moonwort would not be expected in this habitat type and was not found in the project area during surveys in the spring and fall of 2002. Also, there were no state listed sensitive plant species detected during the same surveys.

Water Quality

The project area lies between Snyder and Jackson Creeks, which flow into Lake McDonald. There may be some seeps in the area, but there are no groundwater concerns with this project. A recent study of selected lakes in the park (including Lake McDonald) indicated that water quality in the park is very high (Ellis et.al 1992).

Wildlife

Over 300 species of terrestrial wildlife occupy Glacier National Park, either seasonally or year-round. Of particular significance to many species of wildlife are riparian areas, travel routes, avalanche chutes, shrubfields, wetlands, meadows, bogs, snags, recently burned areas, aspen parklands, old-growth forests, floodplains, mineral licks, nesting colonies, birthing grounds, hibernacula, den sites, ecotonal areas, roosts, caves, and cliffs.

The access path is surrounded by old-growth cedar-hemlock forest with the following characteristics: a mix of trees of various sizes from large, mature cedar and hemlock to smaller saplings, mostly live but some dead trees (snags) and broken-topped trees, a mostly closed canopy with a well-shaded forest floor, with scattered small partial

openings, and abundant downed woody material in various stages of decay. The snags and broken-topped trees provide opportunities for bat nest and hibernacula sites, bird and small mammal nest, roost and foraging sites, and possible black bear den sites. The mix of foliage, branches, and bark plus the downed woody material, including logs and stumps, provide foraging, nesting and den sites for an abundance of animal species.

No wildlife inventory has been conducted for the immediate area of the access path. However, the following species have been documented within a mile of the site: grizzly bear (*Ursus arctos*), black bear (*Ursus americanus*), gray wolf (*Canis lupis*), wolverine (*Gulo gulo*), mountain lion (*Felis concolor*), Canada lynx (*Lynx canadensis*), marten (*Martes americana*), striped skunk (*Mephites mephites*), Columbian ground squirrel (*Spermophilus columbianus*), moose (*Alces alces*), elk (*Cervus elaphus*), mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus*), harlequin duck (*Histrionicus histrionicus*) (on Snyder, Jackson and Sprague Creeks), bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), spruce grouse (*Dendragapus canadensis*), ruffed grouse (*Bonasa umbellus*), great gray owl (*Strix nebulosa*), great-horned owl (*Bubo virginianus*), belted kingfisher (*Ceryle alcyon*), three-toed woodpecker (*Picoides tridactylus*), pileated woodpecker (*Dryocopus pileatus*), Clark's nutcracker (*Nucifraga columbiana*), chestnut-backed chickadee (*Parus rufescens*), brown creeper (*Certhia americana*), winter wren (*Troglodytes troglodytes*), American dipper (*Cinclus mexicanus*), and pine siskin (*Carduelis pinus*). Many other species of birds, mammals, reptiles, amphibians, and invertebrates associated with old-growth cedar-hemlock forest and adjacent riparian habitats are also likely to occur in the area.

Threatened and Endangered Species and Species of Concern

There are five threatened or endangered wildlife species listed by the U.S. Fish and Wildlife Service (USFWS) in Glacier National Park. They are the threatened bald eagle (*Haliaeetus leucocephalus*), grizzly bear (*Ursus arctos*), Canada lynx (*Lynx canadensis*), bull trout (*Salvelinus confluentus*), and the gray wolf (*Canis lupus*).

Bald Eagle. There are no known bald eagle nest, perch, or foraging sites in the project area. There are perch sites approximately ½ mile from the site, and eagles may occasionally fly over or near the area. There is a traditional bald eagle roost in old-growth cedar-hemlock forest near the Lake McDonald Lodge. The project area contains similar roost attributes and, though bald eagles have not been documented using the area (no surveys have been conducted), it may be used periodically as a bald eagle roost site. There is also a major raptor migration corridor directly over the area; golden eagles are the primary migrant, but lesser numbers of bald eagles, along with several other species of raptors, are documented during spring (March-April) and fall (September- October) migratory periods.

Bull Trout. The USFWS formally listed bull trout as “threatened” under the Federal Endangered Species Act in June 1998 (Federal Register 64: 58909). Bull trout are present in Lake McDonald and the McDonald drainage. Bull trout are not known to inhabit the upper reach of Jackson Creek.

Canada Lynx. On April 24, 2000, the Canada lynx was listed as a threatened species in the coterminous United States. The USFWS concluded that the population was threatened by human alteration of forests, low numbers as a result of past

overexploitation, expansion of the range of competitors, and elevated levels of human access into lynx habitat (USFS and USFWS 2000).

Lynx habitat generally is described as climax boreal forest with a dense undercover of thickets and windfalls (Ruediger et al. 2000). Advanced successional stages of forests and dense conifer stands often are preferred habitats of lynx for denning and foraging respectively. Lynx generally forage in young conifer forests especially where their primary prey, snowshoe hare (*Lepus americanus*), is abundant. Ongoing research in Montana (Squires 2003) has documented the importance of some mature high elevation spruce-fir forests to lynx. They not only provide denning habitat but some spruce-fir stands are also foraging habitat, especially in winter, with stable and relatively high densities of snowshoe hares. Other prey includes squirrels, grouse, martens, and voles. Travel corridors are thought to be an important factor in lynx habitat because of their large and variable home ranges, generally 8-738 square kilometers (Ruediger et al. 2000). Lynx are most susceptible to disturbance during the denning period and while newborns are developing (May–August) (Claar et al. 1999).

Historically, lynx were considered “more or less common” throughout the area of Glacier National Park (Bailey and Bailey 1918). Documented sightings declined during the 1970s and 1980s and have increased in recent years (NPS files); however, sightings may not be particularly sensitive to population changes and should be interpreted with caution. Systematic lynx surveys involving snow tracking and DNA sampling were initiated in 1994 and 1999 respectively; lynx were detected in many drainages throughout the park including the St. Mary, Two Medicine, McDonald and Many Glacier Valleys, although no estimates of population numbers nor trend were attempted. No surveys have been conducted in the immediate project area, and there are no incidental sighting or track records in the general area. Old-growth cedar-hemlock forest at the site provides attributes of lynx denning habitat, and may provide foraging habitat. A preliminary map of lynx habitat in Glacier defined mesic (moist) conifer forest above 4,000 feet elevation as the most likely areas supporting lynx. Little is known about lynx habitat use in Glacier and these criteria are general in nature. However, because the project site is about $\frac{3}{4}$ mile below 4,000 feet elevation, these criteria suggest the area may not provide suitable lynx habitat.

Gray Wolf. Wolves have been resident in the North Fork drainage, on the west side of the park, since naturally recolonizing in the 1980s and wolves have been reported in every major drainage in the park in recent years including the McDonald drainage. Wolves denned within a few miles of the area in 2001, but the current status of that wolf pack is unknown. White-tailed deer and elk, primary prey species of wolves, make year-round or seasonal use of the habitats in the project area; the area is part of a white-tailed deer winter range, though winter densities are probably low.

Management and recovery of wolves in the Northwest Montana Recovery Zone, of which Glacier National Park is a part, is directed by *the Northern Rocky Mountain Gray Wolf Recovery Plan* (USFWS 1987). Glacier National Park’s predominately natural landscape contains some of the most secure and productive wolf habitat in the Northwest Montana Recovery Zone. Despite fluctuating wolf numbers since 1986, Glacier’s established wolf population continues to serve as a source for natural recolonization in northwest Montana and southern Canada (Boyd-Heger 1997). Wolves

are wide-ranging animals and may pass through the Snyder Ridge area, but there are currently no known den or rendezvous sites in the area.

Grizzly Bear. Glacier National Park is part of the Northern Continental Divide Ecosystem (NCDE) recovery area for the threatened grizzly bear. The NCDE is especially important for grizzly populations because it adjoins occupied grizzly bear habitat in Canada. Preliminary results from a recent study using sign surveys and DNA fingerprinting indicate that in 2000, there were a minimum of 197 individual grizzly bears inhabiting the Greater Glacier Area with an estimated population of 234-339 individuals (Kendall 2003). These preliminary results are from a recent study using non-invasively collected hair samples and DNA fingerprinting (Kendall and Waits 2002). Exact population estimates and trends are difficult to establish due to the lack of intensive population level research within this ecosystem and the inherent problems of counting the widely distributed and reclusive grizzly bear. The *Grizzly Bear Recovery Plan* (USFWS 1993) and the *Glacier National Park Bear Management Plan* (USNPS 2001b) serve as guidelines for management of grizzly bears in Glacier National Park. The plans outline actions that are required to protect and recover the federally listed grizzly bear.

Grizzly bear habitat is found throughout the park and ranges from the lowest valley bottoms to the summits of the highest peaks. Grizzly bears require large areas of undeveloped habitat (including a mixture of forests, moist meadows, grasslands, and riparian habitats) and have home ranges of 130 to 1,300 square kilometers (USFWS 1993). A radio-collared female grizzly, with cubs, was documented using 220 square kilometers as a home range in 1998 and 1999 in the McDonald Valley of Glacier National Park; these bears were known to pass within ¼-mile of the Snyder Ridge project area (NPS files).

Grizzly bear seasonal movements and habitat use are tied to the availability of different food sources. In spring, grizzly bears feed on dead ungulates and early greening herbaceous vegetation at lower elevations (Martinka 1972). During the summer, some bears move to higher elevations in search of glacier lilies and other roots, berries, and army cutworm moths (*Euxoa auxiliaris*). During the huckleberry season, bears often concentrate in the Snyder Ridge area, as well as other areas.

Glacier National Park was placed into grizzly bear management situations (MS₁ and MS₃) in accordance with the Grizzly Bear Recovery Plan (USFWS 1993). Most of the park is designated as MS₁ habitat while developed, front-country areas are managed as MS₃ habitat. Glacier National Park is encompassed by 5 Bear Management Units (BMUs) and 41 internal Bear Management Zones (BMZs). Management direction for MS₁ areas specifies that maintenance and improvement of grizzly bear habitat and grizzly-human conflict minimization will receive the highest management priority. Management decisions will favor the needs of the bear when grizzly habitat and other land use values compete (USFWS 1993). The project area is grizzly bear habitat and is mapped as MS₁. Grizzlies forage and travel in the project area, though little is known of frequency of use.

Species of Concern. State listed species of concern to Glacier National Park are those species that are rare, endemic, disjunct, vulnerable to extirpation, in need of further research, or likely to become threatened or endangered if limiting factors are not reversed. Likewise, a species may be of concern because of characteristics that make them particularly sensitive to human activities or natural events. In addition, species of

concern may also include big game, upland game birds, waterfowl, carnivores, predators, and furbearers whose populations are protected in the park but subject to hunting and trapping outside of the park.

Wolverines (*Gulo gulo*) are very wide-ranging carnivores that may pass through the area in search of carrion, and probably make only temporary and sporadic use of the area; there is unlikely any denning habitat near the site. Fisher (*Martes pennanti*) also likely make only temporary and sporadic use, though little is known about the distribution and movements of either of these elusive carnivores.

Harlequin ducks (*Histrionicus histrionicus*) may use streams near the site during the breeding season from May to September. Golden eagles (*Aquila chrysaetos*) forage in open habitats and probably only pass over the project area during migration; there is a major golden eagle migratory corridor directly over the project area. The northern goshawk (*Accipiter gentilis*) typically nests in mature conifer forest like that found in the project area; nesting and foraging, though undocumented, may occur. The great gray owl also nests in mature conifer forest and may nest in the area, though habitat appears to be less favorable than for the goshawk. Both species are relatively uncommon.

The boreal owl (*Aegolius funereus*) typically nests in higher elevation conifer forest; none have been documented in the area during nocturnal owl surveys but they may use the area periodically. The pileated woodpecker (*Dryocopus pileatus*), three-toed woodpecker (*Picoides tridactylis*), and brown creeper (*Certhia americanus*) are fairly common year-round residents of mature conifer forest, and all likely nest in the area.

Ruffed grouse (*Bonasa umbellus*) and spruce grouse (*Falcapennis canadensis*) may nest in the general area, though the habitat is not typical of either species. The calliope hummingbird (*Stellula calliope*) may occur during the summer nesting season along riparian areas near the project. The Clark's nutcracker (*Nucifraga columbiana*) may fly over the project area, though preferred habitat is found in more open conifer forests, usually at higher elevations. Both the Hammond's flycatcher (*Empidonax hammondi*) and winter wren (*Troglodytes troglodytes*) are common in old-growth cedar-hemlock forest and likely nest near the site.

On the west side of the Park the State of Montana lists two species of fish as "Species of Special Concern". These are the westslope cutthroat trout (*Oncorhynchus clarki lewisi*) and the federally threatened bull trout. Both of these species are found in Lake McDonald and the McDonald drainage.

The following species of concern do not occur in or near the project area, so no effects are anticipated to these species or their habitats: Rocky Mountain bighorn sheep (*Ovis canadensis*), common loon (*Gavia immer*), Barrow's goldeneye (*Bucephala islandica*), hooded merganser (*Lophodytes cucullatus*), American white pelican (*Pelecanus erythrorhynchos*), horned grebe (*Podiceps auritus*), willow flycatcher (*Empidonax traillii*), veery (*Catharus fuscescens*), red-eyed vireo (*Vireo olivaceus*), and lazuli bunting (*Passerina amoena*).

Cultural Resources

Glacier National Park is home to many significant cultural resources. The National Historic Preservation Act (NHPA) of 1966, as amended, and its implementing federal

regulations (36 CFR 800), require federal agencies to identify potentially significant cultural resources within a project's impact area and to consider the effects on cultural resources before undertaking any actions. Cultural resources are defined as buildings, structures, objects, sites, or districts that display significant associations to American history, architecture, archaeology, engineering, or culture. Cultural resources may be historic or prehistoric, and may be intact resources or archaeological sites. If a proposed federal project would adversely affect an eligible property, measures must be developed and implemented to minimize or mitigate those effects. No historic buildings, archeological resources or other historic properties occur in the project area.

Ethnographic Resources

Glacier National Park completed an ethnographic overview of the park in 2001. It focuses on Blackfeet and Kootenai ethnohistory and ethnology. Additional efforts to identify ethnographic resources in the park have included contracts with the Blackfeet Tribal Business Council and the Confederated Salish and Kootenai Tribes of the Flathead Reservation.

Lake McDonald has been identified as an area of ethnographic importance by the Confederated Salish and Kootenai Tribes of the Flathead Reservation. They have requested that Glacier National Park notify them of projects within the area. The Confederated Salish and Kootenai Tribes and the Blackfeet Tribe were notified of this project during scoping. The Salish and Kootenai tribes indicated that they did not have any concerns with the preferred alternative. The Blackfeet did not respond to the scoping letter. The tribe will receive a copy of this Environmental Assessment and will be further contacted by telephone and/or in person.

Other Resources

Park Landowners

There are approximately 100 privately owned parcels within Glacier National Park. Most parcels are concentrated near Lake McDonald or Polebridge. Private homes within the park are used primarily during the summer and fall seasons. For nearly all private lands within the park, including those with existing structures, the Park's policy is to purchase them on a willing buyer-willing seller basis. Regarding undeveloped private lots remaining in the vicinity of the Lake McDonald Lodge the park's Land Protection Plan (National Park Service, 1985, pg. 49) states that these lots:

“... be acquired in fee to prevent future development and private use. Such development and use would conflict with existing public use in and near the Lake McDonald developed area and would restrict National Park Service options for accommodating public use in the future. Should these tracts be developed, the area's soil, vegetation, wildlife, and visual quality resources could be adversely affected.”

There are three other lots in the Glacier Park Villa Sites subdivision on Snyder Ridge that are still privately owned by two landowners but have no structures on them. These lots could possibly be accessed by an extension of the road to Lot 2 if it were built. The NPS has acquired the remaining lots on Snyder Ridge.

ENVIRONMENTAL CONSEQUENCES

The effects of each alternative are assessed for direct, indirect, and cumulative impacts on selected natural and cultural resources and other resources. Direct impacts are impacts caused by the proposal and alternatives at the same time and place as the action. Indirect impacts are caused by the action and alternatives but occur later in time or farther in distance than the proposed action. Impacts are described in terms of intensity (negligible, minor, moderate, or major), context (site specific, local, and/or regional effects), duration (short-term or long-term), and type (adverse or beneficial). The thresholds of change for intensity of an impact are defined in Table 3. Impacts to federally listed threatened and endangered species have been described in accordance with the Endangered Species Act. Impacts for cultural resources are described in accordance with section 106 of the National Historic Preservation Act.

Table 3: Impact Threshold Definitions

| Impact Topic | Negligible | Minor | Moderate | Major | Duration |
|---------------------------|---|--|--|--|---|
| <i>Natural Soundscape</i> | There would be no detectable introductions of artificial noise into the Park. | An introduction of artificial noise would occur at localized sites. The effect would be readily detectable, but would not affect Park visitors or wildlife. | A widespread or localized introduction of noise would be readily detectable and would affect nearby visitors and wildlife. | An introduction of noise that would adversely affect visitors and wildlife. | Short term—Effects extend only through the period of the project. Long term—Effects extend beyond the project. |
| <i>Soils</i> | Soils would not be affected or the effect would be below or at the lower end of detection. Any effects to soil productivity or fertility would be slight. | The effects to soils would be detectable. Effects to soil productivity or fertility would be small, as would the area affected | The effect to soils would be readily apparent. Effects would result in a change to soil character over a relatively wide area or multiple locations. | The effect on soils would be readily apparent and would substantially change the character of soils over a large area. | Short term—Effects last less than 3 years. Long term—Effects last more than 3 years. |
| <i>Vegetation</i> | Vegetation would not be affected or the changes would be so slight that they would not be of any measurable or perceptible consequence to the species' population. | Some individual native plants would be affected over a relatively small area, but the effects would be localized, and would be of little consequence to the species' population. | Individual native plants would be affected over a relatively wide area or multiple sites and would be readily noticeable. A sizeable segment of the species' population could be affected. | A considerable effect on native plant populations would occur over a relatively large area. | Short term—Effects last less than 3 years. Long term—Effects last more than 3 years. |
| <i>Water Quality</i> | Neither water quality, nor hydrology would be affected, or changes would be either non-detectable or if detected, would have effects that would be considered slight and local. | Changes in water quality, or hydrology would be measurable, although the changes would be small and the effects would be localized. | Changes in water quality, or hydrology would be measurable but would be relatively local. | Changes in water quality, or hydrology would be readily measurable, would have substantial consequences, and would be noticed on a regional scale. | Short term—Effects last less than 1 year. Long term—Effects last more than 1 year. |

| Impact Topic | Negligible | Minor | Moderate | Major | Duration |
|--|--|---|---|---|--|
| <i>Wildlife</i> | Wildlife and aquatic resources would not be affected or the changes would be so slight that they would not be of any measurable or perceptible consequence to the species' population. | Effects to individual wildlife and aquatic species are possible, although the effects would be localized, and would be small and of little consequence to the species' population. | Effects to individual wildlife and aquatic species are likely and localized, with consequences at the population level. | Effects to wildlife and aquatic resources would have substantial consequences to species populations in the region. | Short term—Effects extend only through the period of the project. Long term—Effects extend beyond the project period. |
| <i>Threatened and Endangered Species and Species of Concern</i> | No federally listed species would be affected or an individual of a listed species or its critical habitat would be affected, but the change would be so small that it would not be of any measurable or perceptible consequence to the protected individual or its population. Negligible effect would equate with a “no effect” determination in U.S. Fish and Wildlife Service terms. | An individual(s) of a listed species or its critical habitat would be affected, but the change would be small. Minor effect would equate with a “may effect, not likely to adversely affect” determination for the species in U.S. Fish and Wildlife Service terms. | An individual or population of a listed species, or its critical habitat would be noticeably affected. Moderate effect would equate with a “may effect” determination in U.S. Fish and Wildlife Service terms and would be accompanied by a statement of “likely...” or “not likely to adversely affect” the species. | An individual or population of a listed species, or its critical habitat, would be noticeably affected with a vital consequence to the individual, population, or habitat. Major effect would equate with a “may effect, likely to adversely affect” determination in U.S. Fish and Wildlife Service terms and would require formal consultation. | Short term—Effects extend only through the period of the project. Long term—Effects extend beyond the project period. |
| <i>Ethno-graphic Resources</i> | An action that could cause a change to a natural or physical ethnographic resource, but the change would be so small that it would not be of any measurable or perceptible effect. | An action that could cause a change to a natural or physical ethnographic resource, but the change would be small. | An action that would cause some change to a natural or physical ethnographic resource. The change would be measurable and would have a sufficient effect but be more localized. | An action that would cause a noticeable to severe change or exceptional benefit to a natural or physical ethnographic resource. The change is measurable and has a substantial and possible permanent effect. | Short term—Effects extend only through the period of the project. Long term—Effects extend beyond the project period. |

| Impact Topic | Negligible | Minor | Moderate | Major | Duration |
|-------------------------------|---|--|--|---|--|
| <i>Park Operations</i> | Park operations would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect. | The effect would be detectable but would be of a magnitude that would not have an appreciable effect on park operations. | The effects would be readily apparent, and would result in a substantial change in park operations in a manner noticeable to staff and the public. | The effects would be readily apparent, would result in a substantial change in park operations in a manner noticeable to staff, and would be markedly different from existing operations. | Short-term - Effects lasting for the duration of the treatment action Long-term - Effects lasting longer than the duration of the treatment action. |
| <i>Park Landowners</i> | Changes would be below or at the level of detection. Any effects would be short-term. | Impacts would cause a change in park landowners' activities, but the change would be slight and localized. | Impacts would cause some change in park landowners' activities. The change would be apparent. | Impacts would cause a severe change or exceptional benefit to the activities of park landowners. The change would be measurable in time or funds and would have substantial and possibly permanent effect on landowner relations. | Short-term - Effects lasting for the duration of the treatment action Long-term - Effects lasting longer than the duration of the treatment action. |

Cumulative Impacts

The Council of Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act (NEPA), requires assessment of cumulative impacts in the decision making process for federal projects. Cumulative impacts are defined as “the impact on the environment,” which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other actions (40 CFR 1508.7). Cumulative impacts are considered for all alternatives.

Cumulative impacts are determined by combining the impacts of the federal action 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 have occurred and could occur in the vicinity of the project area.

- Increased vehicular traffic on the administrative road and Jackson Creek Bridge.
- Resource impacts associated with construction of a nonresidential structure on Lot 2, Block 24 of the Glacier Park Villa Sites.
- Access may now also be sought for the 3 other private lots on Snyder Ridge, none of which presently have road or trail access. These landowners rightfully may ask for a similar Special Use Permit from Glacier National Park.
- Normal operation of the Lake McDonald Lodge and campground.
- Planned construction at Lake McDonald, beginning no earlier than 2004 (NPS Draft Commercial Services Plan and Environmental Impact Statement, 2003).
- Normal maintenance and rehabilitation of the Going-to-the-Sun Road.
- Planned rehabilitation of the Going-to-the-Sun Road, beginning spring 2004.
- Administrative flights to Sperry Chalet in September 2003.
- Scenic air tours.

Impairment of Park Resources or Values

The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid or to minimize to the greatest degree practicable, adverse impacts on park resources and values. However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise.

The prohibited impairment is an impact that would harm the integrity of the park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may constitute an impairment. An impact would be more likely to constitute an impairment to the extent it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified as a goal in the park's general management plan or other relevant NPS planning document.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating the park. A determination on impairment is made below.

None of the proposed actions in any of the alternatives would produce major adverse impacts on any natural or cultural resources described in this EA 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 any natural or cultural resources as a result of the implementation of alternatives A or B. There would be potential for impairment to natural soundscapes, soils and water quality as a result of implementation of Alternative C.

Natural Resources

Methodology

Current resource conditions were assessed through consultation with Glacier National Park staff including the ecologist, wildlife biologist, restoration biologist, air and water quality specialist, and biological technicians. Alternatives were evaluated on the basis of data and other information gathered from the following sources: databases (including GNP inventory, monitoring, and sighting databases as well as databases acquired from USGS scientists, universities, and independent researchers); Geographic Information System (GIS) thematic layers, interviews with technical experts, monitoring reports and current literature reviews. Data from recent field surveys was used along with information from other compliance documents. Site visits were conducted to the project area during spring and fall of 2002.

Natural Soundscapes

Alternative A: Preferred Alternative

Impact Analysis: Under the preferred alternative, there would be short-term introductions of artificial noise into the landscape around the project area while hand

tools and chain saws are being used. Use of an ATV to transport materials would cause a short-term introduction of artificial noise into the area, which could disturb wildlife and could be audible to visitors in the Lake McDonald Lodge area. There would be short-term, localized, minor adverse impacts to natural soundscapes as a result of implementation of the preferred alternative.

Cumulative Impact Analysis: A minimal, short term increase in artificial noise would occur when the nonresidential structure is constructed. Increased use of the administrative road would not cause a measurable increase in artificial noise in the area. Similar access requests by other landowners would cause a minor incremental increase in adverse impacts on natural soundscapes. The proposed action would add to the effect of these disturbances, as well as those caused by flights, roadwork and campground activities, on the natural soundscape. Cumulative effects would be minor, short-term, localized and adverse.

Alternative B: Land Exchange

Impact Analysis: Natural soundscapes would not be impacted as a result of the land exchange process.

Cumulative Impact Analysis: A minimal, short term increase in artificial noise would occur when the nonresidential structure is constructed. Increased use of the administrative road would not cause a measurable increase in artificial noise in the area. Similar access requests by other landowners would cause a minor incremental increase in adverse impacts on natural soundscapes. Although there would be impacts to natural soundscapes with other actions, under NEPA, because the federal action of a land exchange would have no impacts to natural soundscapes, the effects of these actions would not be considered cumulative effects.

Alternative C: No Action

Impact Analysis: There would be no direct impacts on natural soundscapes as a result of the no action alternative. However, the construction of a ½-mile long access road would require extensive clearing of trees and motorized equipment use for a period of several days. Both wildlife and visitors in the Lake McDonald Lodge area would be disturbed by this artificial introduction of noise. There would be major, short-term, localized adverse impacts from Alternative C if the road were constructed.

Cumulative Impact Analysis: There would be minor, short-term, localized adverse impacts associated with construction of a nonresidential structure on Lot 2, Block 24. There could be a moderate increase in artificial noise for a longer term if area landowners were to make frequent use of the road and/or if other landowners on Snyder Ridge also chose to develop their property as the result of the new road access. The No Action alternative would add to the effect of these disturbances, as well as those caused by flights, roadwork and campground activities, on the natural soundscape. Cumulative effects would be moderate, short-term, localized and adverse.

Conclusion: Alternative A would have minor, short-term, localized, adverse impacts to natural soundscapes, and cumulative effects would be minor, short-term, localized and adverse. There would be no new impacts, and no cumulative effects, to natural soundscapes with Alternative B. With Alternative C, if the landowners constructed an access road, there would be major, short-term localized, adverse impacts on natural soundscapes, and cumulative effects would be moderate, short-term, localized and adverse. There would be no impairment of natural soundscapes with Alternatives A or B.

Alternative C would produce major adverse impacts on natural soundscapes 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 impairment of natural soundscapes as a result of the implementation of Alternative C.

Soils

Alternative A: Preferred Alternative

Impact Analysis: The forest floor in the project area is moist and thus easily disturbed. The soil surface would be disturbed over an area about 6 feet wide and 75 yards long, roughly 1,350 square feet. The soil would be subject to compaction and erosion along this stretch. Soil disturbance would be minimized by using a rubber tired ATV and "ramping up" over uneven ground using plywood or similar material. Soil disturbance could be further minimized by hauling building material when ground is snow covered. Materials would not be transported in early spring while the soil is still wet. Minor, short-term, site specific adverse impacts to soils would result from this disturbance. Soils would be aerated during revegetation to help mitigate some of the impact.

Cumulative Impact Analysis: Increased vehicular traffic by the landowners on the administrative road could result in a negligible to minor increase in soil erosion along this road. Construction of a nonresidential structure on the private parcel would disturb approximately 250 square feet of soil surface adding a minor, long-term increment to the area of soil disturbed. If other private landowners within Glacier Park Villa Sites were to make similar requests, triple the area could be disturbed or more depending on whether direct routes that would not involve the removal of large trees are available to those properties, resulting in the potential for another minor incremental increase in adverse impacts to soils in the project area. The proposed action would add to the effects of these activities on soils; cumulative effects would be localized, negligible to minor, long-term and adverse.

Alternative B: Land Exchange

Impact Analysis: In the event of a land exchange, no access trail would need to be constructed and no surface disturbance to soils would result. If the parcel were adjacent

to the administrative road, increased vehicular traffic along the road could result in a negligible to minor increase in erosion along this road. Alternative B would likely result in no more than negligible to minor, site-specific, short-term, adverse impacts to soils, but the potential exists for long-term minor impacts if additional landowners were to make land exchanges and construct structures.

Cumulative Impact Analysis: The same potential for construction of a nonresidential structure could exist as in Alternative A. Other land exchanges could be requested and considered, and the potential for other structures and more vehicular use of the administrative road would be possible, resulting in a minor increase in soil disturbance. Alternative B would add to the effects of these activities on soils; cumulative effects would be minor, localized, long-term and adverse if additional landowners were to make land exchanges and construct structures.

Alternative C: No Action

Impact Analysis: There would be no construction of an access trail and no disturbance of soil undertaken by the Park under the no action alternative. However, if the landowners were to claim their deeded access as shown on the Glacier Park Villa Sites plat map (Figure 2), a road of approximately ½-mile in length, and up to 30 feet wide, could be constructed up Snyder Ridge. The steepness and straightness of the road coupled with the highly erosive soil type would likely result in severe soil erosion of at least moderate to major intensity. Potential for mass movement of soil within the road prism would exist. Maintenance of such a road in good condition would be difficult as evidenced by the current condition of the Park's administrative road. In the short-term, the no action alternative would have no direct impact on soils. However, if the landowners were to construct a road up Snyder Ridge and if other landowners took other actions to develop their property, impacts to soils would be moderate to major, localized, long-term, and adverse.

Cumulative Impact Analysis: While increased vehicular use would be transferred from the administrative road to the new access road in this scenario, the potential impacts to soil from traffic use would be minor to moderate due to the steep grade of the road. The same cumulative impacts could result from construction of a nonresidential structure as described in Alternative A. Use of the access road by other landowners would result in a minor to moderate incremental increase in adverse impacts. The No Action alternative would add to the effects of these activities on soils; cumulative effects would be minor to moderate, long-term, and localized and adverse.

Conclusion: Alternative A would have minor, short-term, site specific adverse impacts on soils. Alternative B would have negligible to minor, site-specific, short-term, adverse impacts to soils, but impacts would be minor and long-term if additional landowners were to make land exchanges and construct structures. Alternative C would have no direct impact on soils, but if a road were constructed impacts would be moderate to major, localized, long-term and adverse.

Cumulative impacts from Alternative A would be localized, negligible to minor, long-term and adverse. Cumulative impacts from Alternative B would be minor, localized,

long-term and adverse. Cumulative impacts from Alternative C would be minor to moderate, long-term, localized and adverse. There would be no impairment of soils with Alternatives A or B.

Alternative C would produce major adverse impacts on soil resources 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 impairment of soils as a result of the implementation of Alternative C.

Vegetation

Alternative A: Preferred Alternative

Impact Analysis: Approximately 1,350 square feet of vegetation would be removed by park staff to construct this trail. This vegetation would be mostly hemlock and cedar less than two inches in diameter, with some trees up to approximately five inches in diameter. The ground surface would be disturbed over most of the trail, and much of the vegetation in the understory would be destroyed. There would also be disturbance to mosses growing on the ground surface and on downed logs to be moved. Disturbance would be minimized if transport were to occur while the ground is snow-covered and frozen. The next optimal time would be during the summer dry season. Use of plywood ramps over uneven terrain would also help alleviate the disturbance. The area would be revegetated using plant material from the Park's native plant nursery following transport of the material. Revegetation potential is high on this site, providing there is no great loss of soil. In the interim until the native plants become well-established, the area would be moderately susceptible to weed invasion. The area would need to be monitored for weed establishment and treated if necessary over the next several years. Impacts to potential old growth in the surrounding area would be negligible at this level of disturbance. As a result of the proposed action, there would be minor, short-term, site-specific, adverse impacts to vegetation in the project area.

Cumulative Impact Analysis: Increased traffic on the administrative road would cause no new impacts to vegetation, although long-term parking of more than two vehicles at the trailhead would cause trampling and disturbance to vegetation near the road. A negligible to minor, but long-term, site specific decrease in vegetation would result from construction of a nonresidential structure. The precedence would be set for at least triple the disturbance to vegetation if other landowners made and were granted the same request. The proposed action would add to the effects of these activities on vegetation; cumulative effects would be negligible to minor, long-term and adverse.

Alternative B: Land Exchange

Impact Analysis: There would be no new impacts to vegetation if a land exchange were to take place.

Cumulative Impact Analysis: The action the landowner is taking to construct a nonresidential structure would have adverse impacts to vegetation on the property similar to those under Alternative A, but because the federal action of exchanging land would not have any direct impacts on vegetation, it does not add to the impacts of other actions. Therefore, under NEPA, there would be no cumulative effects with Alternative B.

Alternative C: No Action

Impact Analysis: There would be no direct new impact to vegetation in the short-term under the no action alternative. However, if a new road access were developed up Snyder Ridge, there would be a 30-foot swath a half-mile long where all vegetation would be removed. It would be impossible to avoid the removal of a large number of mature cedar and hemlock trees if such a road were to be constructed. Potential effects on old growth forest and opportunities for weed invasion would be greatly exacerbated. The impacts would be moderate in scale, site-specific, long-term, and adverse.

Cumulative Impact Analysis: Potential minor, long-term impacts resulting from construction of a nonresidential structure would still exist under this alternative, but the potential for impacts resulting from other landowners developing would be moderate. The No Action alternative would add to the effects of these activities on vegetation; cumulative effects would be long-term, adverse and minor to moderate.

Conclusion: Alternative A would have minor, short-term, site-specific, adverse impacts to vegetation. Cumulative effects of Alternative A would be negligible to minor, long-term and adverse. Alternative B would have no new impacts to vegetation, and there would be no cumulative impacts. With Alternative C, if a road were constructed, there would be moderate, site-specific, long-term adverse impacts to vegetation. Cumulative effects of Alternative C would be long-term, minor to moderate and adverse.

None of the alternatives would produce major adverse impacts on vegetation 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 vegetation as a result of the implementation of any of the alternatives.

Water Quality

Alternative A: Preferred Alternative

Impact Analysis: There would be negligible, if any, increase in sediment input to Jackson Creek or Lake McDonald as a result of this proposal. Sediment produced during construction of the trail would produce no new long term effects on water quality,

hydrology, or fisheries. There would be no change in parameters such as peak flow, channel stability, or stream water temperature as a result of this proposal. Use of the trail would not produce any long-term negative impacts on water quality.

Cumulative Impact Analysis: The proposed action would add to the effects of construction of a nonresidential structure on water quality. Cumulative impacts would be negligible, short-term, localized and adverse.

Alternative B: Land Exchange

Impact Analysis: No impacts to water quality would occur under this alternative.

Cumulative Impact Analysis: The action the landowner is taking and actions that other in-holders could take would have effects on water quality similar to those under Alternative A, but because the federal action of exchanging land would not have impacts on water quality, it does not add to the impacts of other actions. Therefore, under NEPA, there would be no cumulative effects with Alternative B.

Alternative C: No Action

Impact Analysis: Under the no action alternative, construction of the deeded road would cause a decline in water quality due to the erosion of large amounts of sediment created by road construction, and future drainage problems (Forman et al. 2003). Therefore, Alternative C could have moderate, localized, long-term adverse impacts on water quality.

Cumulative Impact Analysis: Impacts to water quality from construction of a nonresidential structure on the exchange parcel would be negligible. Access may be sought by other in-holders along this same route, which would result in major, long-term, localized adverse impacts. Under the No Action alternative, cumulative impacts resulting from the construction of the deeded road combined with possible development of road access to other in-holdings would be moderate, long-term, localized and adverse.

Conclusion: Alternative A would have negligible impacts on water quality, and cumulative impacts would be negligible, short-term and localized. Alternative B would have no new impacts and no cumulative impacts on water quality. Alternative C could have moderate, localized, long-term adverse impacts on water quality, and cumulative impacts would be major, long-term, localized and adverse.

None of the alternatives would produce major adverse impacts on water quality resources 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 water quality as a result of the implementation of any of the alternatives.

Wildlife

Alternative A: Preferred Alternative

Impact Analysis: The use of hand tools and chain saws to construct the path, and the human presence during path construction, would temporarily displace wildlife from the project area. Negligible loss of nesting, roosting, and foraging habitat would occur. Alternative A would have minor, short-term, localized adverse impacts on wildlife.

Cumulative Impact Analysis: Past, concurrent, and foreseeable future actions that would likely increase the impact of this action would be increased vehicular and foot traffic, more frequent occupancy of the site, and further development on other private property in the area, normal operation of the Lake McDonald Lodge and campground, maintenance of the Going-to-the-Sun Road, and administrative flights including those to Sperry Chalet. Summer occupancy of the site is likely to increase, and without sanitary or food storage facilities, conflicts with deer and bears would likely increase. This may result in food-conditioned bears that may eventually be destroyed. The proposed action would add to the effects on wildlife from these activities; cumulative impacts would be minor, localized, long-term and adverse.

Alternative B: Land Exchange

Impact Analysis: Since there would be no trail construction, there would be no direct impacts to wildlife as a result of Alternative B.

Cumulative Impact Analysis: The action the landowner is taking would have effects on wildlife similar to those under Alternative A, but because the federal action of exchanging land would not have impacts on wildlife, it does not add to the impacts of other actions. Therefore, under NEPA, there would be no cumulative effects with Alternative B.

Alternative C: No Action

Impact Analysis: There would be no new impact to wildlife in the short-term under the no action alternative. However, if a new road access were developed up Snyder Ridge, there would be a 30-foot swath a half-mile long where all vegetation and wildlife habitat would be removed. Impacts to wildlife would be moderate in scale, localized, long-term, and adverse.

Cumulative Impact Analysis: A nonresidential structure would be constructed and used on the property. The two other in-holders could construct similar road access to their properties should the owners of Lot 2, Block 24 construct the road authorized in their deed. The result could be a moderate, long-term adverse impact on wildlife. The No Action alternative would add to the effects of these activities on wildlife; cumulative effects would be moderate, localized, long-term and adverse if the road were constructed.

Conclusion: Alternative A would have minor, short-term, localized adverse impacts on wildlife. Cumulative impacts with Alternative A would be minor, localized, long-term and adverse. Alternative B would have no direct impacts and no cumulative impacts to wildlife. Alternative C would have moderate, localized, long-term adverse impacts and cumulative effects to wildlife.

None of the alternatives would produce major adverse impacts on wildlife 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 wildlife as a result of the implementation of any of the alternatives.

Threatened and Endangered Species and Species of Concern

Alternative A: Preferred Alternative

Impact Analysis:

Bull Trout – Westslope Cutthroat Trout. Under Alternative A, sediment produced during construction activities would be localized and would not affect bull trout, westslope cutthroat trout or their habitat attributes. Due to the minor disturbance that would be caused by this project there would be no effect on Jackson Creek, Lake McDonald or any waters in the McDonald drainage.

Bald Eagle. There would be little impact anticipated to bald eagles from implementing this project, as the species does not nest or forage at the site. Migrating birds would be little affected. It is unknown if the site is used as a roost; however, there appears to be roost site habitat in more favorable areas closer to the lake. Alternative A would have negligible impacts on bald eagles.

Canada Lynx. A generalized map of lynx habitat in Glacier indicates the project area is about $\frac{3}{4}$ -mile outside the boundary of what is typically considered habitat favorable to lynx. This has not been confirmed by monitoring or research in Glacier, but suggests the area is not important to lynx habitat. Though little is known about the specific distribution patterns and habits of lynx in the Park, this project is expected to have negligible impact on the species due to the lack of track records or sightings in the area, and the limited duration and extent of the project. The area may contain lynx denning habitat, but the chance of a den near the site is probably low since the property is currently used, and there is ample denning habitat elsewhere in the park.

Gray Wolf. This project is expected to cause little impact to wolves, since there is little evidence of recent wolf activity in the area, the area is not considered primary wolf habitat (a limited prey base for wolves), and the project would have a short duration and limited spatial effect. This conclusion is based on incidental observations and comparison to areas occupied by wolves for many years; no research or monitoring of

wolves or ungulates has occurred in the area. Alternative A would have negligible impacts on gray wolves.

Grizzly Bear. Displacement of grizzly bears as a result of this project would likely be minimal, due to the limited duration and extent of the action, and the wide-ranging nature of the species. Based on research in the South Fork of the Flathead River (Mace and Waller 1997), denning habitat is likely not present in this low elevation, forested area. High quality grizzly bear foods, such as cow parsnip or huckleberries, do not appear to be common in this area. The disturbance caused by constructing and using the trail would temporarily displace grizzly bears in the area. Alternative A would have minor, short-term adverse impacts to grizzly bears.

Species of Concern- There could be minor long-term adverse effects to northern goshawks, great gray owls, pileated woodpecker, three-toed woodpecker, and brown creeper. Any live trees or snags cut for this project or later removed as safety hazards, or any logs or stumps removed may affect a small amount of foraging, and possibly nesting, habitat for these species.

Cumulative Impact Analysis: If the other two in-holder sites were accessed and developed and use of the administrative road increased, one could expect the negative impacts on threatened and endangered species and species of concern to increase slightly due to the potential for increased sedimentation and temporary displacement of wildlife. Construction of the nonresidential structure, and flights over the area including flights to Sperry Chalet, combined with other actions, could also temporarily displace listed species. Increased human activity at the site could result in more human-bear encounters. If bears become food-conditioned, the risk of grizzly bear mortality would increase. The proposed action would add to the effects of these activities on threatened and endangered species and species of concern. Cumulative effects to grizzly bears would be minor, long-term, localized and adverse, and for other threatened and endangered species and species of concern, cumulative effects would be negligible to minor, short-term localized and adverse.

Alternative B: Land Exchange

Impact Analysis: Since there would be no path construction, there would be no direct impacts to threatened and endangered species and species of concern with Alternative B.

Cumulative Impact Analysis: The action the landowner is taking, and future actions other in-holders could take, would have effects on threatened and endangered species and species of concern similar to those under Alternative A, but because the federal action of exchanging land would not have impacts on threatened and endangered species and species of concern, it does not add to the impacts of other actions. Therefore, under NEPA, there would be no cumulative effects with Alternative B.

Alternative C: No Action

Impact Analysis: There would be no new impact to threatened and endangered species or species of concern in the short-term under the no action alternative. However, if a new road access were developed up Snyder Ridge, there would be a 30-foot swath a half-mile long where all vegetation would be removed. The potential for long-term, adverse impacts to bull trout and westslope cutthroat trout does exist. This threat is due to the sedimentation that may be caused during construction and during use of the road or by rainwater drainage off of the dirt road. Construction of the deeded road would adversely impact grizzly bears, Canada lynx, gray wolves and species of concern due to loss of approximately 3.6 acres of habitat. Indirect impacts to bull trout, westslope cutthroat trout, Canada lynx, grizzly bears, gray wolves, and species of concern would be moderate in scale, site-specific, long-term, and adverse.

Cumulative Impact Analysis: It is possible that the two other in-holders would seek access to their properties from the Going-to-the-Sun Road if one in-holder was permitted this route of access. The result could be a moderate negative impact on bull trout and westslope cutthroat trout as well as other aquatic species. Adverse impacts to grizzly bears, and possibly lynx and wolves would also increase due to the cumulative effects of lodge and campground operation, road maintenance, and flights over the area. The No Action alternative would add to the effects of these activities on threatened and endangered species and species of concern. Cumulative impacts to bull trout and westslope cutthroat trout would be major, long-term, localized and adverse; cumulative impacts to grizzly bears would be moderate, long-term, localized and adverse; cumulative impacts to Canada lynx, gray wolves, and species of concern would be moderate, long-term, localized and adverse.

Conclusion: With Alternative A, there would be no effect to bull trout or westslope cutthroat trout; there would be negligible impacts to bald eagles, Canada lynx, and gray wolves; there would be minor, short-term, localized adverse impacts to grizzly bears; and there would be minor long-term adverse impacts to species of concern. Cumulative impacts of Alternative A to grizzly bears would be minor, long-term, localized and adverse, and cumulative effects to bull trout, westslope cutthroat trout, Canada lynx, and gray wolves would be negligible to minor, short-term, localized and adverse. Alternative B would have no direct impacts and no cumulative impacts to threatened and endangered species and species of concern.

With Alternative C, there could be moderate, long term, localized adverse effects on bull trout, westslope cutthroat trout, and grizzly bears; there could be minor to moderate long-term adverse impacts to Canada lynx, gray wolves and species of concern. Cumulative impacts of Alternative C to all species would be moderate, long-term, localized and adverse.

None of the alternatives would produce major adverse impacts on threatened and endangered species and species of concern resources 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 threatened and endangered species and species of concern as a result of the implementation of any of the alternatives.

Cultural Resources

Methodology

In this environmental assessment, impacts to cultural resources (including archaeological and ethnographic resources) are described in terms of type, context, duration, and intensity, as described above, which is consistent with the regulations of the Council on Environmental Quality (CEQ) that implement the National Environmental Policy Act (NEPA). These impact analyses are not intended to comply with the requirements of §106 of the National Historic Preservation Act (NHPA). The Advisory Council on Historic Preservation's regulations implementing §106 of the NHPA (36 CFR Part 800, *Protection of Historic Properties*) requires federal agencies to take into account the effects of their undertakings on historic properties by: (1) determining the area of potential effects; (2) identifying historic properties (including archaeological and ethnographic) present in the area of potential effects that are listed in or eligible for listing in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected historic properties; and (4) considering ways to avoid, minimize or mitigate adverse effects.

Under the Advisory Council's regulations a finding of either *adverse effect* or *no adverse effect* must also be made for affected, National Register-eligible historic properties. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a historic property that qualify it for listing in the National Register, e.g. diminishing the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the preferred alternative that would occur later in time, be farther removed in distance, or be cumulative. A finding of *no adverse effect* means there is an effect, but the effect would not diminish in any way the characteristics of the historic property that qualify it for inclusion in the National Register.

CEQ regulations and the National Park Service's *Conservation Planning, Environmental Impact Analysis and Decision-making* (Director's Order #12) also call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g. reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. It does not suggest that the level of effect as defined by §106 is similarly reduced. Although adverse effects under §106 can be mitigated, the effect remains adverse.

In this Environmental Assessment, a §106 summary is included in the impact analysis sections for cultural resources. The summary is based on currently available knowledge about cultural resources in the area of potential effect for each alternative. The summary is intended to meet the requirements of §106 only for the Preferred Alternative. An archeological survey of the site was conducted by a park archeologist on July 8, 2003. No

historic or prehistoric resources were located. Identification of historic properties for the other alternatives does not meet the standards established in §106.

Ethnographic Resources

Alternative A: Preferred Alternative

Impact Analysis: The proposed access trail construction could affect unidentified ethnographic resources. Consultation with the Salish and Kootenai Tribes identified no ethnographic concerns under this alternative. If ethnographic resources were identified by the Blackfeet in the future that would be affected by this alternative, Glacier National Park would consult with the Tribe, State Historic Preservation Officer, and other consulting parties as appropriate, to avoid or mitigate an adverse effect. Based upon available information, the preferred alternative would have no effect on cultural resources. For §106 purposes, the finding would be “no historic properties affected.”

Cumulative Impacts: Because there are no identified impacts associated with Alternative A, it would not contribute to impacts of other actions. Consequently, under NEPA, there would be no cumulative impacts under the alternative.

Alternative B: Land Exchange

Impact Analysis: A land exchange along the administrative road could affect unidentified ethnographic resources because the proposed exchange parcel has not yet been identified. Glacier National Park will consult with the Tribes to identify ethnographic resources in the area. If ethnographic resources would be affected, Glacier National Park will consult with the Tribes, State Historic Preservation Officer, and other consulting parties as appropriate, to avoid or mitigate adverse effects. Effects are expected to be similar to those of Alternative A. For Section 106 purposes, the finding would be “no historic properties affected.”

Cumulative Impacts: Because there are no identified impacts associated with Alternative B, it would not contribute to impacts of other actions. Consequently, under NEPA, there would be no cumulative impacts under Alternative B.

Alternative C: No Action

Impact Analysis: Proposed road construction could affect unidentified ethnographic resources. Glacier National Park would consult with the Tribes to identify ethnographic resources in the area. Road construction would be more likely to impact ethnographic values than Alternatives A or B since the new road could be highly visible from outside the project area. If ethnographic resources would be affected, Glacier National Park would consult with the Tribes, State Historic Preservation Officer, and other consulting parties as appropriate, to avoid or mitigate the adverse effect. Depending upon the visibility of the road from important ethnographic resources, effects might range from no effect to major, long-term, adverse effects. For Section 106 purposes, the finding would be from “no historic properties affected” to “adverse effect.”

Cumulative Impacts: Because there are no identified impacts associated with Alternative C, it would not contribute to impacts of other actions. Consequently, under NEPA, there would be no cumulative impacts under the alternative.

Conclusions: There would be no effect on ethnographic resources and no cumulative effects with Alternatives A or B. Alternative C could have no effect, or effects could range up to major, long-term adverse, depending on whether ethnographic resources were identified in the area and their visibility from the road. No cumulative effects are expected from Alternative C.

None of the alternatives would produce major adverse impacts on ethnographic resources 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 ethnographic resources as a result of the implementation of any of the alternatives.

Other Resource Topics

Methodology

Park staff, such as the ecosystems program manager, environmental protection specialist, chief ranger and staff, superintendent and assistant superintendent (current and former), as well as Department of Interior solicitors, and the county sanitarian were consulted for information on development of alternatives and analysis of impacts on issues other than natural and cultural resources. Park files, other compliance documents, and consultation with Regional National Park Service staff were also used in analysis.

Park Landowners

Alternative A: Preferred Alternative

Impact Analysis: Impacts to private landowners within the park would be negligible. Impacts to landowners of the other lots on Snyder Ridge would be minor, localized, long term and adverse. None of the other 3 private lots on Snyder Ridge are developed or have trail or road access. There would be short term impacts during construction if the other landowners were in the area. There would be long term impacts to them from viewing development in an area that has none. Other landowners in the park would not be impacted by the construction and use of the access trail to Lot 2, Block 24.

Cumulative Impact Analysis: The remoteness of Lot 2, Block 24 would likely prevent other landowners from being disturbed by construction and use of this site. The potential exists for other landowners on Snyder Ridge to seek a similar Special Use Permit from the park so that they too may access their property by crossing federally

owned land. The proposed action would add to the effects of other activities on park landowners, but cumulative effects would be minor, long-term and adverse.

Alternative B: Land Exchange

Impact Analysis: Impacts to private landowners within the park would be negligible. However, impacts to other landowners on Snyder Ridge would be minor, long term and adverse. They would be affected by development in a currently undeveloped area. The exchange lot would be most likely be located along a portion of the administrative road, not visible from the Going-to-the-Sun Road and would likely be at least 100 yards from the nearest private home.

Cumulative Impact Analysis: The remoteness of Lot 2, Block 24 would likely prevent other landowners from being disturbed by construction and use of this site. The potential exists for other landowners on Snyder Ridge to seek a similar Special Use Permit from the park so that they too may access their property by crossing federally owned land. Alternative B would add to the effects of other activities on park landowners, but cumulative effects would be minor, long-term and adverse.

Alternative C: No Action

Impact Analysis: Should the owners of Lot 2, Block 24 decide not to build the access roads to their property, impacts on other park landowners would be negligible. Should the owners decide to construct the access road, the impact to park landowners on Snyder Ridge could be major, long-term, adverse or beneficial depending on whether the other landowners would prefer more access or want their property to remain remote and undeveloped.

Cumulative Impact Analysis: Road access to the other three private lots on Snyder Ridge may prompt these landowners to seek ways to develop or sell their property. The No Action alternative would add to the effects of these activities on park landowners; cumulative impacts would be major, long-term, localized and adverse or beneficial.

Conclusions: Alternatives A and B would have negligible impacts to park landowners, and minor, long-term and adverse impacts to landowners on Snyder Ridge. Cumulative impacts would be minor, long-term and adverse. Alternative C would have major adverse or beneficial impacts to park landowners, and cumulative impacts would be major, long-term, localized and adverse or beneficial. There would be no impairment of park landowners with any of the alternatives.

None of the alternatives would produce major adverse impacts on park landowners 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 park landowners as a result of the implementation of any of the alternatives.

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Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
Montana Department of Natural Resources and Conservation
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COMPLIANCE WITH FEDERAL AND STATE REGULATIONS

The NPS would comply with all applicable federal and state regulations when implementing the preferred alternative.

The Endangered Species Act of 1973, as Amended (16 U.S.C. 1531 et seq.)--Section 7 of the Endangered Species Act is designed to ensure that any action authorized, funded, or carried out by a federal agency would not jeopardize the continued existence of any endangered or threatened plant or animal species. If a federal action may affect threatened or endangered species, then consultation with the U.S. Fish and Wildlife Service (USFWS) is required. The preferred alternative would have no effect on bald eagles, bull trout, Canada lynx, or gray wolves. The preferred alternative may affect, but is not likely to adversely affect grizzly bears in the project area. A biological assessment for grizzly bears is being prepared to submit to the USFWS.

Executive Orders 11988 and 11990, Floodplain Management and Wetland

Protection—These executive orders direct NPS to avoid, to the extent possible, the long- and short-term adverse impacts associated with modifying or occupying floodplains and wetlands. They also require NPS to avoid direct or indirect support of floodplain or wetland development whenever there is a practical alternative. There are no known wetlands in the immediate vicinity of the project, and the project is outside of any floodplain.

National Environmental Policy Act (NEPA) and Regulations of the Council on

Environmental Quality--The National Environmental Policy Act applies to major federal actions that may significantly affect the quality of the human environment. This generally includes major construction activities that involve the use of federal lands or facilities, federal funding, or federal authorizations. This EA meets the requirements of the NEPA and regulations on the Council on Environmental Quality in evaluating potential effects associated with activities on federal lands. If no significant effects are identified in this evaluation, a finding of no significant impact (FONSI) will be prepared. If significant impacts are identified, then a notice of intent (NOI) will be filed for preparation of an Environmental Impact Statement.

National Historic Preservation Act of 1996, as Amended (16 U.S.C. 470, et. Seq.)--

Section 106 of the National Historic Preservation Act of 1966 (as amended) requires all federal agencies to consider effects from any federal action on cultural resources eligible for or listed on the National Register of Historic Places (NHRP), prior to initiating such actions. This EA has been submitted to the State Historic Preservation Office for review.

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