GRAND PORTAGE
National Monument / Minnesota

DRAFT GENERAL MANAGEMENT PLAN / ENVIRONMENTAL IMPACT STATEMENT

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DRAFT GENERAL MANAGEMENT PLAN / ENVIRONMENTAL IMPACT STATEMENT
GRAND PORTAGE NATIONAL MONUMENT — COOK COUNTY, MINNESOTA

This *Draft General Management Plan / Environmental Impact Statement* describes a preferred alternative and four alternatives for managing and using Grand Portage National Monument. The plan is intended to provide a foundation to help management guide programs and set priorities. The alternative that is finally chosen as the plan will guide the management of Grand Portage National Monument over the next 15 to 20 years.

Alternative A, the "no-action" or status quo alternative provides a baseline for comparing the other "action" alternatives. No major changes would be made in resource management, visitor programs, or facilities beyond regular maintenance, and the current road system through the Monument would remain. There would be no changes in the partnership with the Grand Portage Band of Minnesota Chippewa or in the management of the Monument's museum collections and archives.

The four action Alternatives, B through E, all would involve road realignment, restoring the landscape to a historic appearance, and developing a heritage center and other features to enhance visitor understanding of the fur trade story and the area's maritime history. All the action alternatives propose preserving and interpreting the 20th century Ojibwe village site northeast of the stockade, and all would retain Fort Charlotte and the portage relatively unchanged.

Alternative B, "Fur Trade with Maritime Emphasis," would attempt to transport visitors back to the 1790s, with maritime transportation along the historic waterfront and additional interpretation of Lake Superior and connecting waterways. Visitors could learn about the maritime aspects of the fur trade, as well as about the Ojibwe culture and heritage. **Alternative C,** "Fur Trade and Ojibwe Heritage," would offer a multifaceted visitor experience: several newly reconstructed structures and interpretive exhibits in the stockade (which would be open seven months per year), a combined heritage center / headquarters open year-round, and an Ojibwe Cultural Demonstration Shelter. Interpretation would encompass prehistoric, historic, and contemporary activities. All administrative/operations facilities would be removed from the national monument, as would County Road 17 (in two phases). Limited restoration of the historic scene would be carried out. In **Alternative D,** "Heritage Center Focus," a large multifunctional heritage center would be built in which to offer a glimpse into the history of the Grand Portage and its inhabitants. Costumed interpreters, live demonstrations of Ojibwe crafts, films, interactive displays, and interpretive talks would try to give visitors a comprehensive understanding of the site and personalize the visitor experience. **Alternative E,** "Preferred Alternative," is a "hybrid" alternative that was developed to combine actions from the other alternatives to achieve desired results. It would include a year-round heritage center and an Ojibwe Cultural Demonstration Shelter.

This document also includes discussions of the potential consequences of each alternative. Alternative A would not change the scene either by making it more like the historic landscape or by adversely affecting the remaining significant landscape features. Facilities for telling a comprehensive interpretive story would not be available. Alternative B would return the site to a more historically authentic appearance and substantially increase visitation, but it would continue a safety concern regarding County Road 17, would have a less comprehensive interpretive story than the other alternatives, and would entail a dramatic increase in staff and maintenance costs. Alternative C would offer a more balanced interpretation between fur trade and Ojibwe heritage, would give the national monument better control of collections, and would result in better use of the collections for research and interpretive exhibition. Alternative D would not change the landscape significantly, and the stockade would change relatively little. It would not solve the safety concern of visitors crossing County Road 17, and the heritage center would drain much of the interpretive excitement from the stockade. This document is on review for 60 days following publication of the Notice of Availability in the Federal Register. Comments are due by March 22, 2002.
For questions about this document, contact

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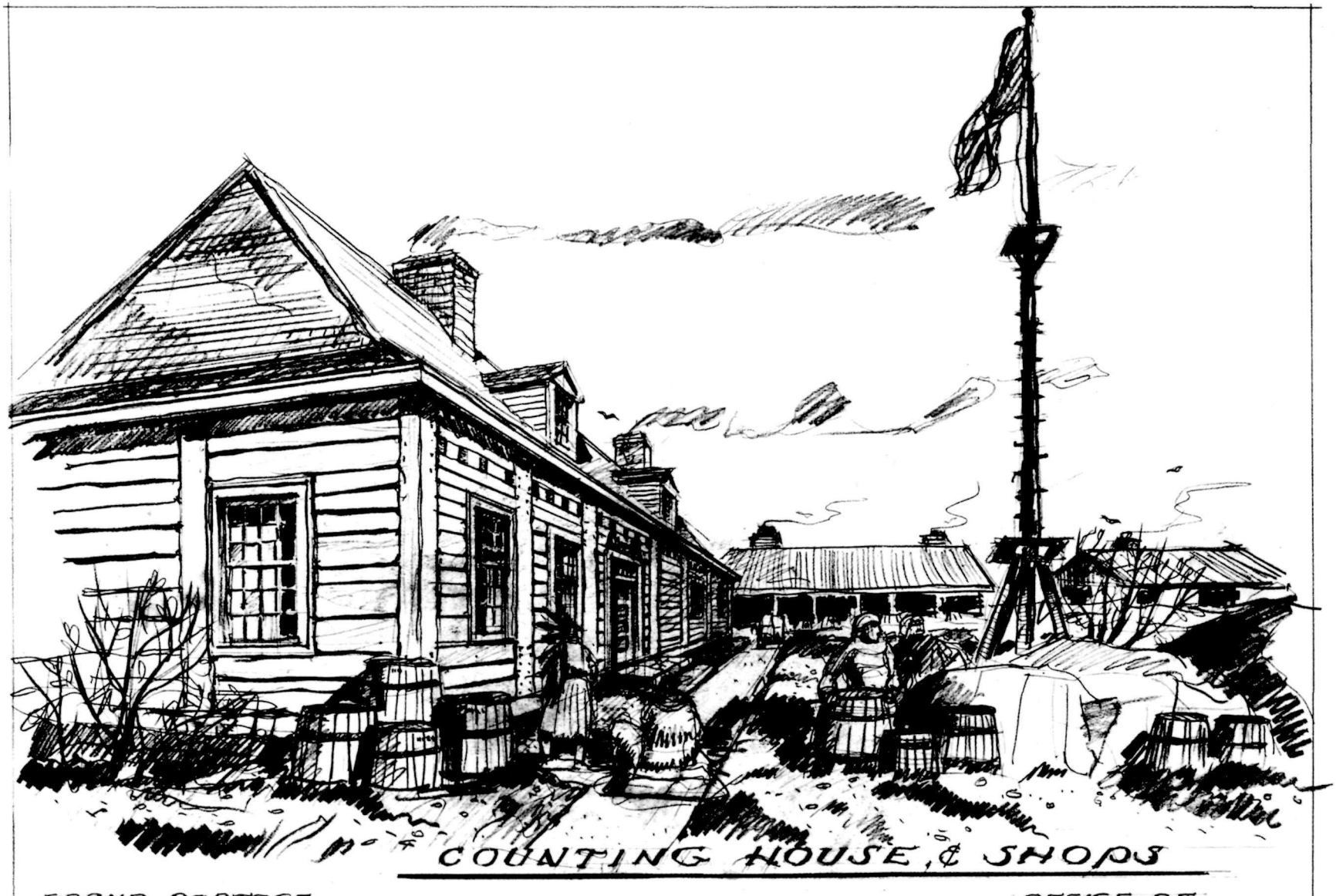
It is National Park Service practice to make comments, including names and addresses of respondents, available for public review. Individual respondents may request that we withhold their address from the record, which we will honor to the extent allowable by law. However, we will not consider anonymous comments. We will make all submissions from organizations or businesses, and from individuals identifying themselves as representative or officials of organizations or businesses, available for public inspection in their entirety.



GRAND PORTAGE
CONJECTURAL SKETCH
BY FRANK S GERNER
OCTOBER 1971

OFFICE OF
HISTORY & HISTORIC ARCHITECTURE
WESTERN SERVICE CENTER
SAN FRANCISCO CALIFORNIA

DOCUMENT SUMMARY

The purposes of this *General Management Plan / Environmental Impact Statement* are to specify resource conditions and visitor experiences to be achieved in Grand Portage National Monument and to provide the basic foundation for decision-making regarding the management of the national monument. A plan is needed to provide broad direction for the future of the monument and to help managers make purposeful decisions based on a deliberate vision. When a final plan is approved, it will guide the management, development, and interpretation of Grand Portage National Monument for the next 15 to 20 years.

The National Park Service (NPS) has a unique relationship with the Grand Portage Band of Minnesota Chippewa resulting from the national monument's location in the middle of the Grand Portage Reservation. A member of the Band is a member of the planning team. In addition, an annual agreement between the National Park Service and the Grand Portage Band on a government-to-government basis gives the Grand Portage Band responsibility for the maintenance of the Grand Portage National Monument. The National Park Service views the public as an integral team member in establishing the desired resource and experience conditions that will guide the management of Grand Portage National Monument.

ALTERNATIVES

On the basis of public comments, and within the framework established by legislation and mandates, the planning team developed a no-action alternative and four additional alternatives that reflected the range of ideas proposed by the public.

The four action alternatives, B through E, all would involve road realignment, restoring the landscape to a historic appearance, developing a heritage center, and increasing interpretation and staff to enhance visitor understanding of the fur trade story and the area's maritime history. All the action alternatives propose preserving and interpreting the 20th century Ojibwe village site northeast of the stockade, and all would retain Fort Charlotte and the portage relatively unchanged. All four action alternatives propose increased housing and maintenance facilities offsite.

All the action alternatives include provision for an Ojibwe cultural demonstration shelter, ranging from an area within the heritage center or within the stockade to a separate facility near the 20th century village site. This is an extension of the demonstration program already existing at the national monument and is in keeping with the spirit of the establishing legislation both as an "outlet for the production and sale of handicraft objects within the monument" and as a means of further understanding the role of the Ojibwe in the history of the Grand Portage.

Alternative A: No Action

The no-action alternative describes what would happen to the national monument if present management practices were projected into the future. Grand Portage National Monument would be maintained as it has evolved thus far. The goal would be to preserve existing visitor experiences and activities and maintain the monument's natural, cultural, and scenic values. No major changes would be made in resource management, visitor programs, or facilities beyond regular maintenance, and the current road system through the monument would remain. There would be no changes in the partnership with the Grand Portage Band of Minnesota Chippewa or in the management of the monument's museum collections and archives.

The historic portage would remain as a fairly primitive trail surrounded by second-growth forest. No attempt would be made to restore the forest along the trail corridor to more accurately depict its historic appearance. The Fort Charlotte campsites would be retained, and interpretation of a general nature would be available at a kiosk in that area. The stockade and surrounding area would be unchanged, but the National Park Service would try to make the site more accessible to visitors with disabilities without impacting site resources.

Alternative B: Fur Trade with Maritime Emphasis

Alternative B would use reconstructed historic buildings, a dock, a rehabilitated landscape, and an expanded interpretive program of new exhibits and living history activities to try to transport visitors back in time to the 1790s. Distinct from other alternatives, Alternative B would bring a strong maritime emphasis into interpretation, focusing on the monument's physical and historical relationship with Lake Superior.

The lower part of the portage trail would be restored to its historic appearance. That restored part of the trail would be designed to offer visitors with disabilities or time constraints a small example of what the portage was like. The Fort Charlotte campsites would be retained to offer a primitive camping experience. Archeological resources would be protected. The Mount Rose trail would become a loop trail with an extension to the new heritage center.

The Monument's headquarters would be built on Grand Portage Band land, separate from the heritage center. Museum collections would be stored at the headquarters facility. Additional structures would be reconstructed to help visitors visualize the variety, scale, and number of structures in the historic stockade. With the stockade open to the public for seven months and a new onsite heritage center open all year, visitors could learn about the maritime aspects of the fur trade, as well as about the Ojibwe culture and heritage. The maritime relationship would be illustrated by replicas of small historic watercraft and exhibits at the heritage center. Interpretation would cover Lake Superior and connecting waterways, the maritime aspects of the fur trade, and programs on canoe construction.

Alternative C: Fur Trade and Ojibwe Heritage

Alternative C would offer a multifaceted visitor experience: several newly reconstructed structures and interpretive exhibits in the stockade (which would be open seven months per year), a combined heritage center / headquarters open year-round, and an Ojibwe Cultural Demonstration Shelter. Interpretation would encompass prehistoric, historic, and contemporary activities. All administrative/operations facilities would be removed from the national monument, as would County Road 17 (in two phases). Limited restoration of the historic scene would be carried out.

The Fort Charlotte campsites would be upgraded to offer a primitive camping experience, but no new campsites would be added. The Mount Rose trail would be maintained in its present condition. The lower part of the portage trail, which would be restored to its historic appearance, would become a portion of a loop trail to the 20th century Ojibwe village site. Interpretive media would be increased to explain the portage to hikers along the lower portage. Archeological resources would be protected.

Alternative D: Heritage Center Focus

In Alternative D, a large multifunctional Fur Trade Heritage Center would be built on land leased from the Grand Portage

Band. The center would offer a glimpse into the history of the Grand Portage and its inhabitants. Costumed interpreters, live demonstrations of Ojibwe crafts, films, interactive displays, and interpretive talks would try to give visitors a comprehensive understanding of the site and personalize the visitor experience. All maintenance and operations facilities would be removed from the national monument, except that a small parking area for visitors to the stockade would remain.

The Fort Charlotte campsites would be retained to offer a primitive camping experience. The Mount Rose trail would be maintained in its present condition. The lower part of the portage trail, which would be restored to its historic appearance, would become a portion of a loop trail to the 20th century Ojibwe village site. Interpretive media would be increased to explain the portage to hikers along the lower portage.

The site of the late 19th and early 20th century Grand Portage village would continue to function as a picnic area and open space. Interpretive programs and cultural demonstrations would be offered at the heritage center, along with information about commercial and subsistence fishing, canoe building and paddling programs, and historic small boats such as bateaux and mackinaw boats.

Alternative E: Preferred Alternative

Alternative E is a "hybrid" alternative that was developed to combine actions from the other alternatives to achieve desired results. In an effort to integrate the national monument into the community, the National Park Service and the Grand Portage Band would develop a "gateway" to the community of Grand Portage at the intersection of MN 61 and County Road 17. This landscaped, redesigned intersection would welcome visitors to the community of Grand Portage, the national monument, and the Grand Portage Casino.

A new year-round heritage center would be built to introduce visitors to the national monument and to take modern functions out of the stockade. An Ojibwe Cultural Demonstration Shelter would help to explain the rich and long-term story of the Ojibwe heritage, including contemporary heritage activities. Three new structures would be reconstructed in the stockade area, and all other known structures would be outlined on the ground to help NPS interpreters tell a more exciting and comprehensive story.

The Fort Charlotte campsites would be upgraded, but no new campsites would be added. The Mount Rose trail would become a loop trail connecting to the new heritage center. The portage trail, which also would become a portion of a loop trail connecting with the stockade and the 20th century Ojibwe village site, would be restored to a semblance of its historic appearance.

ENVIRONMENTAL CONSEQUENCES

The planning team evaluated the consequences that would result from each of the alternatives.

Impacts of Alternative A: No Action

Alternative A would allow several contemporary intrusions to remain on the portage. The trail is intersected by a busy county roadway, and the housing area and maintenance buildings sit upon the historic southern terminus. These intrusions would give visitors an inaccurate representation of the historic portage.

The mixed use at the stockade and the numerous nonhistoric features would continue to make accurate interpretation difficult. Modern intrusions would continue to mar the historic

scene and ambience. Visitors would not be able to transition from modern times to the historic fur trade era. The staff would not be able to give visitors a comprehensive understanding of the Monument's historic landscape. There would be little interpretation of contemporary Ojibwe culture, and visitors would have little opportunity to understand the continuum of Ojibwe culture and heritage.

Currently there is no comprehensive plan or program in place to preserve archeological sites. In the absence of a comprehensive survey, research, and preservation program, the slow degradation of many of the Monument's archeological resources would continue.

Impacts of Alternative B: Fur Trade with Maritime Emphasis

Under Alternative B, the integrity of the stockade landscape would be enhanced by shifting the main entrance to the more historically accurate lake gate. Visitors would be "transported in time" back to the 1790s, with maritime transportation along the historic waterfront and additional interpretation of Lake Superior and connecting waterways. Visitors also could learn about the maritime aspects of the fur trade, as well as about the Ojibwe culture and heritage.

The upper portions of the portage trail would continue to possess a high degree of integrity. Removing the roads, housing area, and maintenance buildings at the lower portion and rehabilitating the trail would enhance the historic setting. Improved access and the resultant increase in visitation could lead to increased wear and tear on resources, but the level of integrity and the quality of the visitor experience would improve.

Realigning the road and constructing the heritage center could affect three state-listed plant species found near the site of these activities. These projects might involve large amounts of blasting and excavation to remove a large rock lobe on which the listed plants occur. Changes in the shading and moisture retention of the site could also affect the plants. Planting a buffer strip of trees would help to mitigate this effect.

Impacts of Alternative C: Fur Trade and Ojibwe Heritage

Alternative C would offer a more balanced interpretation between fur trade and Ojibwe heritage, would give the national monument better control of collections, and would result in better use of the collections for research and interpretive exhibition.

As in Alternative B, the upper parts of the portage trail would continue to possess a high degree of integrity under Alternative C, and removing the housing area and maintenance buildings and rehabilitating the trail would enhance the historic setting. Shifting the main visitor entrance to the stockade from the north to the more historically accurate lake gate and installing a more historically accurate footbridge over Grand Portage Creek would enhance the integrity of the stockade landscape. Changes in vegetation would help transport visitors back to the time of the fur trade. With less reconstruction than Alternative B, Alternative C would cause less ground disturbance.

More comprehensive interpretation would be possible than in Alternatives A and B, including the fur trade and historic and contemporary Ojibwe culture. This alternative would best respond to the Monument's mandate to recognize and support the Ojibwe heritage. Keeping the heritage center open year-round would enable more visitors, even winter visitors, to learn about the Monument.

Impacts of Alternative D: Heritage Center Focus

Alternative D would not change the landscape significantly, and the stockade would change relatively little. The upper parts of the portage trail would continue to have a high degree of integrity, and removing the housing and maintenance buildings and rehabilitating the trail would enhance the historic setting. Connecting the portage trail to an overall interpretive trail would give more visitors access to the portage and the community. Outlining missing stockade structures would lend a sense of the character of the stockade during the fur trade era and would not damage any subsurface remains of the original structures.

The heritage center, open year-round, would present orientation and in-depth interpretation of the fur trade story and the Ojibwe culture and history, along with Ojibwe cultural demonstrations. This would enable visitors to learn the full story of Grand Portage from its earliest occupation through the present. Alternative D would have fewer impacts on soils than the other action alternatives.

Impacts of Alternative E: Preferred Alternative

With three centers of activity: the heritage center, the stockade, and a new Ojibwe Cultural Demonstration Shelter, Alternative E would offer the most interpretation of any of the alternatives and an optimum balance between interpretation of the fur trade and the Ojibwe heritage and culture. The overall quality of the visitor experience would be improved, and opportunities for partnerships would increase.

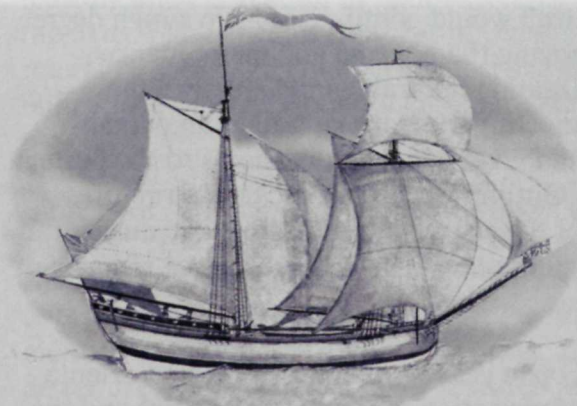
As in the other action alternatives, the upper parts of the portage trail would continue to have a high degree of integrity, and removing the housing and maintenance buildings and rehabilitating the trail would enhance the historic setting. Active maintenance of the 20th century village landscape features would allow them to exist in perpetuity.

Connecting the portage trail to an overall interpretive trail would improve access to the portage and the community. More visitors would cause increased wear and tear on trails and vegetation and potential damage to archeological resources.

Visitors would be better able to immerse themselves in the 18th century experience with all the structures in the stockade furnished as they were during the height of the fur trade and interpreters dressed in period clothing. Adding three more reconstructed, historically furnished structures and outlining the missing stockade structures would give visitors a better impression of the stockade during its heyday and life during the fur trade period. Demonstrations of crafts and cultural practices in the Ojibwe Cultural Demonstration Shelter would enable visitors to understand the continuum of Ojibwe culture.

Constructing the heritage center and Monument headquarters could affect three state-listed plant species found near the site of these activities. These projects might involve large amounts of blasting, which could cause cliff faces to crumble or the scree slopes to slide. Mitigative measures to minimize ground vibration and air blast would reduce the chances of rock slides or fly rock impacting a listed plant. The proposed heritage center parking lot could change the shading and moisture retention of adjacent sites with listed plants. Planting a buffer strip of trees would reduce changes in shading to minimize these impacts.

Adventure,
economics,
and geography
came to focus on
one small place;
and the explosion opened half a continent.



Erwin Thompson, 1969

A BRIEF DESCRIPTION OF THE NATIONAL MONUMENT

The Grand Portage, in the north woods of Minnesota, was an important setting for the activities of the northern fur trade, a dynamic enterprise that forged diverse relationships between American Indian and non-Indian peoples as early as the 17th century.

The *Grand Portage* ("Great Carrying Place"), a roughly 9-mile trail on the northwestern periphery of the Great Lakes–St. Lawrence River drainage in the middle of North America, connected the lakeshore with Fort Charlotte, an embarkation point for voyageurs heading west and a gathering point for furs going east. The portage was the most direct route from the Great Lakes into the Canadian interior. Several falls and cataracts blocked use of the Pigeon River by the voyageurs so that a portage was needed, hence the name "Grand Portage."

French and later British traders entered the Great Lakes–Northwest trade by traveling west from Montreal. Having learned to use birch bark canoes, they moved into the mid-continent along an established inland network of Indian canoe routes. Building on entrenched Indian exchange practices and catering to Indian preferences, traders bartered imported European goods and commodities for Indian furs, provisions, and services. This ultimately led to an intercultural exchange of languages, ideas, technologies, diseases, and genes. It also promoted commercial, political, and marital alliances.

When business grew more complex and the frontiers of exchange expanded westward, certain places gained distinction as corridors of commerce that played strategic roles in the flow of workers, provisions, merchandise, and information. Grand Portage became such a place in the 18th century, emerging in mid-century as a headquarters for local trade and a transshipment center linking markets and transportation lanes in the east with branching trade routes and scattered trade districts to the northwest. Between 1731 and 1804, thousands of men shuttled tons of supplies and furs over the portage and in and out of warehouses at either end of the woodland trail.

During the British regime after 1760, the portage became a general rendezvous and a beehive of activity during summers, but in winters the comparatively quiet outposts were staffed by skeleton crews that engaged in local trading. At the height of the trade, around 1800, Grand Portage was the western headquarters of the North West Company and the rival XY Company, two of the largest commercial establishments in North America.

When the North West Company and the XY Company moved their operations north to Kaministikwia (later Fort William, Ontario) at the beginning of the 19th century, Grand Portage became remote to the main channels of trade and communication and less important to the outside world. The boundary between Canada and the United States between Lake Superior and Lake of the Woods was not firmly established until the Webster-Ashburton Treaty of 1842. Under the terms of that treaty, the Grand Portage clearly became United States property; however, the use of the trail was to remain free and open to citizens of both the United States and Great Britain.

The historic portage is the reason for Grand Portage National Monument, which is bordered on the north and south by the Grand Portage Indian Reservation, on the east by Lake Superior, and on the west by the Pigeon River and Canada. It lies within both the Grand Portage Indian Reservation and the unincorporated community of Grand Portage. The community

is the headquarters of the Grand Portage Band of Minnesota Chippewa (Ojibwe). The nearest incorporated communities are Grand Marais, about 35 miles southwest, and Thunder Bay, Ontario, about 45 miles northeast.

The national monument consists of two "districts," which are connected by the historic Grand Portage. The eastern, or lakeshore, district consists of the major visitor attraction with a reconstructed stockade, a great hall, a kitchen, and a canoe warehouse. It is here that the bulk of interpretation occurs.

The western, or Fort Charlotte, district, is named for the historic Fort Charlotte, which today is a camping area with primitive campsites, a point of debarkation for modern canoe travelers leaving the boundary waters to the west, and a destination for hikers following in the footsteps of the voyageurs from the lakeshore. A stone monument marks the location of Fort Charlotte.

Visitors to Grand Portage National Monument can glimpse the late 18th century fur trade, see Ojibwe arts and crafts and learn about the Ojibwe culture, or simply enjoy fall's changing colors in this quiet forest setting. Grand Portage is also the "end of the trail" for many visitors coming by canoe from the Boundary Waters Canoe Area. The portage trail can give travelers real insights into the experiences of the voyageurs.

> Much of the above material was drawn from a draft National Register form written by Douglas Birk.

There are a number of "fur trade sites" besides Grand Portage National Monument in the national park system. However, Grand Portage is the earliest site among these (Fort Vancouver National Historic Site, Washington; Fort Union Trading Post National Historic Site, North Dakota; Bent's Old Fort National Historic Site, Colorado; Sitka National Historical Park, Alaska). Grand Portage is the only site concerned with the French and subsequent British period. It also is the fur trade site most involved in western exploration (Mackenzie's voyages to the Arctic and Pacific Oceans) and subsequently its role in the establishment of an international border.

Grand Portage is significant because it is a fur trade site whose history is integrally related to Native Americans in the past and present. For example, Grand Portage is within the Grand Portage Indian Reservation, and the ancestors of contemporary Reservation residents traded with the North West Company 200 years ago or more. Grand Portage is unique among "fur trade sites" in the national park system because its story is one of a pioneering, multinational business that exerted powerful political influence — the North West Company.

The nearby Voyageurs National Park, despite its name, does little interpretation on the fur trade or Ojibwe heritage and none on the business side of the fur trade. The site most closely connected by story to Grand Portage is its sister site in Thunder Bay, Ontario, Old Fort William, operated by the Province of Ontario. Historically, Fort William was the successor depot and summer headquarters for the North West Company after it moved from Grand Portage in 1803 and represents a later period in fur trade history. Old Fort William dwarfs Grand Portage with its 42 reconstructed buildings, its working farm, and the scale of its first person living history programs. However, Old Fort William was not reconstructed on its original location and does not, today, have such an intimate relationship with Native Americans as does Grand Portage. Contemporary budget concerns have redirected some of Old Fort William's interests toward revenue-producing activities such as banquets and nonhistoric special events.

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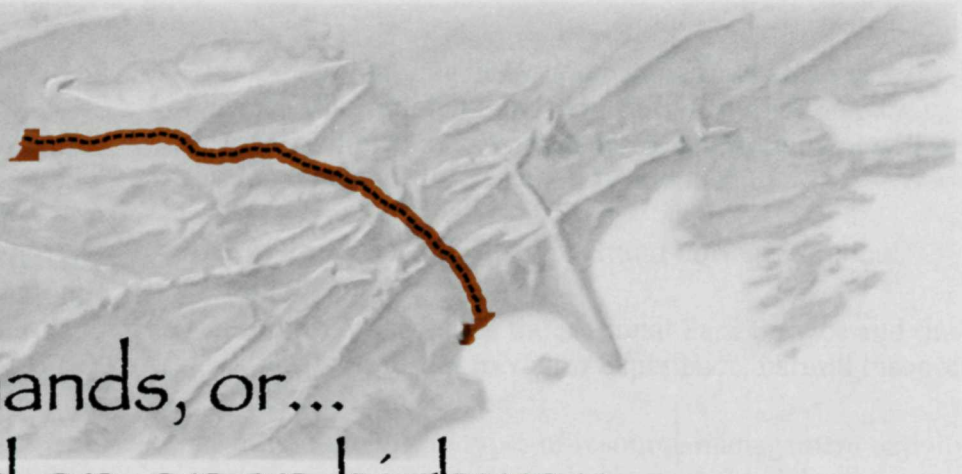


It is indispensably
necessary that the
Grand Portage
be thrown into our hands, or...
that it be considered an open highway...
Without this, even the part of the North West
still within our limits would become useless.

Memorial of Montreal Merchants Respecting Trade, 1792*

* Carolyn Gilman, The Grand Portage Story, 1990:75

INTRODUCTION

PURPOSE OF AND NEED FOR THE ACTION

Purpose of the General Management Plan

Grand Portage National Monument was established on September 2, 1958 (72 Stat. 1751) as a unit of the National Park Service " . . . for the purpose of preserving an area containing unique historical values . . . " Previously, the monument had been designated a national historic site on September 15, 1951.

This plan is the basic document for the management of Grand Portage National Monument. It will guide the management, development, and interpretation of the national monument for the next 15 to 20 years. The purposes of this *General Management Plan* are twofold:

- to specify resource conditions and visitor experiences to be achieved
- to provide the basic foundation for decision-making regarding the management of the national monument

As part of this plan, an environmental impact statement has been prepared according to the National Environmental Policy Act of 1969 (NEPA) and regulations of the Council on Environmental Quality (40 CFR 1500-1508). The environmental impact statement assesses the impacts that potential actions may have on resources in the affected environment.

This *General Management Plan* represents an agreement between the National Park Service (NPS) and the public, describing how Grand Portage National Monument will be used and managed. As such, it is intended to

- confirm the significance of Grand Portage National Monument
- establish the goals of the National Park Service and the public with regard to visitor experience, natural resources, and cultural resources
- outline the future types of resource management activities, visitor activities, and development that will be appropriate in the national monument to meet the established goals
- help National Park Service staff determine whether actions proposed by the National Park Service or by others are consistent with the stated goals
- serve as the basis for shorter-term management documents such as five-year strategic plans, annual performance plans, and implementation plans

Some of the future visitor experience, natural resource, and cultural resource conditions at Grand Portage National Monument are specified by law or policy (see appendix A, "Servicewide Mandates and Policies"). Others are open to debate and must be determined through planning. This *General Management Plan* addresses the resource and experience conditions that are not mandated by law and policy.

The National Park Service has a unique relationship with the Grand Portage Band resulting from the national monument's location in the middle of the Grand Portage Reservation. Actions of either entity could adversely affect the other. To ensure that this does not occur, the planning team has a full team member from the Grand Portage Band who provides the Band's perspective on the alternatives. In addition, the national monument has an annual agreement with the Grand Portage Band under the Indian Self-Governance Act. The agreement gives the Grand Portage Band responsibility for the maintenance of the Grand Portage National Monument. This yearly agreement requires close cooperation on a government-to-government basis.

The National Park Service views the public as an integral team member in establishing the desired resource and experience conditions that will guide the management of Grand Portage National Monument. Measures taken by the National Park Service to include the public as a partner in general management planning for the national monument include the following:

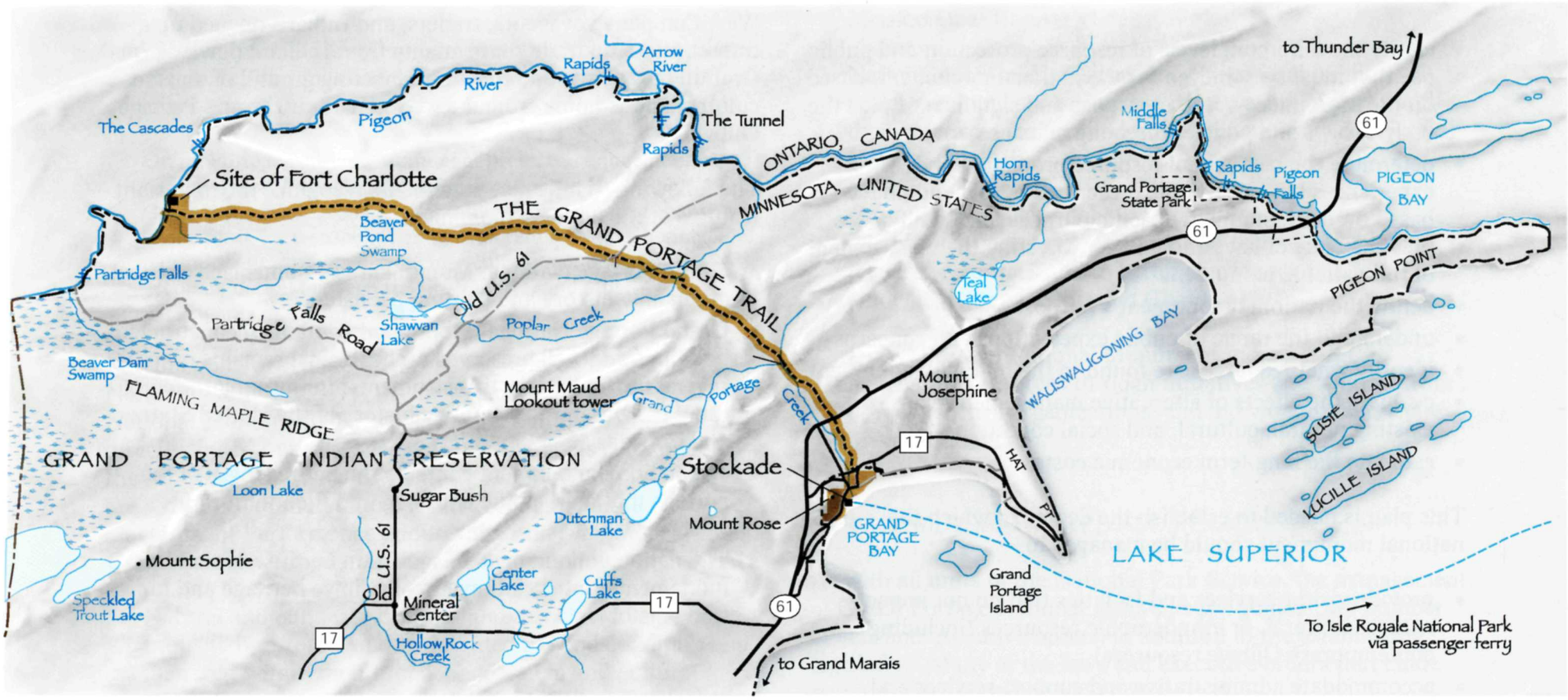
> The National Park Service solicited formal and informal public participation in the planning process and has incorporated suggestions from the public into the proposed management alternatives. This is described in the "Consultation and Coordination," and "History of Public Involvement" sections of this document.
>
> The environmental impact statement portion of this draft document evaluates the effects of the alternatives on the impact topics identified as important by the public during scoping. ("Scoping" is the initial public contact designed to elicit concerns, ideas, and suggestions for the management and development of a unit of the national park system (see the "History of Public Involvement" section).
>
> The public will be asked to comment on this *Draft General Management Plan.* On the basis of that input, a final general management plan will be prepared.

This plan proposes several specific actions while leaving others more general. The plan does not describe how particular programs or projects would be ranked or implemented. Those decisions will be addressed during the more detailed planning associated with strategic plans, annual performance plans, and implementation plans. All those plans will derive from the goals, future conditions, and appropriate types of activities established in this *General Management Plan.*

Need for the General Management Plan

The last comprehensive management plan for Grand Portage National Monument, a master plan, was approved in 1973 and contained no accompanying environmental analysis document. After 27 years, many of the facilities and conditions that existed then have changed, and their management has become more complicated. Many of the concepts in that plan were never implemented and are no longer desirable.

Without an effective overall plan, decisions for the national monument have been made over the years in a piecemeal fashion and without the benefit of public involvement. This *General Management Plan,* which provides broad direction for the future of Grand Portage National Monument, is needed to help managers make purposeful decisions based on a deliberate vision.



Grand Portage National Monument

Unpaved road

Grand Portage Band of Minnesota Chippewa Indian Reservation

North

0 1 2 Kilometers

0 1 2 Miles

VICINITY

Grand Portage National Monument

United States Department of the Interior / National Park Service

DSC / Feb 01 / 398 / 20,017

General management planning is needed to

- clarify the minimum levels of resource protection and public use that must be achieved for the national monument, based on the Monument-specific purpose and significance plus the body of laws and policies directing management
- determine the best mix of resource protection and visitor experiences beyond what is prescribed by law and policy based on the monument-specific purpose and significance plus the body of laws and policies directing the management of the national monument
- define the national monument's purpose
- understand the range of public expectations and concerns
- identify what resources are found in the national monument
- evaluate the effects of alternative management plans on existing natural, cultural, and social conditions
- estimate the long-term economic costs

This plan is needed to establish the degree to which the national monument should be managed to

- provide visitor services and facilities that do not impact natural, cultural, or ethnographic resources (including contemporary Ojibwe resources)
- accommodate administrative and support services and facilities without impacting resources
- restore the natural and cultural resources to the late 18th century to enhance the visitor experience
- partner with other entities to meet common needs while continuing to fulfill the NPS mission

MONUMENT SIGNIFICANCE

Grand Portage National Monument is of international significance as the central hub of a once flourishing fur trade. Here the bold economic strategy and exploration by the North West Company voyageurs, traders, and Indians opened up a transcontinental trade route arising from Indian knowledge. Grand Portage was and remains a meeting ground of diverse cultures and is home ground for contemporary Grand Portage Ojibwe.

The following significance statements recognize the important features of the national monument.

- Grand Portage National Monument is a homeplace of tribal and family history and cultural persistence.
- Grand Portage National Monument contains reconstructed buildings and well preserved archeological remains of several fur trading posts instrumental in the exploration of the West and in the economic history of the United States and Canada.
- The national monument contains the entire length of the portage that marked the entrance into the interior of western Canada.
- The national monument is significant because of the fundamental interrelationship of Ojibwe heritage and fur trade history.

MONUMENT PURPOSE

Grand Portage National Monument was established to delineate, commemorate, and preserve a premier site and route of the 18th century fur trade. This led to pioneering international commerce and exploration in North America, as well as cultural contact between Ojibwe and other Native societies and the North West Company and other fur trade companies' partners, clerks, and canoe men. The monument also was established to work with the Grand Portage Band in preserving and interpreting the heritage and lifeways of the Ojibwe people.

MISSION STATEMENT AND MISSION GOALS

The September 1997 *Government Performance and Results Act Strategic Plan* for Grand Portage National Monument describes the mission of the monument as follows:

> Grand Portage National Monument protects, commemorates, and interprets a reconstructed fur depot of the North West Company, a rendezvous site for international commerce and canoe route for transcontinental exploration, Native heritage, natural scene, and history of cross cultural contact and accommodation between traders, Ojibwa, and other participants in the fur trade.

Mission goals articulate the broad ideals and vision that the National Park Service is striving to achieve at Grand Portage National Monument. The goals for the national monument are directly linked to the servicewide mission goals contained in the *National Park Service Strategic Plan* (NPS 1998). They are written as desired outcomes in keeping with the Government Performance and Results Act. Mission goals for Grand Portage National Monument are as follows.

> Natural and cultural resources and associated values are protected, restored, and maintained in good condition and managed within their broader ecosystem and cultural context (Service Mission Goal Ia).
>
> Grand Portage National Monument contributes to knowledge about natural and cultural resources and associated values; management decisions about resources and visitors are based on adequate scholarly and scientific information (Service Mission Goal Ib).
>
> Visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of the facilities, services, and appropriate recreational opportunities (Service Mission Goal IIa).
>
> National monument visitors and the general public understand and appreciate the preservation of parks and their resources for this and future generations (Service Mission Goal IIb).
>
> Grand Portage National Monument uses current management practices, systems, and technologies to better preserve resources and to better provide for public enjoyment (Service Mission Goal IVa).
>
> Grand Portage National Monument increases its managerial resources through initiatives and support from other agencies, organizations, and individuals (Service Mission Goal IVb).

SERVICEWIDE MANDATES AND POLICIES

As with all units of the National Park Service, the management of Grand Portage National Monument is guided by a number of acts and executive orders, in addition to the establishing legislation. Many of the laws and executive orders that guide management are included in appendix A.

Some acts and executive orders are applicable primarily to units of the National Park System. These include the 1916 act creating the National Park Service, the General Authorities Act of 1970, and the act of March 27, 1978, relating to the management of the national park system. Others have much broader application, such as the Endangered Species Act, the National Historic Preservation Act of 1966, as amended, Executive Order 11990 on the protection of wetlands, and the Indian Self-Governance Act (PL 103-413).

In addition, the National Park Service has established policies that apply to all of the units under its stewardship. These are identified in the NPS *Management Policies* (2001) and codified at Title 36 of the Code of Federal Regulations (36 CFR) "Parks, Forests, and Public Property."

These legal mandates and policies prescribe many resource conditions and some aspects of visitor experience.

While attaining some of these conditions has been deferred in the national monument because of funding or personnel limitations, the National Park Service will continue to strive to implement these policies at Grand Portage National Monument with or without a new general management plan. For instance, the plan is not needed to decide whether or not it is appropriate to protect endangered species, control exotic species, improve water quality, protect archeological sites, provide for access for people with disabilities, or conserve artifacts.

The conditions prescribed by laws, regulations, and policies most pertinent to the planning and management of Grand Portage National Monument are summarized in appendix A.

SPECIAL MANDATES AND ADMINISTRATIVE COMMITMENTS

The monument was established by Public Law 85-910, an act to provide for the establishment of Grand Portage National Monument in the State of Minnesota, and for other purposes. This was approved September 2, 1958 (72 Stat. 1751). Several sections deal specifically with the relationship between the National Park Service and the Ojibwe, as follows:

> Section 4 grants recognized members of the Minnesota Chippewa Tribe the preferential privilege to provide those visitor accommodations and services, including guide services, which the Secretary of the Interior deems necessary within the monument. This portion of the statute has been further defined under Grand Portage National Monument Policy 97-01, or "Minnesota Chippewa Tribal Preference Policy."
>
> Section 5 gives first preference to the employment of recognized tribal members in the performance of any construction, maintenance, or any other service within the monument for which they are qualified.
>
> Section 6 encourages recognized tribal members in the production and sale of handicraft objects within the monument and prohibits interference with the operation or existence of any trade or business of said tribe outside the boundaries of the national monument.
>
> Section 7 recognizes the privilege of the Minnesota Chippewa Tribe to traverse the national monument for the purposes of logging their land, fishing, or boating, or as a means of access to their homes, businesses, or other areas of use, and they shall have the right to traverse such area in pursuit of their traditional rights to hunt and trap outside the monument subject to reasonable regulation designed to preserve and interpret the historic features and attractions within the monument.
>
> Section 8 directs that the Secretary of the Interior construct and maintain docking facilities and that such facilities be available for use by the Minnesota Chippewa Tribe and its recognized members, without charge, but subject to regulations prescribed by the secretary.
>
> Section 9 directs the secretary, subject to funding, to provide consultative or advisory assistance to the Minnesota Chippewa Tribe and the Grand Portage Band of

Chippewa Indians, Minnesota, in the planning of facilities or developments upon the lands adjacent to the monument.

Section 10 directs the secretary to administer, develop, and protect the national monument in accordance with the provisions of the National Park Service Organic Act of 1916.

Section 11 returns the national monument to the Minnesota Chippewa Tribe and the Grand Portage Band of Minnesota Chippewa, Minnesota, in the event that Grand Portage National Monument is abandoned.

The following acts and mandates specific to the management of Grand Portage National Monument are in addition to the national monument's establishing legislation:

Annual Indian Self-Governance Act Agreement between the U.S. Department of the Interior, National Park Service, and the Grand Portage Band of Minnesota Chippewa (first implemented February 1999)

Concession contract with the Grand Portage Band of Minnesota Chippewa for Isle Royale parking

Snowmobile regulations (36 CFR, titled "Parks, Forests, and Public Property") — five crossing points

Oral history cooperative agreement with the Grand Portage Band of Minnesota Chippewa

Interagency Agreement between the Bureau of Indian Affairs (BIA) and the National Park Service for the operation of a radio repeater on Mount Maud (agreement has expired)

Memorandum of understanding among the Minnesota State Parks Department, the Minnesota Department of Transportation, the Minnesota Department of Tourism, the Grand Portage Band of Minnesota Chippewa, and the National Park Service for coordination of interpretation

Memorandum of understanding between the National Park Service and the Grand Portage Band of Minnesota Chippewa for participation in the ambulance service

Memorandum of understanding with the Grand Portage Band of Minnesota Chippewa for assistance with structural fires

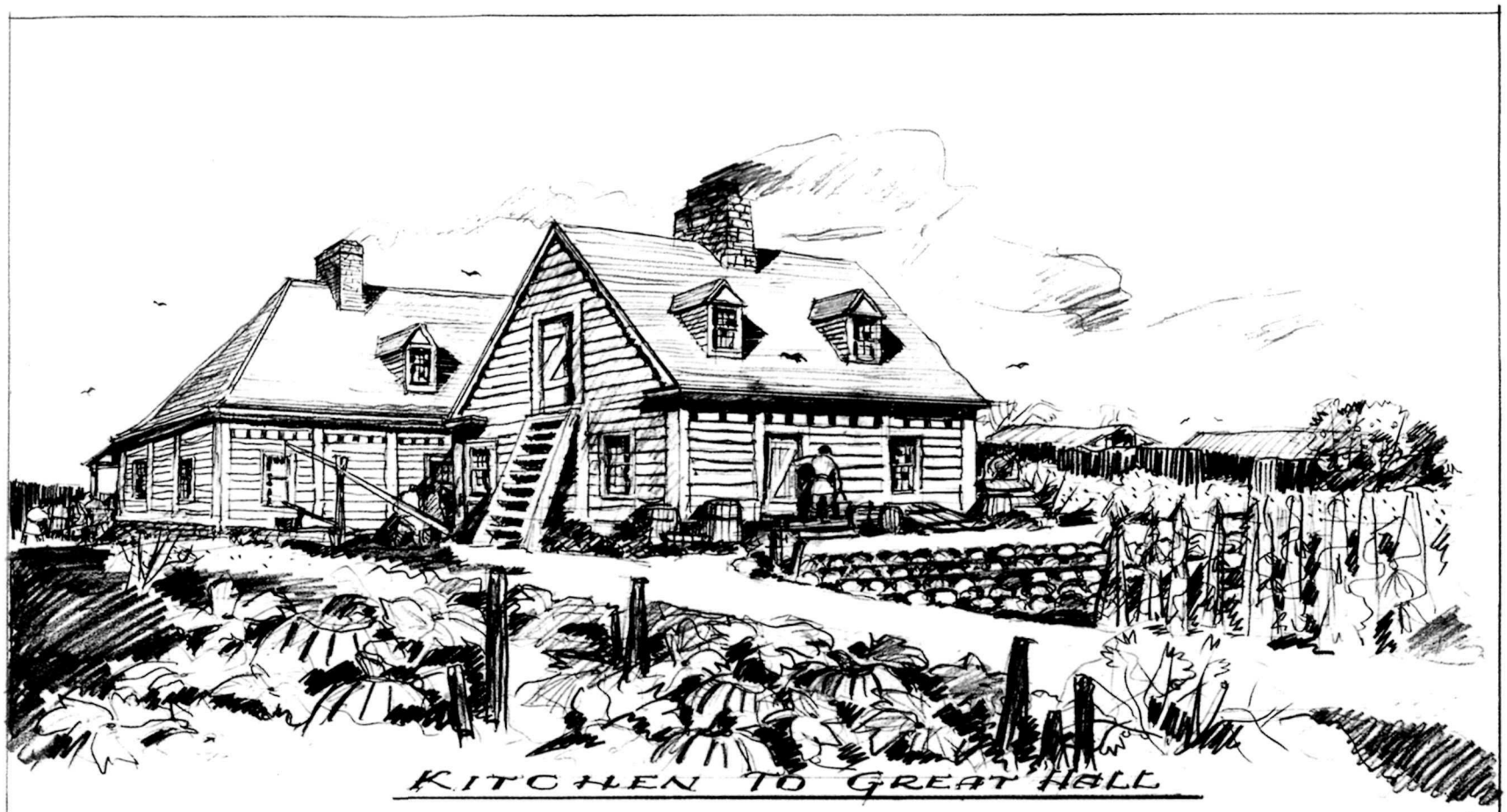
Five-year lease on the Coast Guard buildings in Grand Marais

General Agreement with the sheriff of Cook County, Minnesota, for mutual law enforcement support

Memorandum of agreement with the Minnesota Historical Society for long-term artifact curation

Webster-Ashburton Treaty Between Great Britain and the United States, Concluded the 9th of August, 1842, which provides for Grand Portage to be "free and open" to use by citizens of both countries

Memorandum of agreement with the Institute of Minnesota Archeology " . . . to provide for cooperative archeological investigations at the monument"



KITCHEN TO GREAT HALL

GRAND PORTAGE
CONJECTURAL SKETCH
BY FRANK S GERNER
OCTOBER 1971

OFFICE OF
HISTORY & HISTORIC ARCHITECTURE
WESTERN SERVICE CENTER
SAN FRANCISCO CALIF

PRIMARY INTERPRETIVE THEMES

During the planning for the *General Management Plan,* the team took some time to rethink the interpretive themes for Grand Portage National Monument. Interpretive themes are important concepts or underlying principles that help interpreters order their communications to visitors. Interpreters, in turn, make their stories more specific and graphic, but they use these themes to ensure that they communicate the multi-significance of the monument in all forms of interpretive media (talks, signs, brochures, and other publications). These interpretive themes (and thus all interpreters' presentations) are based on the cultural and natural resources unique to the monument and its significance. The themes for Grand Portage National Monument are as follows:

- The Grand Portage was a vital part of both American Indian and fur trade transportation routes because of the area's geology, topographic relief, natural resources, and strategic location between the upper Great Lakes and the interior of western Canada.
- The fur trade was a driving force for the exploration, mapping, and early settlement of much of North America by Euro-Americans, and it also played an important role in setting the boundary between the United States and Canada. It was part of an effort of several European countries to expand their colonial holdings worldwide.
- The Grand Portage Ojibwe, a people with a distinct culture and a proud heritage, have lived for centuries on or near Grand Portage, where their culture thrives today.
- The fur trade industry was an important part of the international economy, involved a complex transportation system, involved both American Indian and Euro-American technologies and practices, and had extensive impacts on the natural resources and native cultures of North America.
- The extensive archeological resources of Grand Portage National Monument represent not only the fur trade, but also hundreds of years of American Indian life. The national monument is committed to the preservation and interpretation of its archeological resources.
- The fur trade was a catalyst for cross-cultural encounters and exchange between native peoples and Euro-Americans that variably affected both populations.
- The fur trade flourished during a time of unrest between and among native nations and colonial powers, each struggling for power and occupancy of the land and its resources.

· THE BOURGEOIS HOUSE ·

GRAND PORTAGE
CONJECTURAL SKETCH
BY FRANK S. GERNER
OCTOBER 1971

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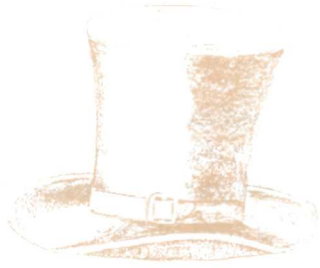


PLANNING OPPORTUNITIES AND ISSUES

PARTNERSHIPS

In recent years, the National Park Service has begun to work with state and federal agencies, nonprofit organizations, and commercial entities to provide needed facilities and services that traditionally have been undertaken by the National Park Service alone. As sites have been added to the national park system and as the cost of visitor services and facilities has grown, it has been necessary to develop new ways of funding and managing such services and facilities. Such partnerships could be simple exchanges of services between agencies for the common benefit, sharing of facilities so that separate, similar structures are unnecessary, or sharing of staff. Partnerships also could be developed with commercial entities that use park resources or have special appreciation for the Grand Portage story; for example, canoe manufacturing companies interested in historic canoe building at the site.

Grand Portage National Monument already provides visitor information, shares its docking facilities, and provides parking for visitors taking the boat over to Isle Royale National Park. The national monument and Grand Portage State Park exchange interpreters. The national monument has a small-scale partnership with the Grand Portage Casino to exhibit items from the Grand Portage collections, and it uses the utilities of the Grand Portage Band rather than providing its own water and sewage treatment. In return, the national monument has built community water storage facilities and has provided employment for Band members as it works toward the common good of the community. These are just a few of the existing partnerships.

The alternatives in this document provide many opportunities for both large-scale and small-scale partnerships. Grand Portage National Monument will seek to implement such partnerships to lower the initial and ongoing costs of management and development. Partnerships would be developed only where they would provide benefit without resulting in an unacceptable commercialization of the site.

Examples of state and federal agencies that might present partnership opportunities are the Minnesota Historical Society, the Minnesota state park system, the Minnesota Department of Transportation, the Minnesota state forest system, the U.S. Forest Service, and the Bureau of Indian Affairs. The Grand Portage Band, Old Fort William, and the communities of Grand Portage and Grand Marais also could be partners. Commercial businesses and foundations interested in canoeing and the fur trade as forceful regional symbols also present partnership opportunities.

Examples of possible partnerships could be combined facilities for maintenance between the Band and the national monument and combined visitor facilities with other agencies within the visitor center, where several similar agencies provide exhibits and visitor orientation and interpretation not only to the national monument but to the region. Other partnerships could be more of a sponsorship nature, with a business or

organization sponsoring the construction of a structure or funding exhibits within the stockade in exchange for some recognition of their assistance.

After this plan has been finalized, the National Park Service would work toward the implementation of as many partnerships as possible at Grand Portage National Monument to achieve the goals of the plan as quickly as possible and to reach the level of coordination that would mean a successful experience for all partners.

DECISION POINTS

A variety of issues and concerns were identified by the general public, the park staff, and other agencies during scoping for this *Draft General Management Plan*. Comments, which were solicited at public meetings and through a planning newsletter, were received via e-mail, telephone, and letters. Additional information on issues identification and public involvement is available in the "Consultation and Coordination" chapter.

Some comments were outside of the scope of this plan. Some concerns identified during scoping are already covered by laws, regulations, or policies or would be in violation of such requirements. These kinds of requirements are discussed in appendix A, "Servicewide Mandates and Policies." Because they are mandatory requirements, these matters are not subject to decision in this plan.

Other issues identified during scoping were at an operational or developmental level of detail. Such issues are most appropriately associated with the monument's five-year strategic plan or implementation plans. Those plans will be based on the resource conditions and visitor experiences to be achieved at Grand Portage National Monument, which will be established in the final general management plan. However, some of the concepts behind operational or developmental issues were incorporated into the alternatives considered in this draft document.

Scoping demonstrated that there is much that the public likes about the national monument. In particular, people want the existing feeling and character of the national monument to continue and be expanded. On the basis of these comments and agency concerns, four major resource condition and visitor experience issues, called *decision points*, were identified. This *Draft General Management Plan* focuses on addressing these decision points, which are identified below.

This document analyzes the current condition and four alternatives regarding the appropriate levels of service and locations for visitor interpretation and education. Concerns ("decision points") that led to the development of these alternatives include the following:

1. To what extent can visitor services (including orientation) and facilities be provided at Grand Portage National Monument without impacting natural and cultural resources (especially historical character)?

   - Is it efficient for staff to shuttle between Grand Marais and Grand Portage?
   - Is it necessary to provide year-round orientation, interpretation, and ranger services in Grand Portage ?
   - Is orientation an appropriate use of the Great Hall?
   - Does the national monument need a museum with attendant collection/archives space?
   - Does the national monument need a visitor center?

- Should the national monument provide camping facilities (Fort Charlotte campsites, washrooms, showers,) for visitors arriving from the backcountry?
- How should Fort Charlotte be accessed and interpreted?
- Should the national monument provide camping facilities near the lakeshore?

2. To what extent can administrative and support services and facilities be efficiently and effectively provided without impacting resources?

   - Where should a headquarters facility be, Grand Marais or Grand Portage?
   - Does the national monument need employee support services at Grand Portage such as housing for permanent and seasonal staff?
   - Where should maintenance facilities for the national monument be?

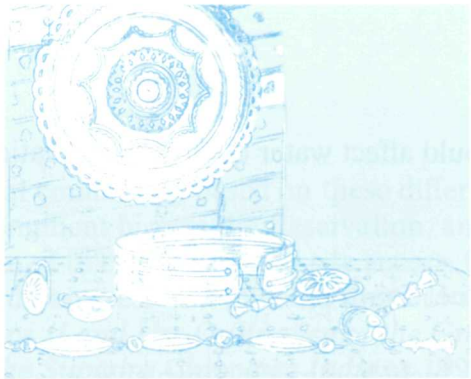
3. To what extent should the national monument's built environment and interpretive focus be on the 1790s "golden era" of the fur trade while including greater attention to Ojibwe heritage and history?

   - How much landscape restoration is feasible and desirable?
   - What is the appropriate level of treatment for landscapes and structures (preservation, restoration, reconstruction) commensurate with visitor understanding and expectations?
   - What is the best way to focus on the economic, political, and social aspects of the site?
   - What is the best way to focus on the maritime aspects of the site?
   - What is the best way to tell the fur trade story in a contemporary Indian Reservation?
   - What is the best means of interpreting the 19th to 20th century Ojibwe remains and story?

4. To what extent should the national monument partner with other agencies to further common needs and fulfill the NPS mission?

   - What partnerships can be implemented to enhance visitors' stay in the Grand Portage area?
   - Can partnerships be implemented to protect viewsheds, ecosystems, and site hydrology both inside and outside the national monument boundary?
   - How much all-terrain vehicle (ATV) and snowmobile access within the national monument is acceptable, and how can such uses be controlled? (section 7, PL 85-910)

This document does not specifically address each of these questions; however, the team used them throughout the planning in developing the alternatives.



IMPACT TOPICS — RESOURCES AND VALUES AT STAKE IN THE PLANNING PROCESS

This section identifies the resources and values (impact topics) that were considered in the planning process and describes the criteria used to establish the relevance of each impact topic to long-term planning for the national monument.

Specific resources and values, called impact topics, were used to focus the planning process and the assessment of potential consequences of the alternatives. The following criteria were used to determine important resources and values for Grand Portage National Monument:

- *Resources cited in the establishing legislation for the national monument.* The establishing legislation for the national monument is reproduced in appendix B. A summary of relevant elements of the legislation is provided in the section entitled "Special Mandates and Administrative Commitments."

- *Resources critical to maintaining the significance and character of the national monument.* The section on "Significance" describes the defining features of Grand Portage National Monument that were used to establish the resources that are critical to maintaining its significance and character.

- *Resources recognized as important by laws or regulations.* Many of the important congressional acts and executive orders that guide the management of all National Park Service facilities, including Grand Portage National Monument, are listed in appendix B. Some of the relevant elements of these acts and orders are summarized in appendix A, "Servicewide Mandates and Policies."

- *Values of concern to the public that were mentioned during scoping for this draft plan.* The National Park Service conducted an extensive public information and scoping program to acquire input from the public and from other agencies. This helped the National Park Service develop alternatives and identify resources and values that are of high interest in Grand Portage National Monument.

Each impact topic relative to these criteria is briefly described below. The "Environmental Consequences" chapter contains a more detailed description of each impact topic and the effects of each of the four proposed management alternatives. The planning team selected the resource impact topics for analysis based on the potential for each resource to be affected by the alternatives.

CULTURAL RESOURCES

Archeology and History

Grand Portage National Monument is listed on the National Register of Historic Places as nationally significant for its ". . . association with the fur trade and the exploration and colonization of the northwest, its historic/geographic link between the United States and Canada, and its excellent state of preservation in a semi-wilderness setting." The national

monument's enabling legislation recognizes the need for preserving its "unique historical values." Indeed, the archeological and historic resources and how to interpret them were the main focus during scoping sessions with the public held in June 1999.

Sacred Sites

It is believed that an important Ojibwe ceremonial site sacred to the Grand Portage Band may exist within or closely adjacent to the national monument.

NATURAL RESOURCES

Soils

All action alternatives propose developments and road realignment. These actions could impact the soil resource.

Air Quality

Grand Portage National Monument is a class II air quality protection zone. Alternatives B and C propose to restore the landscape to a historical appearance. Prescribed (management-ignited) fire might be used to meet this objective and could impact air quality.

Water Quality and Aquatic Species

All action alternatives propose to remove the existing dock, and Alternatives B, C, and E also include proposals to reconstruct a historical wharf. These actions in addition to proposed construction could affect water quality and aquatic habitat.

General Vegetation and Fuel Loading

All the action alternatives include removing intrusive contemporary elements and rehabilitating the lands to provide a more appropriate setting for interpreting fur trade and the Grand Portage community. This could have an impact on the composition and structure of existing vegetation and fuel loading.

Threatened or Endangered Species or Species of Concern — Plants

All the action alternatives would include developing the existing Isle Royale parking lot. This development would be close to state-listed plants and potentially could impact these plants.

VISITOR EXPERIENCE AND INTERPRETATION

All action alternatives propose changes in the way visitors would use and experience the resources of the national monument.

POPULATION, ECONOMY, AND LAND USE

The alternatives provide various levels of development and use of the national monument that could affect how long a visitor would stay in the community and where facilities would be located. There could be differences in economic benefit to the

local community based on these differences. Because the monument bisects the Reservation, any proposed actions related to circulation and site access, facilities construction, or landscape restoration could impact local land use policies or plans (*Land Use Ordinance of the Grand Portage Band of Lake Superior Chippewa Indians* 1996, as amended). Likewise, the land use policies of the Grand Portage Band outside Grand Portage National Monument could affect the character of the national monument, its circulation, and the location of facilities. Many of these possible conflicts were discussed during public scoping.

LOCAL AND REGIONAL TRANSPORTATION

Local and regional transportation was identified as a potential impact topic. Issues of visitor safety, site appearance and restoration, and community circulation through the monument relate specifically to the local transportation network within the Reservation. Relocating roads in the national monument and immediate vicinity was a topic of discussion during scoping. The National Park Service would consult with the Grand Portage Band regarding any proposed actions involving roads.

TABLE 1: IMPACT SUMMARY

IMPACT TOPIC	CULTURAL LANDSCAPE	ARCHEOLOGY AND HISTORY	SACRED SITES	LOCAL AND REGIONAL TRANSPORTATION	ECONOMY, POPULATION, AND LAND USE	VISITOR USE AND EXPERIENCE
Alternative A No Action	Historic landscape would not be restored. Intrusive development would continue to exist in most historic areas. **Cumulative Impact:** minor and long-term. No impairment.	Archeological and historical investigations would precede development. **Cumulative Impact**: No impact. No impairment.	No proposals for area of sacred site. **Cumulative Impact:** None. No impairment.	No proposals for changes to local or regional transportation. **Cumulative Impact:** No short- or long-term impacts. No impairment.	No impact on population, economy or land use within community. **Cumulative Impact:** Negligible, long-term. No impairment.	Limited opportunity for visitors to understand and appreciate significance of the monument's resources. **Cumulative Impact:** negligible, long-term, no impairment.
Alternative B Fur Trade with Maritime Emphasis	Housing and maintenance moved out of national monument. Focus on interior stockade landscape but some restoration elsewhere. County Road 17 would remain. **Cumulative Impact:** moderate, beneficial, long-term. No impairment.	Archeological and historic investigations would precede development. Upgraded collections storage. Some collections returned to site. **Cumulative Impact:** moderate, short-term. No impairment.	Trail construction would be preceded by archeology and consultations. **Cumulative Impact:** None. No impairment.	Minor CR 17 realignment. **Cumulative Impact:** minor short-term, no long-term impact. No impairment.	New heritage center and extended visitor season could boost economy. Short-term impact from construction. **Cumulative Impact:** minor short-term, minor long-term. No impairment.	Broader, more comprehensive visitor experience with some additional visitation. **Cumulative Impact:** major beneficial long-term impact, no impairment.

TABLE 1: IMPACT SUMMARY (continued)

IMPACT TOPIC	CULTURAL LANDSCAPE	ARCHEOLOGY AND HISTORY*	SACRED SITES	LOCAL AND REGIONAL TRANSPORTATION	ECONOMY, POPULATION, AND LAND USE	VISITOR USE AND EXPERIENCE
Alternative C Fur Trade and Ojibwe Heritage	Facilities moved out of national monument. Some landscape restoration. CR17 removed from monument. **Cumulative Impact:** moderate, long-term inside and outside monument with both beneficial and adverse impacts. No impairment.	Archeological and historical investigations would precede development. Upgraded collections storage. All collections returned to site. **Cumulative Impact:** minor, short-term. No impairment.	Trail and shelter construction would be preceded by archeology and consultations. **Cumulative Impact:** None, No impairment.	Two phase road realignment and facilities on MN 61. **Cumulative Impact:** minor short-term, moderate, long-term impact within monument and local area. Negligible in regional area. No impairment.	New Heritage Center on MN 61 open year-round. monument staff living in community, possible secondary development. Short-term economic impact from construction. **Cumulative Impact:** minor short-term, moderate long-term, beneficial. No impairment.	Broader, more comprehensive visitor experience with year-round visitation. **Cumulative Impact:** Major, beneficial, long-term impact, no impairment.
Alternative D Heritage Center Focus	Facilities moved out of national monument. Landscape reflects continuum. Partial road realignment. **Cumulative Impact:** moderate, long-term inside and outside monument with both beneficial and adverse impacts. No impairment.	Archeological and historical investigations would precede development. Upgraded collections storage. All collections returned to site. **Cumulative Impact**: minor, short-term. No impairment.	No proposals for area of sacred site. **Cumulative Impact:** None, No impairment.	Partial road realignment and facilities on MN 61 **Cumulative Impact:** minor short-term, moderate long-term impact within monument and local area. Negligible on regional area. No impairment.	New Heritage Center on MN 61 open year-round. monument staff living in community, possible secondary development. Short-term economic impact from construction. **Cumulative Impact:** minor short-term, moderate long-term beneficial. No impairment.	Broader, comprehensive visitor experience focusing on heritage center and exhibits. Year-round use. **Cumulative Impact:** major, beneficial, long-term impact, no impairment.

TABLE 1: IMPACT SUMMARY (continued)

IMPACT TOPIC	CULTURAL LANDSCAPE	ARCHEOLOGY AND HISTORY*	SACRED SITES	LOCAL AND REGIONAL TRANSPORTATION	ECONOMY, POPULATION, AND LAND USE	VISITOR USE AND EXPERIENCE
Alternative E Preferred Alternative	Housing and maintenance moved out of national monument. Landscape reflects continuum. Three-phase road realignment. **Cumulative Impact:** Moderate, long-term inside and outside monument with both beneficial and adverse effects. No impairment.	Archeological and historical investigations would precede development. Upgraded collections storage. Some collections returned to site. **Cumulative Impact:** Minor, short-term. No impairment.	Trail and shelter construction would be preceded by archeology and consultations. **Cumulative Impact:** None, No impairment.	Three-phase road realignment and gateway on MN 61. **Cumulative Impact:** Minor short-term, moderate long-term impact within monument and local area. Negligible on regional area. No impairment.	New heritage center and extended visitor season could boost economy. monument staff living in community, possible secondary development at gateway. Short-term economic impact from construction. **Cumulative Impact:** Minor short-term, moderate long-term beneficial effect. No impairment.	Broader, more comprehensive visitor experience with year-round visitation. **Cumulative Impact:** Major long-term beneficial effect, no impairment.

IMPACT TOPICS DISMISSED FROM FURTHER CONSIDERATION

The topics discussed below will not be addressed further in this document for the reasons outlined under each topic heading.

ENVIRONMENTAL JUSTICE

Executive Order 12898 requires federal agencies to identify and address disproportionately high and adverse human health or environmental effects on minority and low-income populations. None of the proposed alternatives would have a disproportionately high and adverse effect on any minority or low-income population or community. This conclusion is based on the following information:

- The proposed developments and actions in the alternatives would not result in any identifiable adverse human health effects. Therefore, there would be no direct, indirect, or cumulative adverse effects on any minority or low-income population or community.
- The impacts on the natural and physical environment that would occur in any of the alternatives would not significantly and adversely affect any minority or low-income population or community.
- The alternatives would not result in any identified effects that would be specific to any minority or low-income community.
- The planning team actively solicited public comments during the development of this plan and gave equal consideration to all input, regardless of the commenter's age, race, income status, or other socioeconomic or demographic factors.
- Park staff have consulted and worked with the Grand Portage Band of Minnesota Chippewa and will continue to do so in cooperative efforts to improve communications and resolve any problems that occur. No negative or adverse effects were identified that would disproportionately and adversely affect American Indians.
- Impacts on the socioeconomic environment due to the alternatives would be minor or positive and would occur mostly within the local and regional geographic area near the monument. These impacts would not occur at one time but would be spread over a number of years, which would reduce their magnitude. The impacts on the socioeconomic environment would not substantially alter the physical and social structure of the nearby communities.

INDIAN TRUST RESOURCES

Grand Portage National Monument is within the Grand Portage Reservation, and some of its lands were donated by the Grand Portage Band of Minnesota Chippewa. Section 2 of the establishing legislation notes that the lands are to be held ". . . in trust by the United States of America for the said tribe or band. . . ." The legislation recognizes the crucial part that was played by the Ojibwe in the history of the fur trade and the

importance of the relationship between the national monument and the Band. This relationship was a primary topic of discussion during scoping and subsequently during the generation of alternatives. However, Grand Portage National Monument is public property managed by the National Park Service, and the Grand Portage Band did not retain any property rights that would constitute a legal trust responsibility. That is not to say that the Band does not have certain other rights to the land that are spelled out in the legislation establishing the national monument. Those rights will be honored.

PUBLIC HEALTH AND SAFETY

The proposed developments and actions in the alternatives would not result in any identifiable human health or safety concerns, either direct or indirect. The alternatives were designed to take these factors into consideration and to remove them wherever possible. Several alternatives describe changes to the local transportation system within and outside the national monument that would greatly reduce the possibility of vehicle-pedestrian accidents.

ENERGY CONSUMPTION

Several of the alternatives describe the need for new facilities and roads. Energy consumption within buildings would be considered within design, and the maximum use of energy saving concepts would be implemented.

New roads proposed would be approximately the same distance as the roads they replace, resulting in a negligible change in gasoline consumption.

GEOLOGY AND TOPOGRAPHY

Altering geologic processes and features is not proposed in any of the alternatives. Some earthmoving and blasting activities in association with facility construction and road relocation are proposed; however, they would not impact the geologic processes or features or cause substantial alteration of the topography.

PRIME AND UNIQUE AGRICULTURAL LANDS

The soils and topography in Grand Portage national monument are not conducive to agriculture; therefore, no prime or unique agricultural lands exist within the monument (NPS 1995).

WATER QUANTITY AND TIMING

None of the proposed alternatives would measurably affect the quantity of water or timing of runoff.

COASTAL ZONE MANAGEMENT

Grand Portage National Monument and Grand Portage Indian Reservation are listed as excluded lands from Minnesota's Lake Superior Coastal Program (NOAA 1999). This status exempts the preferred alternatives from federal consistency provisions of section 307 of the Coastal Zone Management Act if they do not affect land or water use or natural resources within Minnesota's Lake Superior Coastal Program. None of the proposed alternatives would have any effect on land or water use or natural resources outside of Grand Portage National Monument or Grand Portage Indian Reservation.

FLOODPLAINS

Regulatory floodplain mapping is currently unavailable for Cook County. However, during the development of a 1991 environmental assessment to construct proposed master plan developments, Cook County officials were consulted, and no floodplains were identified within Grand Portage National Monument (NPS 1991). Because it is likely that there are, in fact, floodplains, the national monument will follow NPS policy. That policy recognizes and manages for the preservation of floodplain values, minimizes potentially hazardous conditions associated with flooding, and adheres to all federally mandated laws and regulations related to the management of activities in floodprone areas. This topic was determined to be a project level issue; therefore, it will not be addressed further in this document. Floodplains will be addressed at the project level by ensuring that projects are consistent with the floodplain policy of the National Park Service (Director's Order 12) and Executive Order 11988.

WETLANDS

Regulatory wetlands and waters of the United States exist throughout Grand Portage National Monument. Proposed development and road realignment could potentially affect wetlands. Wetlands in the monument include a beaver marsh astride a western section of the portage, riparian wetlands adjacent to Grand Portage, Poplar, and Snow Creeks, and 3.3 acres of forested swamp and wet meadow in the southeastern corner of the monument in the area bounded by County Road 17, old BIA 5 (the "boneyard road"), and Lower Bay Road. It is NPS policy to avoid affecting wetlands and to minimize impacts when they are unavoidable. However, it is difficult to address impacts on wetlands without site plans, and impacts can often be avoided by simply relocating a development in a slightly different manner. This topic was determined to be a project level issue; therefore, it will not be addressed further in this document. Wetlands will be addressed at the project level by ensuring that projects are consistent with NPS wetlands policy (DO 77-1), Executive Order 11990, and section 404 of the Clean Water Act.

EXOTIC VEGETATION AND NOXIOUS WEEDS

About 50 exotic plant species are present in Grand Portage National Monument. Only two of these species are of concern; the rest are innocuous and do not change ecosystem function. No program is in place to control these innocuous exotic species because eradication would be very difficult, and the program would be cost prohibitive — the costs would outweigh the benefits. The only concern these species cause is in context of presenting a true historical landscape, which only a very observant person with knowledge of exotic vegetation would notice. None of the alternatives proposes a change in dealing with the innocuous exotic species.

Two exotic plants in the monument are listed on Minnesota's noxious weed list as primary noxious weeds: Canadian thistle (*Cirsium arvense* (L.) Scop. var. *horridum* Wimmer & Grab.) and sow thistle (*Sonchus uliginosa* Bieb.). This listing obligates the National Park Service to take steps to control or eradicate these plants within the boundary of Grand Portage National Monument. The monument currently monitors these populations closely and controls them through mowing and hand pulling. The existing noxious weed control program would continue in all alternatives.

GENERAL WILDLIFE

A faunal study completed in 1995 documented the presence of 102 bird, 27 mammal, 8 amphibian, and 1 reptile species

within Grand Portage National Monument (Graetz et al. 1995). In addition, 17 bird, 17 mammal, 3 reptile, and 4 amphibian species have been known to occur in the vicinity of Cook County but were not found in the two years of surveys supporting the 1995 study in the monument. Increased disturbance and loss of some habitat could occur with proposed construction activities and developments. However, the proposed construction and development in all action alternatives occur in the eastern part of the monument, which is degraded through high disturbance levels from urban development, MN Highway 61, other roads, and human use. Wildlife species inhabiting the eastern part of the monument would be adapted to high levels of disturbance and human activity and would be negligibly affected by any of the proposed alternatives. None of the proposed alternatives would be expected to cause measurable changes in the abundance or distribution of any wildlife species.

THREATENED OR ENDANGERED SPECIES OR SPECIES OF CONCERN — WILDLIFE

The U.S. Fish and Wildlife Service has determined that two wildlife species proposed for federal listing as threatened or endangered may occur or have habitat in the area of Grand Portage National Monument. These species are gray wolf (*Canis lupus*), threatened, and Canada lynx (*Lynx canadensis*), threatened. All of Grand Portage National Monument is within listed critical habitat for the gray wolf. In 1992 the U.S. Fish and Wildlife Service developed the *Recovery Plan for the Eastern Timber Wolf,* which defines actions that are believed to be necessary for the recovery or protection of the species. The monument contains habitat to support part of the larger home range necessary for the gray wolf. Deer, moose, and beaver appear to be plentiful as a prey base within and adjacent to the monument. Open road densities for this area are low, and potential den and rendezvous sites exist in the monument.

A faunal study in 1993 and 1994 (Graetz, Garrot, and Craven 1995) indicated transient use of Grand Portage National Monument by the gray wolf. Protection measures have helped the wolf population recover to the point that its removal from the threatened species list is occasionally debated.

Based on anecdotal information, Canada lynx have not been sighted in the monument but have been seen in the county. However, lynx denning and travel habitat exist within Grand Portage National Monument within mature and old growth conifer and mixed conifer-hardwood forests. Foraging habitat exist adjacent to the monument within recent timber harvest areas in the Grand Portage Indian Reservation. However, timber management activities have also resulted in conditions that favor coyote, a primary lynx competitor.

All action alternatives possibly could affect but would not be likely to adversely affect gray wolf and Canada lynx. This conclusion is based on the following information:

- All action alternatives would maintain the existing condition along the portage trail and Fort Charlotte portions of Grand Portage National Monument.
- Proposed developments and changes in park operations would all occur in the eastern part of the monument and in areas where gray wolf and lynx habitat has already been degraded through high disturbance levels from urban development, Minnesota Highway 61 (MN 61), other roads, and human use.
- Only modest increases in visitation (approximately 10–20%) would be expected for the portage trail and the Fort Charlotte area. Despite the expected increase, overall visitation levels would still remain low, and no changes in time or

use would be expected. Disturbance of habitat for state-listed species would remain low.

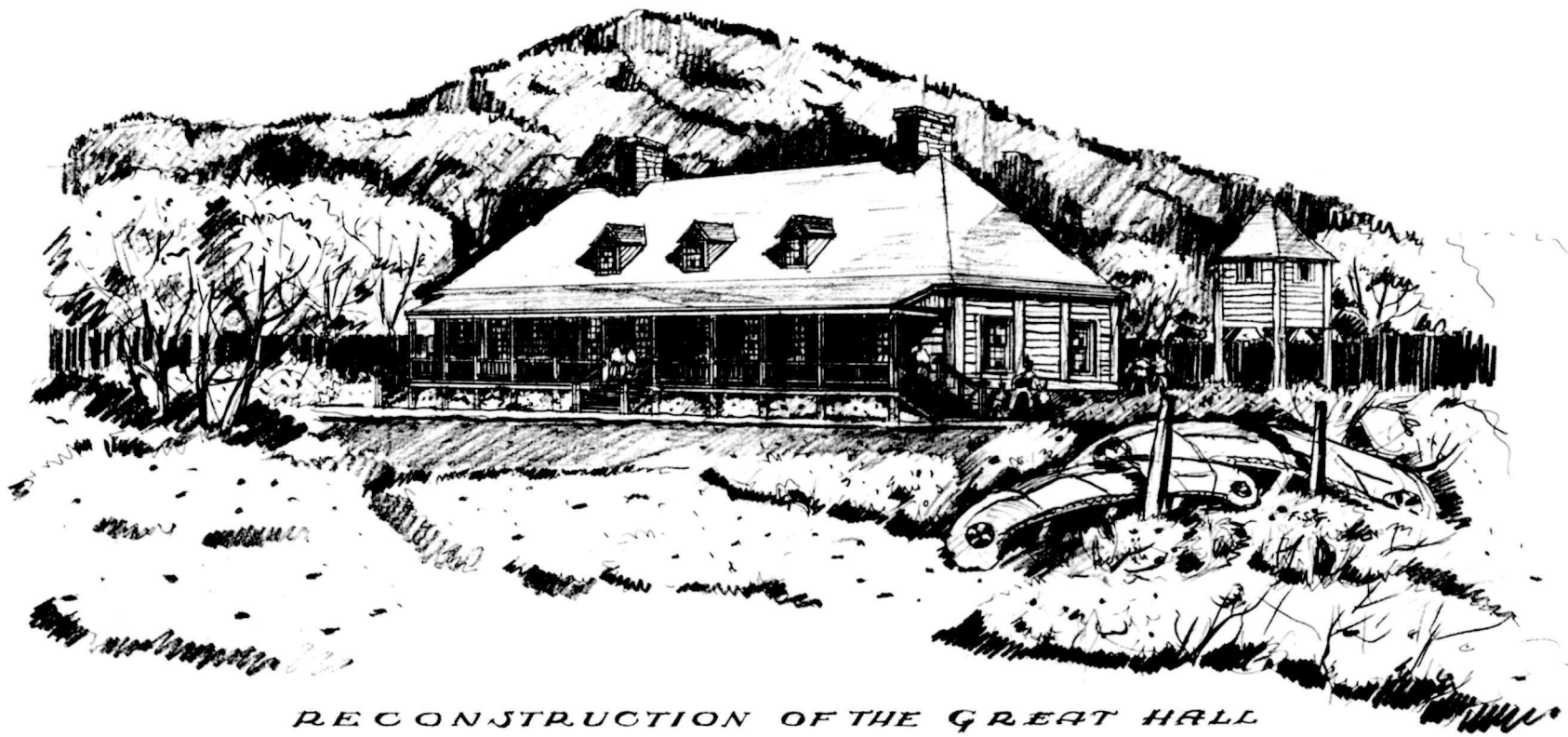
Faunal surveys indicate that the following state-listed species occur or could occur in Grand Portage National Monument:

Peregrine falcon (*Falco peregrinus*) — threatened
Gray wolf (*Canis lupus)* — special concern
Snapping turtle (*Chelydra serpentina*) — special concern
Cerulean warbler (*Dendroica cerulea*) — special concern
Bald eagle (*Haliaeetus leucocephalus*) — special concern
Woodland vole (*Microtus pinetorum*) — special concern
Least weasel (*Mustela nivalis*) — special concern

A taking of any of the state-listed species would not be expected to occur with the implementation of any of the proposed alternatives. This conclusion is based on the following:

- All action alternatives would maintain the existing condition along the portage trail and Fort Charlotte portions of the monument.
- Proposed developments and changes in park operations would all occur in the eastern part of the monument and in areas where habitat for state-listed species has already been degraded through high disturbance levels from urban development, MN 61, other roads, and human use. Only modest increases in visitation (approximately 10–20%) would be expected for the portage trail and the Fort Charlotte area. Despite the expected increase, overall visitation levels would remain low, and no changes in time of use would be expected. Disturbance of habitat for state-listed species would remain low.

For all the action alternatives, the potential impacts on wildlife species listed as endangered, threatened, or special status would be negligible. Endangered, threatened, and special status species will be addressed at the project level through consultations with the U.S. Fish and Wildlife Service and the Minnesota Department of Natural Resources to ensure the protection of these species. Based on these consultations, mitigating measures would be incorporated into project proposals if necessary to address any concerns with these species.



RECONSTRUCTION OF THE GREAT HALL

GRAND PORTAGE NATIONAL MONUMENT

GRAND PORTAGE MINNESOTA

GRAND PORTAGE
CONJECTURAL SKETCH
BY FRANK S. GERNER
OCTOBER 1971

OFFICE OF
HISTORY & HISTORIC ARCHITECTURE
WESTERN SERVICE CENTER
SAN FRANCISCO CALIFORNIA

ALTERNATIVES

The way the alternatives were developed on the basis of scoping is described under "Formulation of Alternatives." After each alternative was defined in a general way, developing the alternatives was a two-step process.

1. The National Park Service identified management prescriptions that potentially were applicable to Grand Portage National Monument. Each management prescription was defined by desired visitor experiences and resource conditions. This helped establish the kinds of activities or facilities within each prescription that would achieve those targeted conditions.

2. The management prescriptions were then mapped to specific areas of the national monument to create four alternatives evaluated in this *Draft General Management Plan*.

Each alternative is a combination of several management prescriptions, the locations of which may vary among alternatives.

POTENTIAL MANAGEMENT PRESCRIPTIONS

A management prescription is an approach for administering or treating the resources or uses of a specified area based on desired outcomes. This section includes all the management prescriptions that could be applied to Grand Portage National Monument under any of the alternatives.

Management prescriptions include target goals or objectives for one or more resources and/or visitor experiences that are present within the prescription area. In some cases management prescriptions apply to an entire park; however, all the alternatives for Grand Portage National Monument consist of multiple zones with different management prescriptions. The six management prescriptions proposed for Grand Portage National Monument are described below and summarized in table 2.

The management prescriptions included in this section define the desired resource conditions and visitor experiences, including the appropriate kinds and levels of management, use, and development. Together, all the management prescriptions in an alternative meet all the goals of the national monument.

Different physical, biological, and social conditions are emphasized in each zone. The factors that define each management prescription are the desired visitor experience and the desired natural and cultural resource conditions. These factors then indicate the types of activities or facilities that are appropriate within the zone.

TABLE 2: POTENTIAL MANAGEMENT PRESCRIPTIONS

Zone	Desired Condition
Primitive Trail	• No mechanized vehicular transport • Few signs or waysides • Minimal trail development • Protect archeological resources at "poses" • Maintain rugged character — footboards, treefalls cut to appear natural, some pruning, manage vegetation for fire safety • Individual personal/physical visitor experience (1790s-like) NPS provides some crucial info. but visitors have primary opportunity to learn about monument through books, brochures, etc.
Recreation	• Campsites have a primitive character • Minimal interpretation and orientation to Grand Portage National Monument story • Provide aesthetically pleasing yet primitive camping experience • Develop alternative access to backcountry
Resources Trust	• Minimal interpretation (not site-specific) • Vegetation management. to protect resources (rare and wetlands plants and archeology) • Archeological "data bank" • Visitors receive indirect info about resources and resource preservation • Continue inventory and monitoring of resources
Maintenance / Park Operations	• Does not intrude on historical areas (physically or visually) • Close to facilities (heritage center, housing, or ranger station) • Screened from housing/administration • Visitors would not experience this zone
Visitor Services and Development	• Away from historic resources • Accessible pathways and contemporary facilities with sensitive alteration of existing landscape • Frequent ranger contacts • Orientation info — library/museum/office — varied interpretive media • Fee collection • Visitors would be introduced to all the monument's interpretive themes and fully understand the range of interpretive and recreational opportunities at Grand Portage National Monument • An in-depth interactive enriched interpretive experience
Interpretive Historic	• Nonintrusive accessibility — minimize modern intrusions • Authentic historic scene • Landscape restoration and reconstruction of structures appropriate • Varied interpretive media that would not intrude on historic scene

Regardless of the target visitor experience or resource condition, all management prescriptions conform to all park-specific purpose, significance, and mission goals and to the servicewide mandates and policies described earlier in this document. For example an archeological site would be protected regardless of the zone in which it occurred. However, the use of that site for interpretive or educational purposes could vary, depending on the management prescription to which its vicinity was assigned.

Management prescriptions are generally future focused, not a description of the status quo. Therefore, the management prescriptions generally do not apply to the "No Action," or status quo, alternative. However, because the monument currently has no active management zoning, the current situation cannot be readily compared to the proposed zoning. To rectify this, and to allow the reader to better compare alternatives, Alternative A has been described using the same management prescription zoning that is used for all other alternatives. Table 3 shows the estimated zone acreages for each alternative.

Primitive Trail Zone

Desired Visitor Experience. The primitive trail zone would give visitors a sense of being transported back to the late 1700s. There would be no mechanized vehicles, and the zone would foster a feeling of tranquility, of immersion in nature, far from comforts and conveniences. The frequency of encountering other visitors and staff would be low on most days. The use of this zone would require a relatively long time commitment and a high level of physical exertion. The environment would offer a relatively high degree of challenge and adventure. Tolerance for noise, visual intrusions, and social interaction would be low. Visitor information would come primarily from interpretive media in the frontcountry.

Desired Resource Condition. The primitive trail zone would feature a rugged trail through a natural-appearing forest corridor. Historic vegetation would be reestablished and exotic species removed to maintain the historic character. Where trees have fallen, they would be allowed to remain unless they interfere with the trail. Visitors would cross areas of natural erosion over footboards as was done historically. "Poses," the historic resting areas of the voyageurs, would be preserved and their possible archeological values protected. National Park Service tolerance for adverse impacts to resources due to visitor use would be very low.

TABLE 3: ESTIMATED ZONE ACREAGES FOR EACH ALTERNATIVE

ZONE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
Historic Interpretation	7.7 acres (1.1%)	17.0 acres (2.4%)	24.7 acres (3.5%)	10.1 acres (1.4%)	20.1 acres (2.8%)
Park Operations	2.4 acres (0.3%)				
Primitive Trail	9.8 acres (1.4%)	9.8 acres (1.4%)	9.8 acres (1.4%)	9.8 acres (1.4%)	9.8 acres (1.4%)
Recreation	1.5 acres (0.2%)	1.5 acres (0.2%)	1.5 acres (0.2%)	1.5 acres (0.2%)	1.5 acres (0.2%)
Resources Trust	685.4 acres (96.5%)	676.6 acres (95.3%)	672.8 acres (94.8%)	687.4 acres (96.8%)	673.5 acres (94.9%)
Visitor Services and Development	3.2 acres (0.4%)	5.1 acres (0.7%)	1.2 acres (0.2%)	1.2 acres (0.2%)	5.1 acres (0.7%)

Appropriate Kinds of Visitor Activities or Facilities. The only activity permitted would be hiking and hiking-related actions. No camping would be allowed. Facilities would consist of the trail itself.

Recreation Zone

Desired Visitor Experience. The recreation zone would contain well-defined trail and campsite areas. The trails would consist of well-maintained or groomed pathways designed to reach a specific destination, but not necessarily the focus of a visitor's experience. The use of this zone would require a commitment of time and exertion. The probability of visitors encountering other visitors would be moderate to high on most days. The likelihood of visitors encountering staff would be low. There would be a good chance of solitary experiences. Noise tolerance would be low to moderate. Visitor information would come from signs placed at overlooks or stops along the trail or interpretive media in the frontcountry.

Campsites would appear as an integral part of the "voyageurs' highway" in an aesthetically pleasing yet primitive character. There would be a high probability of encountering other campers within the relatively small area. Tolerance for noise and visual intrusion would be moderate. Visitor information would come primarily from interpretive media in the frontcountry.

Desired Resource Condition or Character. Trails and campsites would be in a well-maintained condition to provide adequate visitor safety and to protect the quality of the resource. Resource modifications would be evident but would harmonize with the surrounding environment through the use of color, setting, and native materials. NPS tolerance for adverse impacts due to visitor use would be low. Facilities would be away from sensitive cultural and natural resources that could not be protected.

Appropriate Kinds of Visitor Activities or Facilities. The recreation zone would be primarily moderate to high use trails and well-used campsites. Foremost would be portaging. Snowshoeing, cross-country skiing, and other traditional uses would also be appropriate.

Resources Trust Zone

Desired Visitor Experience. The resources trust zone, which includes undeveloped or culturally sensitive areas of the national monument, would be interpreted indirectly in the frontcountry. It would receive light visitor use and would be free of development.

Desired Resource Condition or Character. This zone would include areas of the Grand Portage National Monument where very low use is desirable to protect certain resources and areas where access is difficult. Management for resource protection and safety would be limited, consisting of occasional monitoring of sensitive resources. NPS tolerance for adverse impacts to resources would be very low.

Appropriate Kinds of Visitor Activities or Facilities. No facilities would be appropriate in the resources trust zone, including trails or docks. No campsites would be allowed. Inventory and monitoring of cultural and natural resources would be ongoing.

Maintenance / Park Operations Zone

Visitor Experience. The maintenance / park operations zone probably would not be visited by the general public. It would be highly developed and specialized to meet the maintenance and housing needs of national monument staff.

Desired Resource Condition or Character. Facilities would be developed in the national monument, or reasonably nearby, for ease of staff access. They would not intrude on areas of natural or cultural significance either physically or visually.

Appropriate Kinds of Visitor Activities or Facilities. Appropriate facilities in the maintenance / park operations zone would be those necessary to the day-to-day maintenance of the monument and to the housing needs of the staff, such as maintenance yards, residential areas, access roads, utility areas, and corridors.

Visitor Services and Development Zone

Desired Visitor Experience. Here visitors would pay their entrance fees and receive an overview of monument resources, significance, concepts, and themes in a relatively short time and with a minimum of exertion. Particularly involved or complicated concepts would be especially appropriate in this zone. At times when the stockade was closed, this zone would constitute the principal interpretive experience for visitors. Interaction and encounters with other visitors and monument staff would be common, with occasional periods of overcrowding during fall color and special events. All facilities would harmonize with the area and the natural and cultural resources in proportion, color, and texture.

Desired Resource Condition or Character. The structures in the visitor services and development zone would be highly developed for integration into the natural landscape and for ease of function and visitor movement around the site. They would be within walking distance but away from the historic resources to allow visitors to "transition" back to the historic period of the stockade. All structures would be of contemporary design. Compatible with scale and materials of structures found elsewhere on site. Sensitive landscape design and accessible pathways would be developed.

Appropriate Kinds of Activities or Facilities. The visitor services and development zone would be highly developed with convenient and accessible facilities, including a visitor orientation/information/exhibition museum facility and parking. Learning about the national monument, short walks, and attending interpretive programs would be common activities in this zone. Reconstructed structures, such as quarters, shops, warehouses, offices, or landscape features of the historic period would be appropriate. Visitor centers, kiosks, wayside exhibits, and other interpretive media would be appropriate. Support facilities such as restrooms, picnic facilities, and parking would also be present.

Interpretive Historic Zone

Desired Visitor Experience. Visitors would find a mix of reconstructed/refurnished structures and wayside exhibits and demonstration shelter that would supplement any orientation or information provided in the visitor services and development zone. Visitors would encounter personal, in-depth interpretation of life within and around the stockade circa the late 1700s from costumed interpreters and uniformed NPS rangers. Visitors would be able to sense the hustle and bustle of everyday life. The probability of encountering other visitors and staff would be high. Visiting this zone would require a commitment of several hours. Visual intrusions and noise not associated with historic activities would be unwelcome.

Desired Resource Condition or Character. Appropriate to the interpretive historic zone would be the restoration of the historic landscape with historic structures and features reflecting the bustle and crowded nature of the area surrounding the stockade. Interpretive media such as signs or waysides would be as unobtrusive as possible so as not to detract from the site's character. Paved walkways would guide visitors and protect the landscape from overuse. NPS tolerance of adverse impacts on resources due to visitor use would be very low.

Appropriate Kinds of Visitor Activities or Facilities. Visitors would be able to spend their time learning about the fur trade and the associated history of the Ojibwe peoples. Access for people with disabilities would be designed to be as unobtrusive

as possible in keeping with the historic character of the zone. Support facilities such as restrooms would also be appropriate if designed to be unobtrusive. Reconstructed structures, such as quarters, shops, warehouses, offices, or landscape features of the historic period, would be appropriate.

Nonpark Areas

The National Park Service does not zone properties it does not own. However, any National Park Service facilities constructed outside of national monument boundaries would be managed as though they were within the maintenance / park operations or visitor services and development zones, subject to consultation with the Grand Portage Band. Site-specific environmental documentation would be required before any construction at these locations.

PUBLIC INPUT AND THE DEVELOPMENT OF ALTERNATIVES

Many aspects of the desired future condition of Grand Portage National Monument are defined in the establishing legislation and in purpose and significance statements and servicewide mandates and policies (see appendix A) that were described earlier. Within these boundaries, the National Park Service solicited input from the public regarding the long-term goals for the national monument and measures that could be implemented to achieve those goals.

The public was first invited to suggest ideas for the future of the national monument during scoping at the beginning of the general management planning process in June 1999 (see "Consultation and Coordination"). A total of 27 people attended the three public meetings, and many additional suggestions were received via letters, telephone calls, or e-mail. On the basis of public comments, and within the framework established by legislation and mandates, the planning team developed a no-action alternative and three additional alternative scenarios that attempted to reflect the range of ideas proposed by the public. These alternatives outline a range of visitor experience and resource conditions and are based on outcomes, or actual conditions on the ground, as expressed by the management prescriptions. These concepts were shared with the public in a newsletter dated April 2000. This document reflects comments on the newsletter as well.

During June 2000, the National Park Service evaluated the alternatives using a technique called "Choosing by Advantages." Following that session, a fifth alternative was developed to take advantage of the benefits of certain alternatives.

The configurations for future conditions and management within each alternative were developed by placing the management prescriptions (described in the preceding section) on the map.

ALTERNATIVE A: NO ACTION

Concept

The no-action alternative is an attempt to describe what would happen to the national monument if present management practices and trends were projected into the future. Grand Portage National Monument would be maintained as it has evolved thus far. It would be likely that visitors would not see any substantial change in appearance or operation of the national monument, since the goal would be to preserve existing visitor experiences and activities and maintain the monument's natural, cultural, and scenic values.

The no-action alternative forms a basis for comparison of the other alternatives (which are referred to throughout the document as "action" alternatives).

There would be no major changes in resource management, visitor programs, or facilities beyond regular maintenance. The current road system through the monument would remain and existing management would continue.

The Grand Portage Band of Minnesota Chippewa and Grand Portage National Monument have a fundamental partnership that includes operations, research, and interpretation under the Indian Self Governance Act agreement. No changes to that partnership would occur. The national monument staff would continue to work closely with the Minnesota Historical Society, particularly in the area of collections, archives, and historic preservation. More limited partnerships would continue with the state of Minnesota's Grand Portage State Park and Departments of Tourism and Transportation.

Measures that could be taken to achieve the goals of Alternative A are embodied in the management prescriptions presented below. These are shown on the accompanying maps and summarized in table 2. Management prescription zoning under Alternative A is shown in the Alternative A zoning map.

Note: Grand Portage National Monument does not now have an active general management plan. Therefore, no zoning is in effect. However, each alternative has been described as though the management prescription zoning proposed in this plan were in effect as a way for the reader to better compare the alternatives.

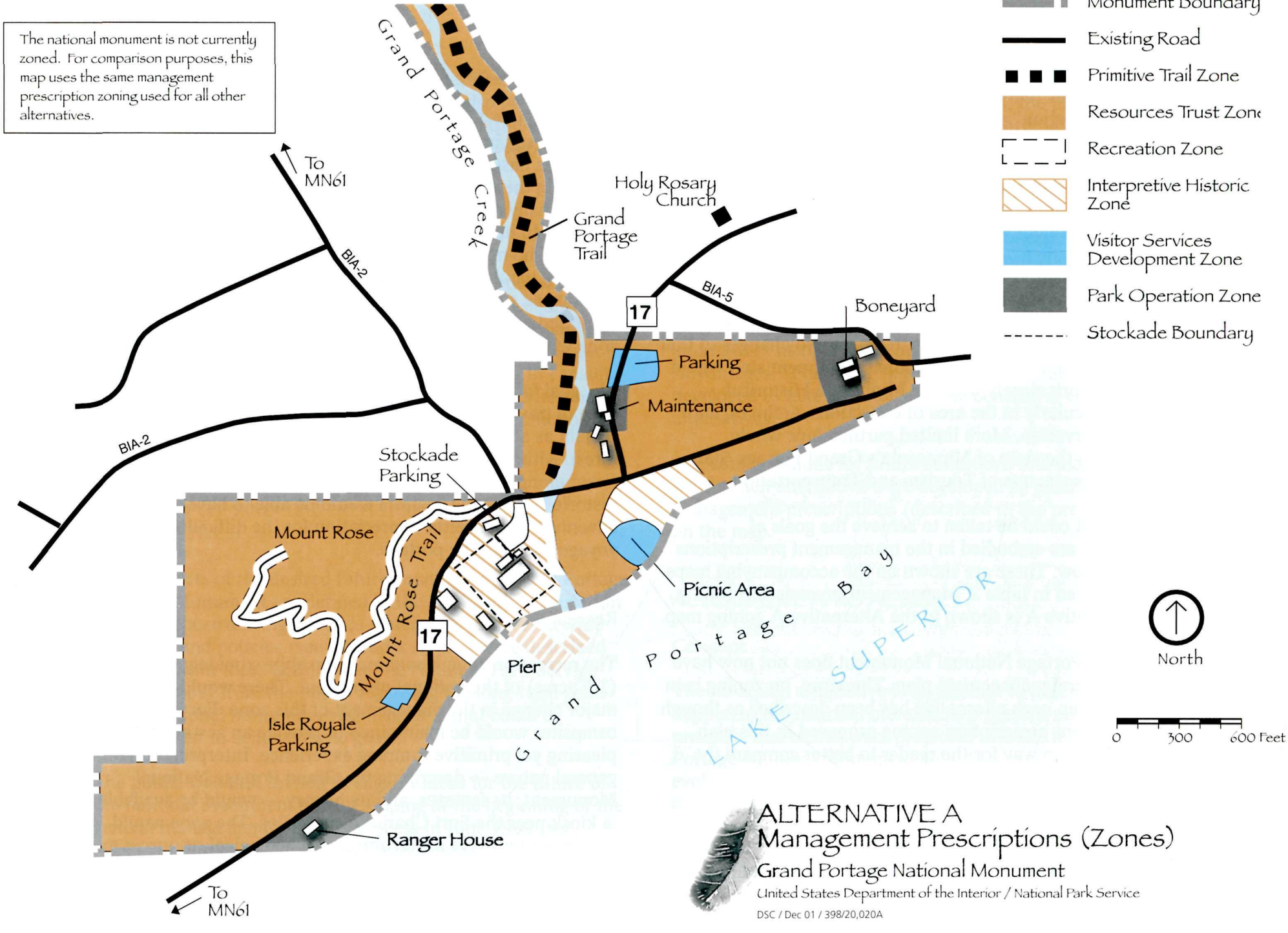
Primitive Trail Zone

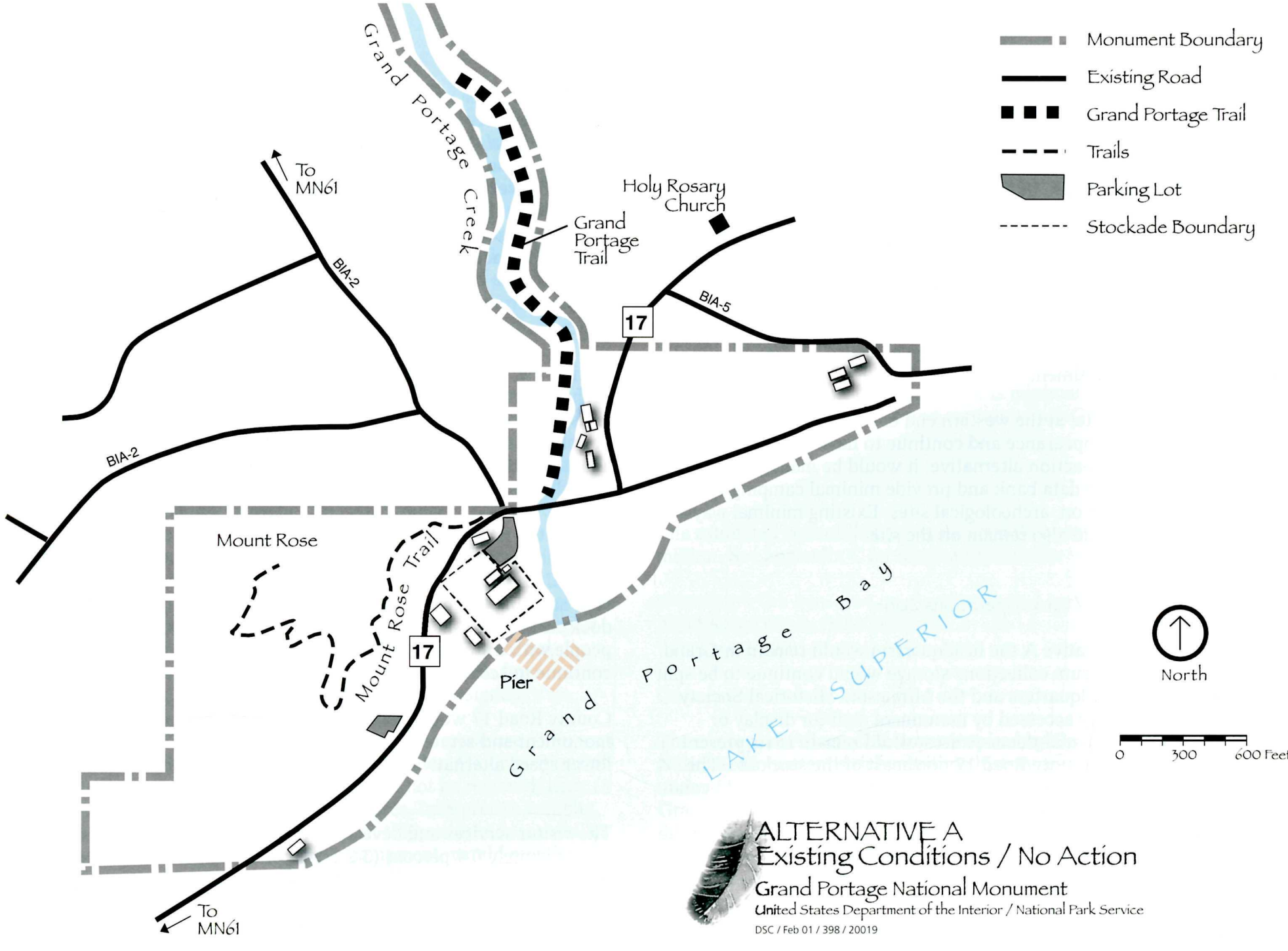
Approximately 1.4 percent of the national monument would be encompassed in the primitive trail zone under Alternative A (9.8 acres based on a 3-meter width). There would be no major change in the management of this zone. It would continue to be minimally maintained for visitor safety and use but would continue to have a semblance of its historic appearance. There would be no new trails. Any interpretation of features within this zone would occur via brochure or interpretive NPS ranger talks at the stockade. Archeological features would be identified and protected. Wheeled or motorized access to this zone would continue to be strictly limited.

The goal for this area would be for visitors to enjoy the experience of traversing the historic portage. The portage would remain as a fairly primitive trail surrounded by second-growth forest. Although no attempt would be made to restore the forest along the trail corridor to more accurately depict its historic appearance, visitors would be able to have a sense of adventure and a better appreciation for the difficulties of the voyageurs using the portage.

Recreation Zone

The recreation zone would make up approximately 0.2 percent (1.5 acres) of the national monument. There would be no major change in the management of this zone. Fort Charlotte campsites would be maintained to provide an aesthetically pleasing yet primitive camping experience. Interpretation of a general nature — describing the Grand Portage National Monument, its features, and its history — would be available at a kiosk near the Fort Charlotte campsites. The zone would continue to provide protection for archeological resources and retain its rugged character reminiscent of the historic period.


The national monument is not currently zoned. For comparison purposes, this map uses the same management prescription zoning used for all other alternatives.
Monument Boundary
Existing Road
Primitive Trail Zone
Resources Trust Zone
Recreation Zone
Interpretive Historic Zone
Visitor Services Development Zone
Park Operation Zone
Stockade Boundary
Grand Portage Creek
To MN61
BIA-2
Holy Rosary Church
Grand Portage Trail
BIA-5
17
Boneyard
Parking
Maintenance
Stockade Parking
Mount Rose
Mount Rose Trail
Picnic Area
Grand Portage Bay
LAKE SUPERIOR
Pier
Isle Royale Parking
Ranger House
North
0
300
600 Feet
ALTERNATIVE A
Management Prescriptions (Zones)
Grand Portage National Monument
United States Department of the Interior / National Park Service
DSC / Dec 01 / 398/20,020A



ALTERNATIVE A
Existing Conditions / No Action

Grand Portage National Monument

United States Department of the Interior / National Park Service

DSC / Feb 01 / 398 / 20019

Resources Trust Zone

The resources trust zone would be primarily an "archeological data bank" — an area managed to protect unexcavated archeological resources. However, this zone would also be used to protect wetlands or areas containing habitat for rare species. As such, its resources would be interpreted only indirectly, through brochures or NPS ranger talks. Although visitors would not be prohibited in this zone, there would be little reason for them to seek it out. No trails would be developed in this zone. The resources trust zone in Alternative A would encompass about 96.6 percent (686 acres) of the national monument.

Fort Charlotte, at the western end of the portage, would retain its current appearance and continue to have a dual purpose under the no-action alternative: it would be managed as an archeological data bank and provide minimal camping facilities near, but not on, archeological sites. Existing minimal wayside exhibits would also remain on the site.

Maintenance / Park Operations Zone

Under Alternative A the headquarters would remain in Grand Marais. Museum collections storage would continue to be split between headquarters and the Minnesota Historical Society and not easily accessed by monument staff for display or research. The maintenance area would remain in its present location on County Road 17 northeast of the stockade. The small, outdated facilities in the maintenance area would continue to be repaired and used until repair and use was no longer feasible, then new facilities would be constructed in the same approximate location. The maintenance storage area, or "boneyard," separate from the maintenance area, would stay in the northeast corner of the national monument. Seasonal employees would continue to live in mobile homes in the maintenance area until the homes could not be maintained any longer, then they would be replaced with leased housing in the general area of the national monument. The residence for the onsite NPS ranger would remain on County Road 17, just inside the west boundary. With the exception of headquarters, none of these facilities would be likely to provide any visitor interest. This zone would encompass approximately 0.3 percent (2.4 acres) of the national monument.

Visitor Services and Development Zone

During the May to October visitor season, most visitor services such as information/orientation, NPS ranger-led interpretive talks, or sales by the cooperating association would be offered out of the stockade. The rest of the year, visitor information about the monument would be available at headquarters in Grand Marais only.

During the Isle Royale visitor season (mid-June to mid-September), the Isle Royale parking area west of the stockade along County Road 17 would remain open with Grand Portage staff assisting visitors taking the boat over to Windigo. The dock and Isle Royale boat would remain largely inaccessible to people with disabilities, but the National Park Service would continue to seek ways to make the dock more accessible.

County Road 17 would continue to bisect the national monument and serve the local community as a less dangerous, lower speed alternative route through the community to MN 61.

The visitor services and development zone would occupy approximately 0.4 percent (3.2 acres) of the national monument.

Interpretive Historic Zone

The interpretive historic zone would encompass all the historic resources that would be interpreted to the public or that provide the setting or landscape that would help visitors visualize what the Grand Portage looked like historically. This is the zone where visitors would be able to glimpse the northwestern frontier of the 1790s. In the no-action alternative this zone would overlap with the visitor services and development zone because, in the absence of a visitor information and orientation facility at Grand Portage, nearly all visitor information and orientation occurs in the stockade.

In the no-action alternative this zone is relatively small (1.1 percent, 7.7 acres) because the emphasis of the alternative would be on the interior of the stockade and the area immediately outside to the west. The landscape of the rest of the national monument would be maintained "as is" rather than restored to a more historic appearance.

Although the stockade and surrounding area would be maintained as at present, the National Park Service would make an effort to make the site more accessible to visitors with disabilities where the changes would not permanently impact site resources. Walkway materials and grades would be adjusted where possible, and alternative methods for interpreting inaccessible features would be designed.

The Great Hall would continue its multipurpose use as an area for visitor contact, interpretation, and sales. Major portions of the historic stockade landscape would not be restored; they would remain as archeological features. Interpretive exhibits, such as the gardens in and adjacent to the stockade, as well as the Ojibwe village / voyageur encampment, would remain within the historic stockade setting. Contemporary intrusions, such as County Road 17 as it passes the stockade, the NPS Ranger station parking lot, the restrooms, the creek footbridge, and the dock would be left in their current locations.

Visitor safety and resource protection would be enhanced through the installation of the newest fire detection and suppression system available.

The former village site east of Grand Portage Creek would retain both aboveground and subsurface remnants of the early and mid 20th century landscape, including domestic, institutional, ceremonial, and public works resources. The present management approach focuses on preserving archeological resources and the routine stabilization or maintenance of extant features. There is minimal interpretation of the historic and contemporary Grand Portage community.

Cost

The estimated cost of this alternative would be more than $2 million. See appendix C for assumptions made.

ALTERNATIVE B: FUR TRADE WITH MARITIME EMPHASIS

Concept

The concept of Alternative B was inspired by Grand Portage National Monument's rich maritime history and relatively undeveloped and unspoiled waterfront. The view toward Grand Portage Bay and Grand Portage Island, Hat Point, and the waters beyond has changed little since the days of the fur traders. Reconstructed historic buildings, a dock, and a rehabilitated landscape, combined with an expanded interpretive program of new exhibits and living history activities, would help visitors to understand and appreciate the

significance and meaning of the fur trading post in the 1790s. Distinct from other alternatives, Alternative B would bring a strong maritime interpretive emphasis focusing on Grand Portage's physical and historical relationship with Lake Superior.

The visitor season, during which the stockade and historic buildings would be open to the public, would be extended, with the stockade open to the public for seven months, and a new onsite heritage center open all year.

The heritage center would significantly enhance onsite interpretation through exhibits, educational sales, audiovisual programs, a research center with archives and library, and a demonstration shelter for interpretation and demonstration of traditional Ojibwe arts and culture. It would also provide visitor amenities such as parking, public washrooms, and areas for picnicking and cooperating association sales. During winter, with the stockade and its buildings closed, most onsite interpretation would shift to the heritage center, which would provide exhibits and visitor amenities.

Collections space would be designed to house collections at the Midwest Archeological Center but not the much larger collection housed at the Minnesota Historical Society.

A separate headquarters facility would be constructed in or near the national monument. County Road 17 would be adjusted within the Grand Portage National Monument to improve visitor safety.

The Grand Portage Band of Minnesota Chippewa and the national monument have a fundamental partnership under the Indian Self-Governance Act agreement, which includes operations, particularly maintenance. Other partnership efforts with the Band involve resources management, interpretation, and possibly museum curation. No changes would be made to that agreement. The national monument would continue to work closely with the Minnesota Historical Society, particularly in the area of collections, archives, and historic preservation. To a limited degree, the national monument also would cooperate on interpretation with Minnesota's Grand Portage State Park and Departments of Tourism and Transportation.

Measures that could be taken to achieve the Alternative B goals are embodied in the management prescriptions presented below. These are shown on the accompanying maps and summarized in table 4, "Comparison of Alternatives" at the end of this chapter.

Primitive Trail Zone

The primitive trail zone would encompass approximately 1.4 percent (9.8 acres) of the national monument. The zone would be minimally maintained for visitor safety and use but would have a semblance of its historic appearance. There would be no new trails. Any interpretation of features in this zone would be carried out through brochures or by interpretive NPS ranger talks at the stockade.

Archeological features would be identified and protected. Wheeled or motorized access to this zone would continue to be strictly limited.

In an effort to restore historic forest cover, maintain safety, and prevent dangerous levels of fuel loading, the National Park Service would carry out selective use of prescribed fire, hand-piling and burning of woody fuel, suppression of invasive exotic plants, removal of hazard trees, and other manipulation of vegetation in this zone.

The goal for trails would be the same as in Alternative A, to offer a primitive trail experience providing a glimpse into a voyageur's labors and landscape.

Recreation Zone

The recreation zone in Alternative B would make up approximately 0.2 percent (1.5 acres) of the national monument. There would be no major change in the management of this zone. Fort Charlotte campsites would be maintained to offer an aesthetically pleasing yet primitive camping experience. The rugged character reminiscent of the historic period would be retained.

The Mount Rose trail, a 0.5-mile, relatively steep, paved walkway with a number of switch backs, handrails, and overlooks, would become a loop trail with an extension to the new heritage center. That trail would be maintained to its present standard.

Resources Trust Zone

The resources trust zone would be primarily an "archeological data bank" — an area managed to protect unexcavated archeological resources. However, this zone would also be used to protect wetlands or areas containing rare species habitat. As such, its resources would be interpreted only indirectly, through brochures or NPS ranger talks. Although visitors would not be prohibited in this zone, there would be little reason for them to seek it out. No trails would be developed in this zone, although the Mount Rose trail would be removed from this zone and, as described above, would be converted to a loop trail. The resources trust zone in Alternative B would encompass about 95.3 percent (676.6 acres) of the national monument.

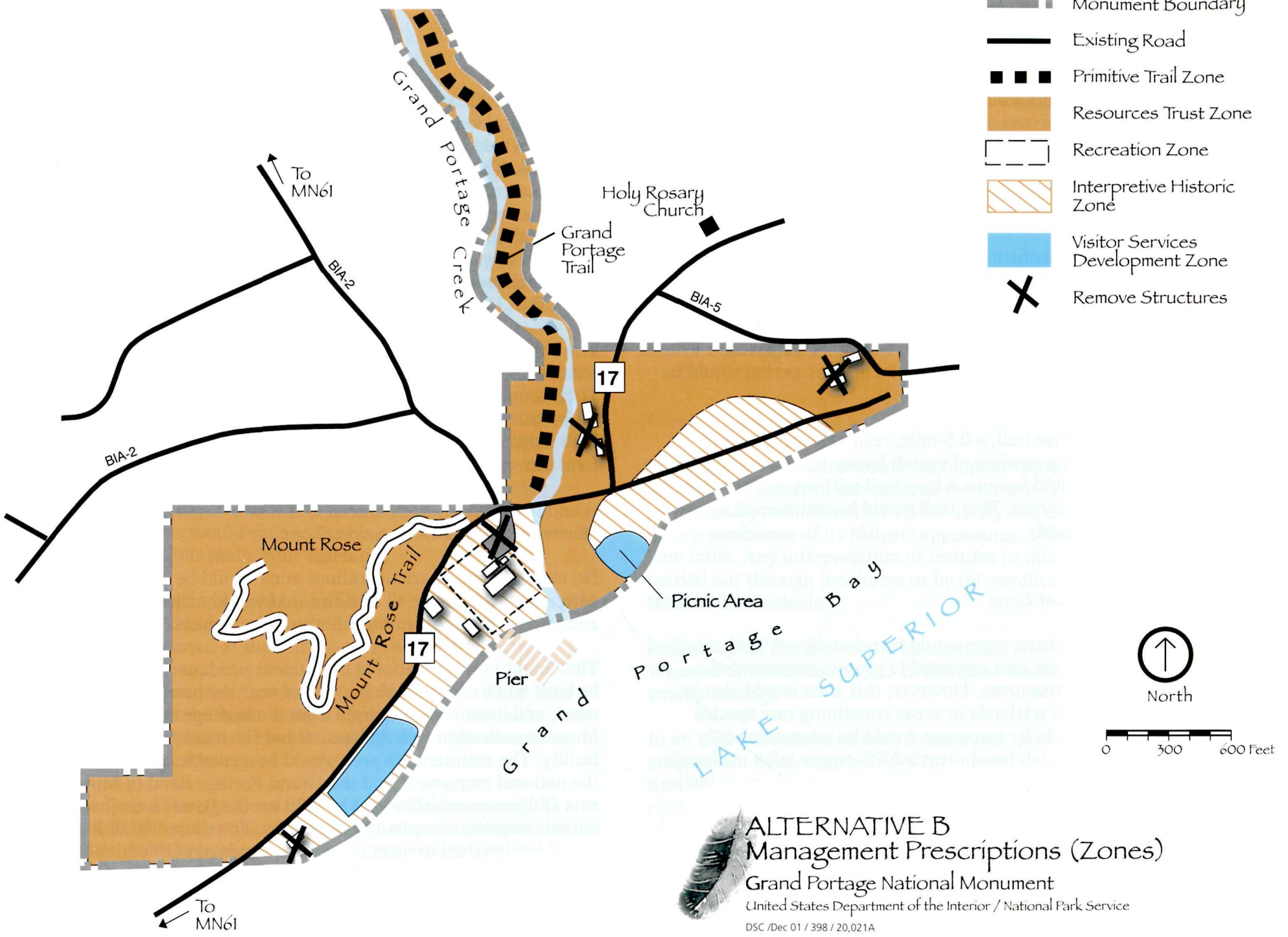
Historic Fort Charlotte would continue to be managed as an archeological landscape under Alternative B. Subsurface features would continue to be preserved in situ as a resource data bank. The only landscape feature is a historic stone monument memorializing the trail, its preservation, and Fort Charlotte as an embarkation point. Maintenance would be focused mainly on keeping the site clean. Access to Fort Charlotte would be upgraded with better signs and wayside exhibits and a new interpretive brochure. This would allow visitors to learn about Fort Charlotte's significance to the fur trade.

The objectives and methods of manipulating vegetation in this zone would be similar to those used in the primitive trail zone. There would be little emphasis on removing hazard trees and trail obstructions, but similar emphasis on removing dangerous fuels, suppressing invasive exotic plants, and restoring historic forest cover.

Maintenance / Park Operations Zone

No maintenance / park operations zone would be necessary in Alternative B because all facilities that would make up such a zone would be provided outside the monument boundary.

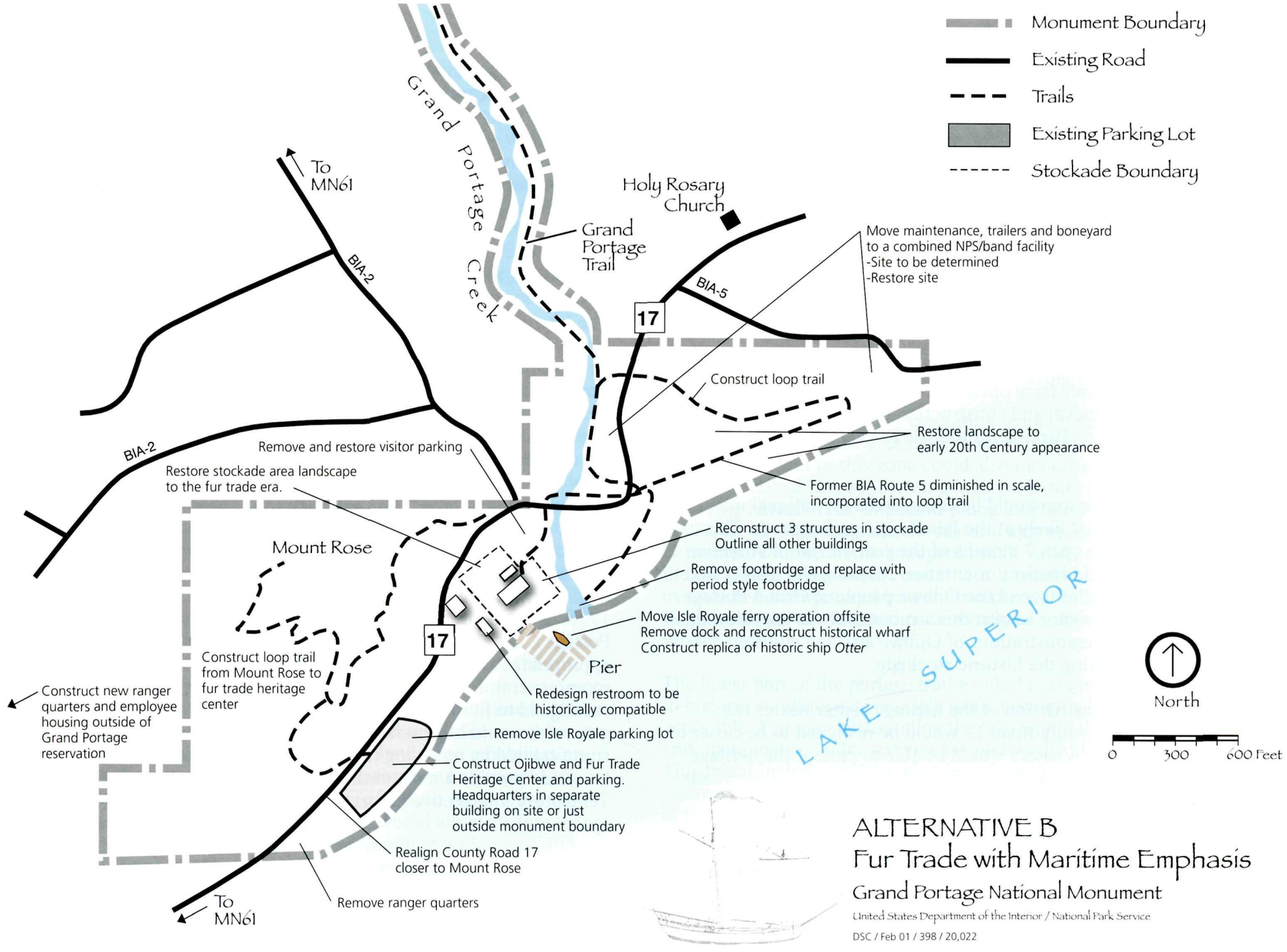
The Grand Portage National Monument headquarters would be built on Grand Portage Band land near the national monument, and it would be separate from the heritage center. Museum collections would be stored at the headquarters facility. The maintenance area would be a combined facility of the national monument and the Grand Portage Band of Minnesota Chippewa, which would be built on the Band lands just outside national monument boundaries. The shared facilities would be designed to meet the unique needs of both entities, such as covered vehicle storage, office space, service bays, shops, and materials storage (boneyard).



ALTERNATIVE B
Management Prescriptions (Zones)
Grand Portage National Monument

United States Department of the Interior / National Park Service

DSC /Dec 01 / 398 / 20,021A



ALTERNATIVE B
Fur Trade with Maritime Emphasis
Grand Portage National Monument

United States Department of the Interior / National Park Service

DSC / Feb 01 / 398 / 20,022

In alternative B, staff size would grow because of the increase in services and infrastructure. Further, because rental housing is scarce and expensive, the national monument must provide additional housing for seasonal and permanent staff. If possible, housing should be leased in Grand Portage, where employees can become part of the Reservation community. Or, if necessary, housing could be constructed on lands that could be transferred from the U.S. Forest Service (and thus off the Reservation). The NPS ranger quarters would be removed to an off-monument site, as well.

Visitor Services and Development Zone

The Isle Royale ferry operation would be moved offsite to allow for dock removal and construction of a more historically compatible wharf. Parking for the Isle Royale ferry also would be moved.

A heritage center would be constructed on national monument grounds, most likely at the Isle Royale parking area. This facility would be open 7 months of the year and would function as a place of information/orientation covering site history and the culture and heritage of the Ojibwe people of Grand Portage. During the visitor season this structure would provide exhibit space and demonstrations of Ojibwe arts and culture, complementing the historic stockade.

To allow construction of the heritage center nearer the shoreline, County Road 17 would be realigned to be closer to Mount Rose. Visitors would be able to park at the heritage center and walk to the stockade without crossing any roads. Removing all paving materials and replanting parts of the former roadbed with native plants would rehabilitate the landscape. Pedestrian trails and/or access roads for maintenance staff could be provided along the routes of the former roads. After the NPS ranger station and the parking lot were removed, the area would be replanted to create a more historic appearance, including a historic encampment area north of the stockade.

In Alternative B, the visitor services and development zone would occupy about 0.7 percent (5.1 acres) of the national monument.

Interpretive Historic Zone

The interpretive historic zone under alternative B would be larger than in Alternative A; it would occupy 2.4 percent of the national monument (17 acres). The zone would include lakefront areas to the east and west of the stockade and would focus on the stockade and the adjacent Lake Superior waterfront. A series of interpretive exhibits and activities along the waterfront would emphasize Grand Portage's maritime history.

Visitors would approach the stockade from the new heritage center to the west, entering through a bustle of maritime activity around the lakeside gate just as newly arrived fur traders would have done. The modern dock would be removed and replaced with a more accurate wharf for the period of the 1790s. The nearby wooden pedestrian bridge over Grand Portage Creek would be removed, and one more historically appropriate for the period would be reconstructed. A restroom/generator facility along the west palisade would be redesigned to fit into the historic setting, and the emergency generator would be removed to the heritage center. The open space created by removing the NPS ranger station and parking lot would provide a more authentic setting for the stockade. Temporary interpretive programs could be expanded into this space.

Replicas of small historic watercraft and associated activities such as fishing, cargo handling, warehousing, boat and canoe

building, and maritime transportation would populate Grand Portage's historic waterfront to illustrate the maritime relationship between site history and geography. Exhibits at the heritage center would support this emphasis, with additional interpretation of Lake Superior and connecting waterways as well as maritime aspects of the fur trade. Exhibits could include a diorama showing the fort, the dock, buildings, offshore supply ships and canoes, and a reconstructed North West Company historic vessel, *Otter*. Expanded canoe programming would include programs on canoe construction and offer visitors firsthand experience in using canoes along the waterfront and bay.

Alternative B would result in substantial improvement to the existing stockade. At least three additional structures would be reconstructed to create more interpretive exhibit space and to help visitors visualize the variety, scale, and number of structures in the stockade. A reconstructed manager's residence, a trading store, a carpenter/cooper's shop, and possibly other residential, shop, and warehouse structures would reflect the stockade's appearance and serve as a material interpretive focus for themes such as pioneering tradesmen and their craft, local trading between area Ojibwe and post clerks, and overwintering at the site. New structures would make it possible to offer more diversified stories to visitors. These selected structures, which provided essential support services to fur trade vessels, would enhance maritime interpretation of the site.

Structures not rebuilt could be "ghosted" or outlined on the ground. Reconstructions and ghosted structures would act as large-scale interpretive exhibits. A landscape rehabilitation based on sound research would incorporate a program of vegetation management to restore historic views and small-scale features as appropriate. This would allow visitors to experience a more authentic environment both inside and outside the palisade walls.

This alternative would result in only minor changes to the late 19th and early 20th century Grand Portage village site to the northeast of the stockade. While its associated landscape and archeological features would be more broadly interpreted through wayside exhibits, no attempts to reconstruct missing elements or remove remnant features would occur; archeological resources would be preserved in situ. The existing grove of pines would not be retained; instead, it would be allowed to evolve into a more naturalistic vegetative buffer to screen modern development. The mown character of the picnic area would be reduced, and scrub vegetation would be allowed to reestablish itself at the perimeter. Although it would remain a picnic area, special events encampment, and open space, it would provide a somewhat natural setting that would better represent the site's unkempt appearance during the fur trade.

The preservation of existing vegetation would help screen the reconstructed stockade area from modern intrusions. Vegetation management in this zone could also include selectively using prescribed fire, suppressing invasive exotic plants, removing hazard trees, and hand-piling and burning woody fuel in an effort to maintain the historic appearance of the area. Former BIA Route 5 (the boneyard road), which runs through the old village area, would remain, but it would be diminished in scale and incorporated into an interpretive walking trail. Vehicles might use the road occasionally as a special events service road.

The lower part of the portage trail would be restored as close to historic conditions as possible while becoming further accessible. The area surrounding the trail where the housing and maintenance buildings were located would be restored. This might include grading, planting of vegetation, and some excavation to install wayside exhibits. The lower restored part of the trail would be designed to offer visitors with time constraints a small example of what the portage was like.

Cost

The estimated cost to implement Alternative B would be $17–23 million. See appendix C for assumptions made.

ALTERNATIVE C: FUR TRADE AND OJIBWE HERITAGE

Concept

Alternative C would offer a multifaceted visitor experience with three areas of visitor focus. During the seven-month visitor season, the major point of interest in Grand Portage National Monument would be the stockade, with several new reconstructed structures and interpretive exhibits. A new facility, which would combine national monument headquarters, a museum complex, and a heritage center, would be built north of the intersection of MN 61 and County Road 17 in cooperation with the Grand Portage Band. The heritage center / headquarters, designed to attract travelers on MN 61, would be open year round. The third area of focus would be an Ojibwe Cultural Demonstration Shelter, which would tell visitors a contemporary story based in Ojibwe crafts and culture.

The headquarters / heritage center would act as a fee collection facility, a visitor orientation site, and a museum of the site's fur trade history. It would include exhibit space, educational materials sales area, and an archives-library for research and reflection. During an expanded summer season, visitors probably would spend minimal time here, with most of their time at the stockade or the Ojibwe Cultural Demonstration Shelter. However, the rest of the year, when the other two facilities were closed, the heritage center, with expanded interpretation, would constitute most of a visitor's experience in Grand Portage National Monument.

Working with the Grand Portage Band, the National Park Service would seek to reroute all of County Road 17 to eliminate traffic within the heart of the national monument. The Isle Royale parking lot would remain, but the stockade parking lot and the NPS ranger station would be removed to provide a more accurate setting for the stockade.

Alternative C would offer a greater degree of active interpretation than any of the other alternatives, encompassing pre-European historic, and contemporary activities. In keeping with this focus, the heritage center would increase its archival and library resource materials to meet public interest in Ojibwe and fur trade heritage.

The cooperative partnership between the Grand Portage Band of Minnesota Chippewa and the national monument would be strengthened with the location of the heritage center off MN 61 on lands leased from the Grand Portage Band of Minnesota Chippewa. A much smaller Ojibwe Cultural Demonstration Shelter would be on national monument lands. The working relationship with the Minnesota Historical Society in the areas of collections, archives, and historic preservation would continue. The partnerships with Minnesota's Grand Portage State Park and Departments of Tourism and Transportation would increase should they agree to participate in the construction or operation of the heritage center facility.

Measures that could be taken to achieve the alternative C goals are embodied in the management prescriptions presented below. These are shown on the accompanying maps and summarized in table 4, "Comparison of Alternatives."

Primitive Trail Zone

The primitive trail zone would encompass approximately 1.4 percent of the national monument (9.8 acres). This zone would continue to be minimally maintained for visitor safety and use, with a continuing semblance of its historic appearance. There would be no new trails. Any interpretation of features within

this zone would occur through brochures or interpretive ranger talks at the stockade. Archeological features would be documented and protected. Wheeled or motorized access to this zone would continue to be strictly limited.

The upper part of the portage trail would enable visitors to sense the hard-laboring and spirited experience of the voyageurs and the difficulty of using the trail.

In an effort to restore historic forest cover, maintain safety, and prevent dangerous levels of fuel loading, management practices in this zone could include selective use of prescribed fire, hand piling and burning of woody fuel, suppressing invasive exotic plants, removing hazard trees, and other manipulation of vegetation.

Recreation Zone

The recreation zone would occupy about 0.2 percent (1.5 acres) of the national monument. The Fort Charlotte campsites would be upgraded to offer a primitive, yet more aesthetically pleasing, camping experience, but no new Fort Charlotte campsites would be added. Maintenance would focus on keeping the camping area, a part of the historic voyageurs' highway, attractive. Several new wayside exhibits or brochures would enable campers and other visitors to learn about the significance of Fort Charlotte to the fur trade.

The 0.5-mile Mount Rose trail, with its steep, paved surface, handrails, switchbacks, and overlooks, would be maintained in its present condition. Archeological resources would be protected in the recreation zone, which would retain its rugged character reminiscent of the historic period.

A brochure would be designed to give general information about the Grand Portage National Monument and its history to visitors coming by canoe out of the Boundary Waters Canoe Area. The brochure could also give logistical information needed by canoe travelers.

Resources Trust Zone

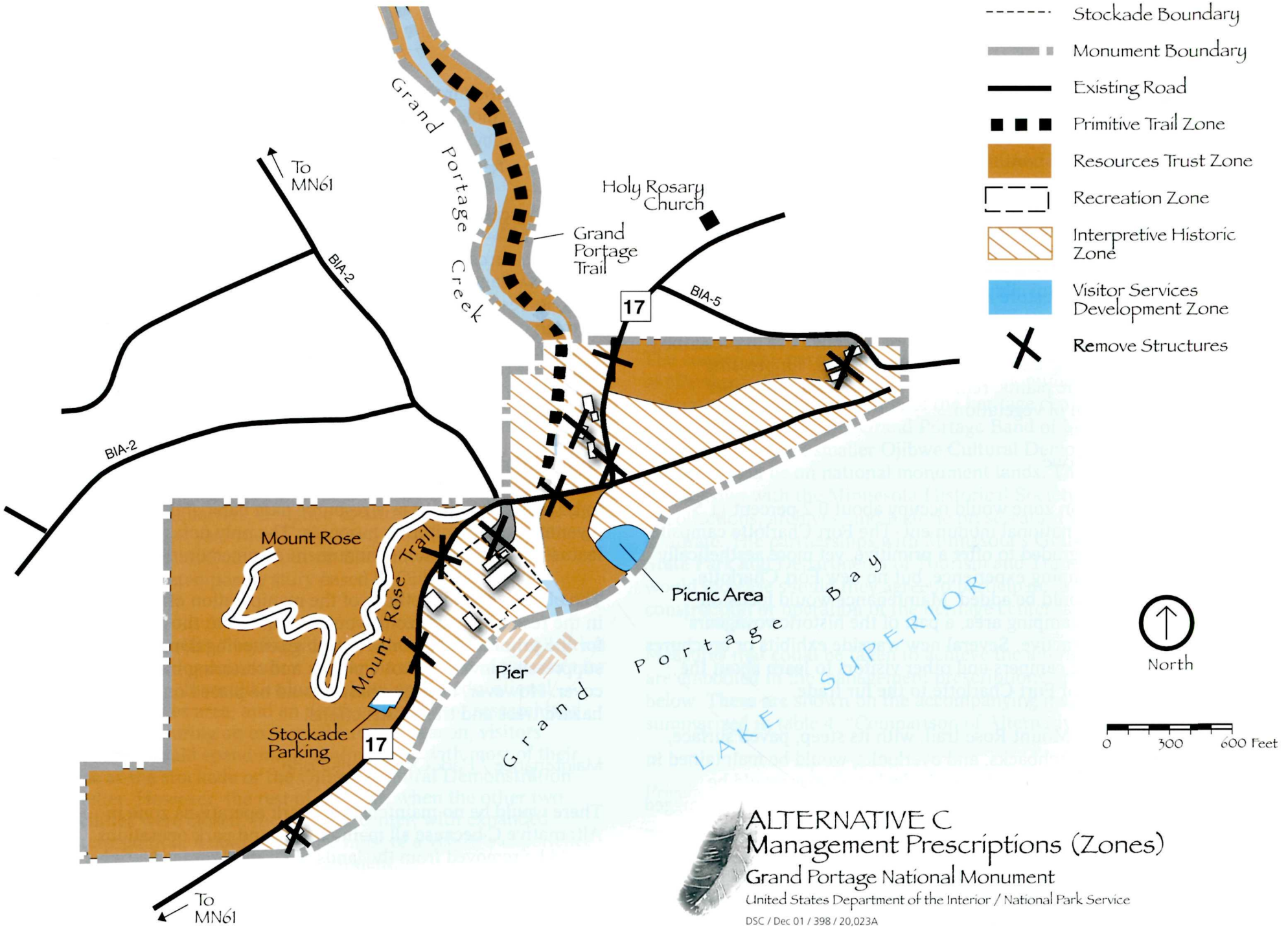
The resources trust zone would be primarily an "archeological data bank" — an area managed to protect unexcavated archeological resources. However, this zone would also be used to protect wetlands or areas containing rare species habitat. As such, its resources would be interpreted only indirectly, through brochures or NPS ranger talks. Although visitors would not be prohibited in this zone, there would be little reason for them to seek it out. No trails would be developed in this zone. The resources trust zone would encompass about 94.8 percent (672.8 acres) of the national monument.

Historic Fort Charlotte would continue to be managed as an archeological landscape. Subsurface features would continue to be preserved in situ as a resource data bank and for inventory and monitoring purposes. The only notable built feature is a historic stone monument commemorating the site.

The objectives and methods of the manipulation of vegetation in the resources trust zone would be similar to those described for the primitive trail zone regarding removing dangerous fuels, suppressing invasive exotic plants, and restoring historic forest cover. However, little emphasis would be placed on removing hazard trees and trail obstructions.

Maintenance / Park Operations Zone

There would be no maintenance / park operations zone in Alternative C because all maintenance and park operations would be removed from the lands of Grand Portage National Monument.



ALTERNATIVE C
Management Prescriptions (Zones)

Grand Portage National Monument

United States Department of the Interior / National Park Service

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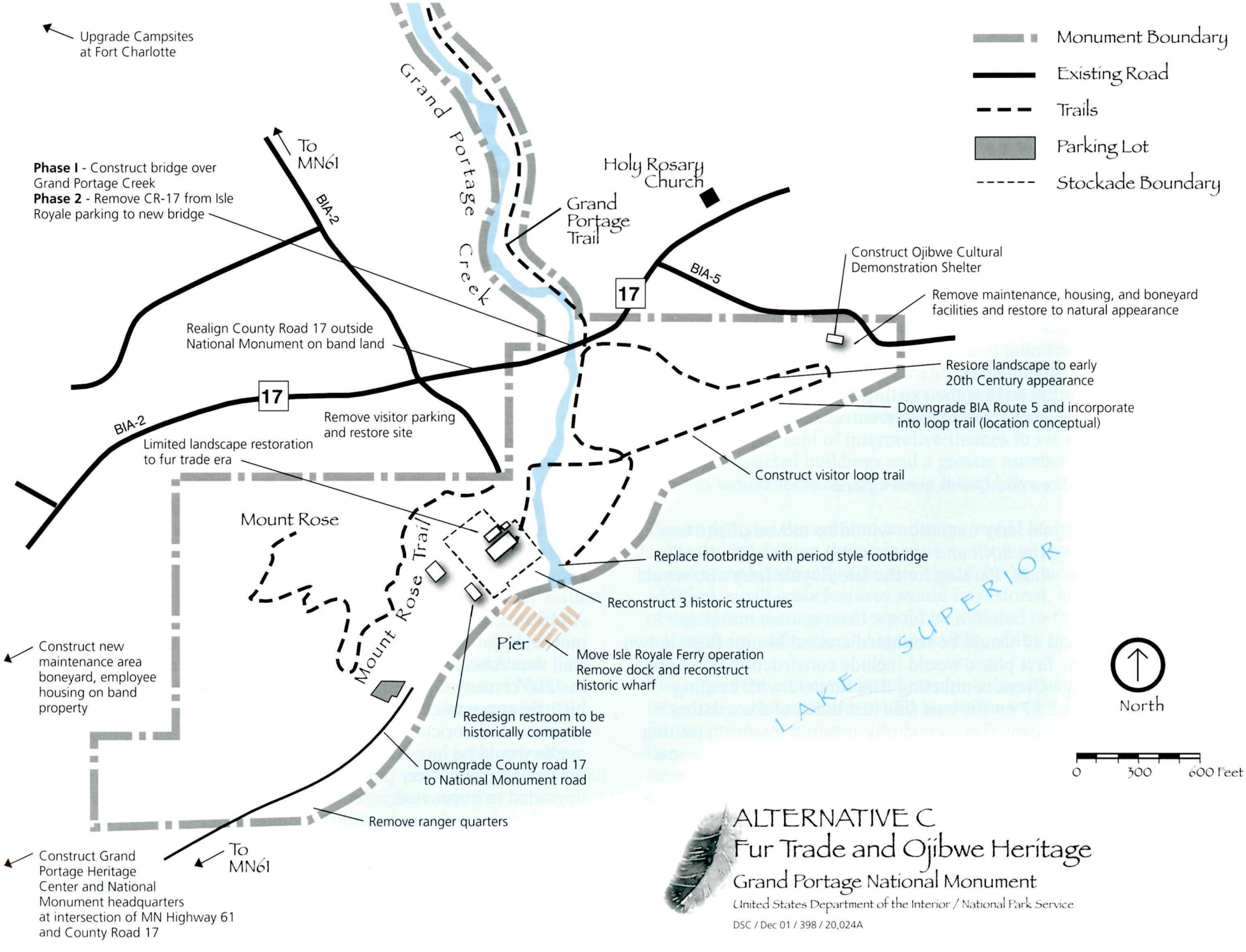


ALTERNATIVE C
Fur Trade and Ojibwe Heritage
Grand Portage National Monument

United States Department of the Interior / National Park Service

DSC / Dec 01 / 398 / 20,024A

The national monument headquarters, which would be combined with the heritage center, would be built on lands of the Grand Portage Band of Minnesota Chippewa at the intersection of MN 61 and County Road 17. Museum collections also would be stored in this building.

Maintenance operations and employee housing would be outside the national monument boundary, on lands owned by the Grand Portage Band, possibly on the flanks of Mount Rose. In this alternative, staff size would grow because of the increase in services and infrastructure. Further, because rental housing is scarce and expensive, the national monument would provide additional housing in Grand Portage for seasonal and permanent staff. The maintenance boneyard would also move to this location so that the existing site could be restored. The NPS ranger quarters at the main entrance would be removed.

Visitor Services and Development Zone

The Isle Royale ferry operation would be moved offsite to allow for removing the dock and constructing a more historically compatible wharf. Parking for the Isle Royale ferry also would be moved.

County Road 17 would be realigned around Mount Rose in two phases. The first phase would include construction of a bridge over Portage Creek connecting BIA Route 2 with existing County Road 17 on the east side just north of the existing maintenance area. The second phase would involve rerouting of County Road 17 around Mount Rose west of the national monument to connect with BIA 2. From the national monument's west boundary to the current Isle Royale parking area, County Road 17 would be downgraded to a road for natopma; monument use only. The main visitor entrance to the stockade would be through the lake gate rather than the present gate near the parking lot. The parking area would accommodate visitor parking during times of low visitation; at other times, a shuttle service from the heritage center to the stockade could be implemented. The asphalt road surface would be removed, leaving a universally accessible surface of mixed soil and gravel. The road could also be narrowed to approximately 12 feet to permit the passage of NPS vehicles. The road edge would be planted with native grasses and forbs as part of the overall rehabilitation of the landscape north of the stockade. The visitor services and development zone would occupy about 1.2 percent (0.2 acre) of the national monument.

Interpretive Historic Zone

In Alternative C the interpretive historic zone, consisting of the stockade, its immediate surroundings, and a portion of the 20th century Grand Portage Village site, would occupy 3.5 percent (24.7 acres) of the national monument. Efforts in this zone would be focused on improving the historic accuracy of the stockade setting to better represent its character during the fur trade era. Development east of Portage Creek would be limited so that the historic and contemporary Grand Portage community could be fully interpreted.

After the housing area and maintenance buildings were removed, approximately 600 feet of the lower part of the portage trail would become a portion of a loop trail 0.75 miles long to the 20th century Ojibwe village site. It would be restored to its historic appearance and managed to give visitors a sense of the vegetation historically present along the portage. Interpretive media would be increased to explain the portage to more hikers along the lower portage. Trail maintenance would be upgraded to improve access. This might include grading to provide universal access, planting of vegetation, and some excavation to install wayside exhibits.

An accessible interpretive loop trail, which would connect the stockade, the portage trail, and the 20th century village site, would lead to resources related to the Grand Portage community. Wayside exhibits would be added to the village site to interpret the remnant landscape features, such as historic plant cultivars, the Civilian Conservation Corps (CCC) bridge and pine grove, and numerous archeological resources. All aboveground and archeological features would be protected through a program of active maintenance. The area west of the stockade would continue to be used for historic cultural demonstrations, and a small shelter would be added at the village site for contemporary cultural demonstrations. With the permission of the Grand Portage Band, the trail could be extended into the community to include the Holy Rosary Church and other significant landmarks in the contemporary village.

The stone bridge would remain as a walkway. The boneyard road (old BIA Route 5) would be downgraded to a pathway leading to the Ojibwe Cultural Demonstration Shelter. Visitor parking in front of the stockade and the existing maintenance/housing area would be removed so that the landscape could be restored.

Nonhistoric roads, the parking lot, and the NPS ranger station would be removed, and that area would be rehabilitated to provide an open, meadow-like setting for the stockade. This open space could be used for interpretive programs and exhibits such as the Ojibwe Village, the Ojibwe and North West Company gardens, and the voyaguer encampment.

The Isle Royale dock would be removed and replaced with a wharf more appropriate to the historic period. Replicated small craft from the fur trade era, including bateaux, mackinaw boats, and canoes, would be exhibited near the new wharf or in the stockade. The siding on the restroom/generator facility would be replaced to be more visually congruent with the historic setting, and the footbridge over Portage Creek would be replaced with one more historically appropriate. The National Park Service would offer information about commercial and subsistence fishing, canoe building and paddling programs, and historic small boats used at the site, such as bateaux and mackinaw boats.

Alternative C, like Alternative B, would substantially improve the historic appearance and interpretive value of the existing stockade. Three additional structures — a fur trading store, a carpenter/cooper's shop, and interpreters' and guides' quarters — would better reflect the stockade's original crowded appearance and provide a material interpretive focus for themes such as aboriginal, geographical and technological knowledge, local trading between Ojibwe and post clerks, continental exploration, and craftsmanship. New structures would make it possible to offer more diversified, less elitist stories and a richer complement of interpretive themes to visitors. These newly constructed buildings and a greater number of ghosted features would serve as large-scale interpretive exhibits.

The integrity of the cultural landscape would be further enhanced by shifting the main visitor entrance from the north to the more historically accurate "lake" (west) side. In addition, small-scale features would be restored, and a program of vegetation management would be initiated to make the setting more authentic and restore views of the stockade.

The objectives and methods of manipulating vegetation in the interpretive historic zone would be similar to those described for the primitive trail zone, with greater emphasis on removing hazard trees, dangerous fuels, and trail obstructions, suppressing invasive exotic plants, and restoring historic forest cover.

As one stop along the loop interpretive trail, development at the village site would be upgraded. With the cooperation of the Grand Portage Band, the trail could extend to sites within the

contemporary village. Seasonal cultural demonstrations would be held at the site, with year-round interpretations of Ojibwe lifeways taking place at the heritage center and within the village when possible.

After the housing and maintenance areas were removed from the southern end, the portion of the portage trail within the primitive trail zone that runs through the current housing/maintenance area, would be partially restored to its historic appearance. Vegetation would be added to recreate the corridor, and the alignment would be restored, but the surface would be upgraded to allow universal access. Interpretation of the portage would be expanded with revised or new wayside exhibits set along the trail.

Cost

The estimated cost of Alternative C would be more than $17 million. See appendix C for assumptions made.

ALTERNATIVE D: HERITAGE CENTER FOCUS

Concept

A large multifunctional Grand Portage heritage center and national monument headquarters would be constructed north of the intersection of MN 61 and County Road 17. It would be designed to attract visitors from the highway and provide a multimedia interpretive/educational glimpse into the history of the Grand Portage and its inhabitants. The heritage center would feature museum exhibits, live demonstrations of Ojibwe crafts, films on various aspects of life at Grand Portage, interactive displays, sales of educational materials, access to archival and library resources via computer terminals, and interpretive talks. Visitors would be able to gain a comprehensive understanding of the site before reaching the stockade, where costumed interpreters would supplement and personalize the visitor experience. No additional structures would be rebuilt. During the five months when the stockade was closed, visitors still would be able to gain a comprehensive understanding of Grand Portage National Monument.

All maintenance and operations facilities would be removed from the national monument. Only a small parking area for visitors to the stockade would remain.

On the northeast side of the national monument, BIA route 2 on the north side of Mount Rose would be connected to County Road 17 by a bridge over the portage and Portage Creek. This would make it possible to vacate the part of County Road 17 from the CCC bridge just east of the stockade, north and east to Holy Rosary church immediately outside the northeast boundary, and use it as a trail.

The cooperative partnership between the Grand Portage Band of Minnesota Chippewa and the national monument would be strengthened by locating the heritage center on lands leased from the Grand Portage Band. The working relationship with the Minnesota Historical Society in the areas of collections, archives, and historic preservation would continue. The partnerships with Minnesota's Grand Portage State Park and Departments of Tourism and Transportation would increase should they agree to participate in the construction or operation of the heritage center facility.

Measures that could be taken to achieve the alternative D goals are embodied in the management prescriptions presented below. These are shown on the accompanying maps and summarized in table 4, "Comparison of Alternatives" at the end of this chapter.

Primitive Trail Zone

The primitive trail zone would encompass about 1.4 percent of the national monument (8.8 acres) under Alternative D. The zone would be minimally maintained for visitor safety and use while still having a semblance of its historic appearance. No new trails would be added. Any interpretation of features in this zone would be accomplished through brochures or interpretive NPS ranger talks at the stockade or the Grand Portage heritage center. Archeological features would be identified and protected. Wheeled or motorized access across this zone would be strictly limited to designated crossings. The portage trail would enable visitors to gain a sense of the wilderness experience of the voyageurs and the difficulty of using this area in that time.

Recreation Zone

The recreation zone would occupy approximately 0.2 percent (1.5 acres) of the national monument. The Fort Charlotte campsites would be maintained to provide an aesthetically pleasing yet primitive camping experience. The 0.5-mile Mount Rose trail, relatively steep and paved, with switchbacks, handrails, and overlooks, would be maintained in its present condition.

Maintenance would focus on keeping the camping area attractive. Archeological resources would be protected, and the site would retain its rugged character reminiscent of the historic period.

Resources Trust Zone

In alternative D the resources trust zone would be primarily an "archeological data bank" — an area managed to protect unexcavated archeological resources. However, this zone would also be used to protect wetlands or areas containing rare species habitat. As such, its resources would be interpreted only indirectly, through brochures or NPS ranger talks. Although visitors would not be prohibited in this zone, there would be little reason for them to seek it out. No trails would be developed in this zone. The resources trust zone would encompass about 96.8 percent (687.4 acres) of the national monument.

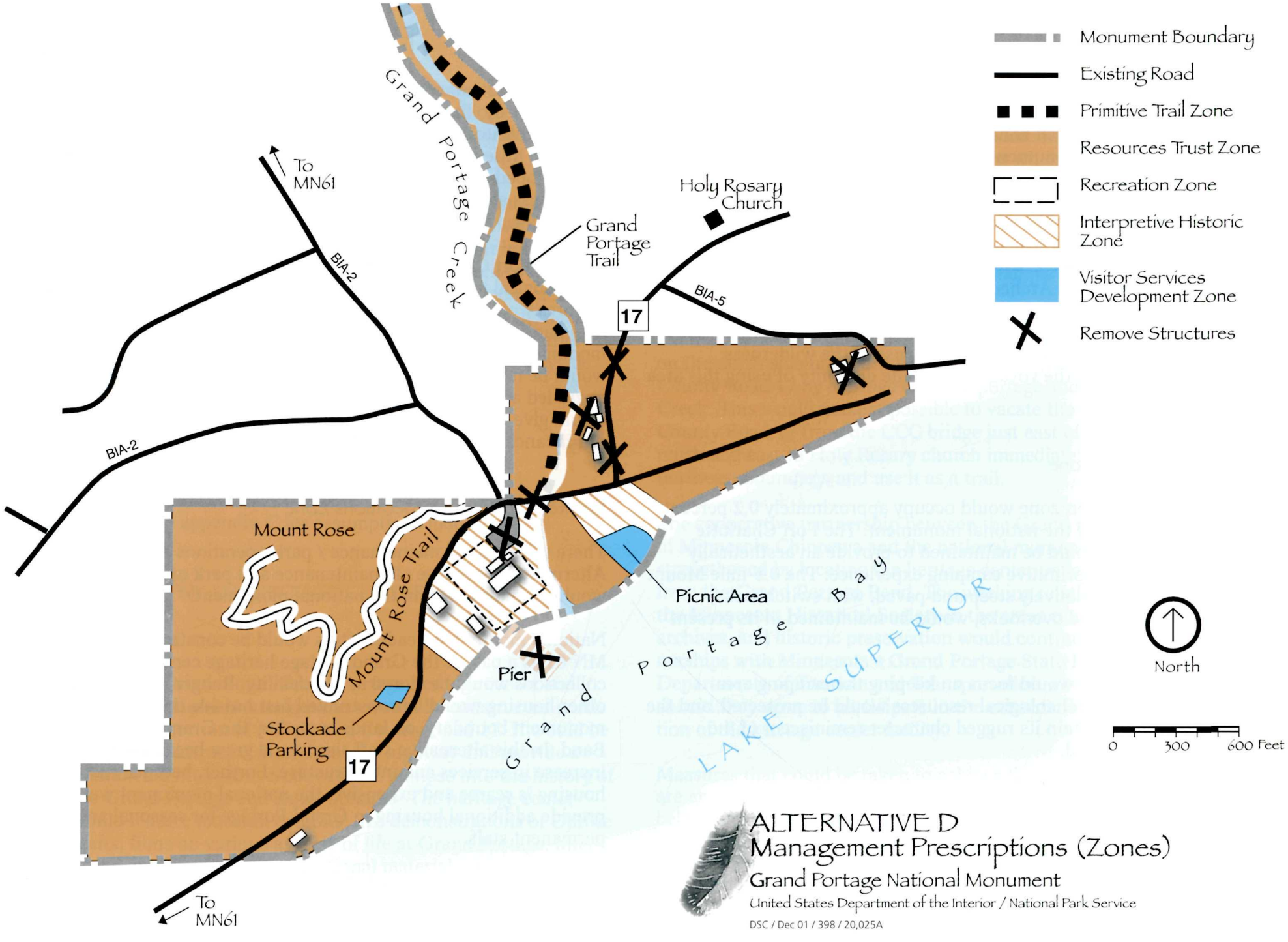
Historic Fort Charlotte would continue to be managed as an archeological landscape under Alternative D. Subsurface features would continue to be preserved in situ as a resource data bank. The only landscape feature is a historic stone monument commemorating the site. The maintenance focus would be mainly on keeping the site clean, with slightly upgraded access and very few new wayside exhibits. This would give visitors an opportunity to learn about the significance of Fort Charlotte to the fur trade.

Maintenance / Park Operations Zone

There would be no maintenance / park operations zone in Alternative D because all maintenance and park operations would be removed from the national monument.

National monument headquarters would be constructed along MN 61 as a part of the Grand Portage heritage center. Museum collections would be stored in that facility. Ranger quarters and other housing would be constructed just outside the national monument boundary, on lands owned by the Grand Portage Band. In this alternative staff size would grow because of the increase in services and infrastructure. Further, because rental housing is scarce and expensive, the national monument would provide additional housing in Grand Portage for seasonal and permanent staff.

The maintenance area would be outside the national monument boundary, on lands owned by the Grand Portage Band, possibly on the flanks of Mount Rose. The maintenance



ALTERNATIVE D
Management Prescriptions (Zones)
Grand Portage National Monument

United States Department of the Interior / National Park Service

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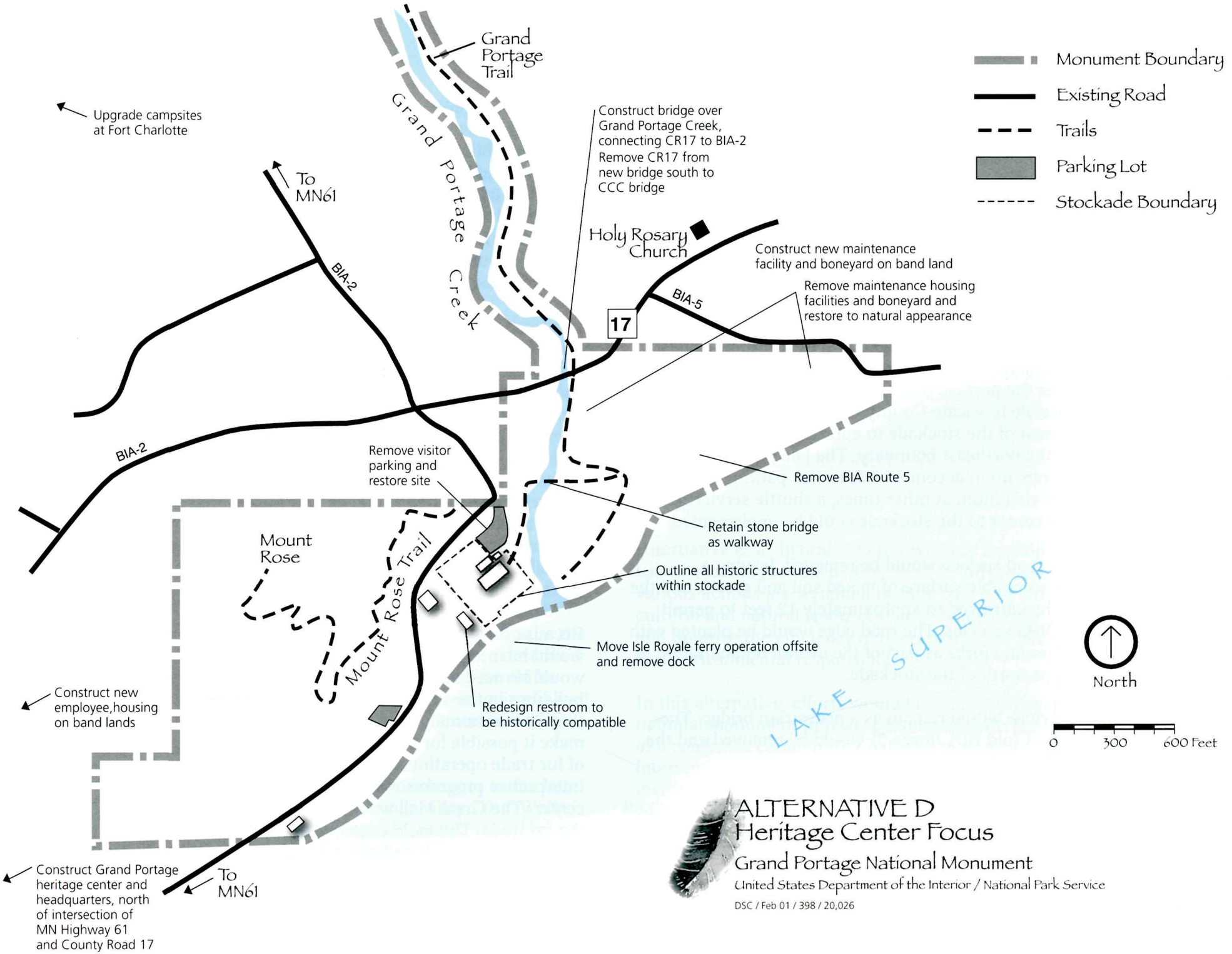


ALTERNATIVE D
Heritage Center Focus
Grand Portage National Monument

United States Department of the Interior / National Park Service

DSC / Feb 01 / 398 / 20,026

boneyard also would be moved to this location so that the existing site could be restored. The NPS ranger quarters at the main entrance would be removed.

Visitor Services and Development Zone

Parking for the Isle Royale ferry would be moved offsite to a new location, and the existing site would be redesigned for stockade parking.

County Road 17 would be realigned on the northeast side of the national monument to connect with BIA Route 2 by way of a bridge over the portage trail and Portage Creek. This would make it possible to vacate County Road 17 from the CCC bridge just east of the stockade to approximately Holy Rosary Church on the northeast boundary. The Isle Royale parking area would remain to accommodate visitor parking during times of low visitation; at other times, a shuttle service from the heritage center to the stockade could be implemented.

The asphalt road surface would be removed, leaving a universally accessible surface of mixed soil and gravel, and the road could be narrowed to approximately 12 feet to permit passage of NPS vehicles. The road edge would be planted with native grasses and forbs as part of the overall rehabilitation of the landscape north of the stockade.

The stone bridge would remain as a pedestrian bridge. The boneyard road (old BIA Route 5) would be removed and the landscape restored.

The visitor services and development zone would occupy about 0.2 percent (1.2 acres) of the national monument.

Interpretive Historic Zone

The interpretive historic zone, which would be made up of the stockade and its immediate surroundings, would occupy 1.4 percent (10.1 acres) of the national monument. Because the focus of Alternative D would be maximizing interpretive programs in a new visitor-oriented facility, few changes would be made to the stockade, the surrounding landscape, or the former Grand Portage village site.

Landscape restoration, which would be limited to areas where roads or park operations, such as the maintenance shop, had been removed, would involve removing all paving materials and replanting portions of the roadbed with native plants. The former roads could become pedestrian trails or access roads for the maintenance staff.

Visitor parking in front of the stockade and the existing maintenance/housing area would be removed so that the landscape could be restored. To enable everyone to have an experience of the historic portage, a loop trail accessible to people with disabilities would be created from the stockade a short distance up the portage trail.

Because contemporary Ojibwe culture and maritime history would be interpreted at the new heritage center, few changes would be needed in the stockade or the village site. Sixteen buildings in the stockade area would be "ghosted," either three-dimensionally or by outlines on the ground. This would make it possible for visitors to have a sense of the historic scale of fur trade operations. Visitor contact, sales, and additional interpretive programs would be shifted to the new heritage center. The Great Hall would be used solely for interpreting the fur trade. The main entrance would be shifted from the north to the west (lakeshore gate), and the demonstration shelter west of the stockade would be enlarged to better accommodate the voyageur encampment and the Ojibwe village.

The siding on the restroom/generator facility would be replaced to be more visually congruent with the historic setting. Extant features from the 20th century village would be more broadly interpreted through wayside exhibits. No attempt would be made to reconstruct missing elements or remove remnant features. Aboveground and archeological resources would be preserved in situ. The current picnic area and open space would be retained, as would contemporary features such as the bridge over Portage Creek.

The Isle Royale ferry operation would be moved offsite to allow for dock removal and construction of a more historically compatible wharf. After the housing area and maintenance buildings were removed, the lower part of the portage trail would become a portion of a loop trail to the 20th century Ojibwe village site. The area would be restored to its historic appearance and managed to give visitors a sense of the vegetation historically present along the portage. Interpretive media would be increased to explain the portage to more hikers along the lower portage. Trail maintenance would be upgraded to improve access. This might include grading, planting of vegetation, and some excavation to install wayside exhibits.

The objectives and methods of manipulating vegetation in the interpretive historic zone would be similar to those described for the primitive trail zone, but greater emphasis would be placed on suppressing invasive exotic plants, removing hazard trees, dangerous fuels, and trail obstructions, and restoring historic forest cover.

Alternative D would result in only minor changes to the late 19th and early 20th century Grand Portage village site. While its associated landscape and archeological features would be more broadly interpreted through wayside exhibits, no attempts would be made to reconstruct missing elements or remove remnant features, and archeological resources would be preserved in situ. The site would continue to function as a picnic area and open space. Visitors would be able to enjoy interpretive programs and cultural demonstrations at the heritage center. The National Park Service would offer information and programming about commercial and subsistence fishing, canoe building and paddling programs, and historic small boats used at the site, such as bateaux and mackinaw boats.

Cost

The estimated cost for Alternative D would be more than $12 million. See appendix C for assumptions made.

ALTERNATIVE E: THE PREFERRED ALTERNATIVE

Concept

Alternative E, a "hybrid" alternative, was developed with the use of a technique called "Choosing by Advantages," in which various actions are weighted by how well they would protect cultural and natural resources, provide for visitor enjoyment, and improve the efficiency of operations, cost effectiveness, and environmental responsibility.

In this alternative, efforts would be made to integrate the national monument into the community with the development of a combined community / national monument gateway at the intersection of MN 61 and County Road 17. This would be an inviting landscaped, redesigned intersection that would welcome visitors to the community of Grand Portage, the national monument, and the Grand Portage Casino. Signs would effectively outline visitor choices in the community.

Once past the gateway, County Road 17 would be rerouted around Mount Rose to connect to BIA Route 2, as in Alternative C. A new year-round heritage center would be built, larger than that in Alternative B but smaller than in Alternatives C and D. The center would serve as an introduction to the national monument and would take modern functions out of the stockade. It would include exhibition space, educational materials, sales, and an introductory film. Its archival and library resource materials would be increased to meet public interest in Ojibwe and fur trade heritage. An Ojibwe Cultural Demonstration Shelter similar to that in alternative C would help to explain the related but temporally more complex story of the Ojibwe heritage. All other modern intrusions on the landscape would be removed: the maintenance area, employee housing, and most roads.

Primitive Trail Zone

The primitive trail zone in Alternative E would encompass about 1.4 percent (9.8 acres) of the national monument. The zone would be minimally maintained for visitor safety and use but would continue to have a semblance of its historic appearance. There would be no new trails. Any interpretation of features in this zone would be carried out through brochures or interpretive NPS ranger talks at the stockade. Archeological features would be identified and protected. Wheeled or motorized access to this zone would be strictly limited.

The goal of the primitive trail zone would be to allow visitors to enjoy the experience of walking in the footsteps of the voyageurs. The portage would remain a fairly primitive trail with minimal interpretation at either end. In an effort to restore historic forest cover, maintain safety, and prevent dangerous levels of fuel loading, management practices in this zone could include selective use of prescribed fire, hand piling and burning of woody fuel, suppressing invasive exotic plants, removing hazard trees, and other manipulation of vegetation.

No attempt would be made to restore the prehistoric forest condition, but some areas might be targeted to improve the conditions and integrity of both natural and cultural resources.

Recreation Zone

The recreation zone would occupy about 0.2 percent (1.5 acres) of the national monument. The Fort Charlotte campsites would be upgraded to offer a primitive, yet more aesthetically pleasing, camping experience, but no new Fort Charlotte campsites would be added. The 0.5-mile Mount Rose trail, a relatively steep, paved walkway with switchbacks, handrails, and overlooks, would become a loop trail connecting to the new heritage center.

A brochure would be designed to give general information about the Grand Portage National Monument and its history to visitors coming by canoe out of the Boundary Waters Canoe Area. The brochure could also give logistical information needed by canoe travelers. Archeological resources would be protected in the recreation zone, which would retain its rugged character reminiscent of the historic period.

Resources Trust Zone

The resources trust zone would be primarily an "archeological data bank" — an area managed to protect unexcavated archeological resources. However, this zone would also be used to protect wetlands or areas containing rare species habitat. As such, its resources would be interpreted only indirectly, through brochures or NPS ranger talks. Although visitors would not be prohibited in this zone, there would be little

reason for them to seek it out. No trails would be developed in this zone. The resources trust zone would encompass about 94.9 percent (673.5 acres) of the national monument.

Historic Fort Charlotte would continue to be managed as an archeological landscape under alternative E. Subsurface features would continue to be preserved in situ as a resource data bank. The only landscape feature is a historic stone monument commemorating the site. The maintenance focus would be mainly on keeping the site attractive and preserving it as part of the historic voyageurs' highway.

The objectives and methods of manipulating vegetation in the resources trust zone would be similar to those described for the primitive trail zone regarding removing dangerous fuels, suppressing invasive exotic plants, and restoring historic forest cover. However, little emphasis would be placed on removing hazard trees and trail obstructions.

Maintenance / Park Operations Zone

There would be no maintenance / park operations zone because all such facilities would be constructed outside the national monument boundaries. The maintenance area would be a combined facility of the national monument and the Grand Portage Band, which would be built on Band lands just outside the national monument boundaries. The shared facilities would be designed to meet the unique needs of both entities, such as covered vehicle storage, office space, service bays, shops, and materials storage (boneyard).

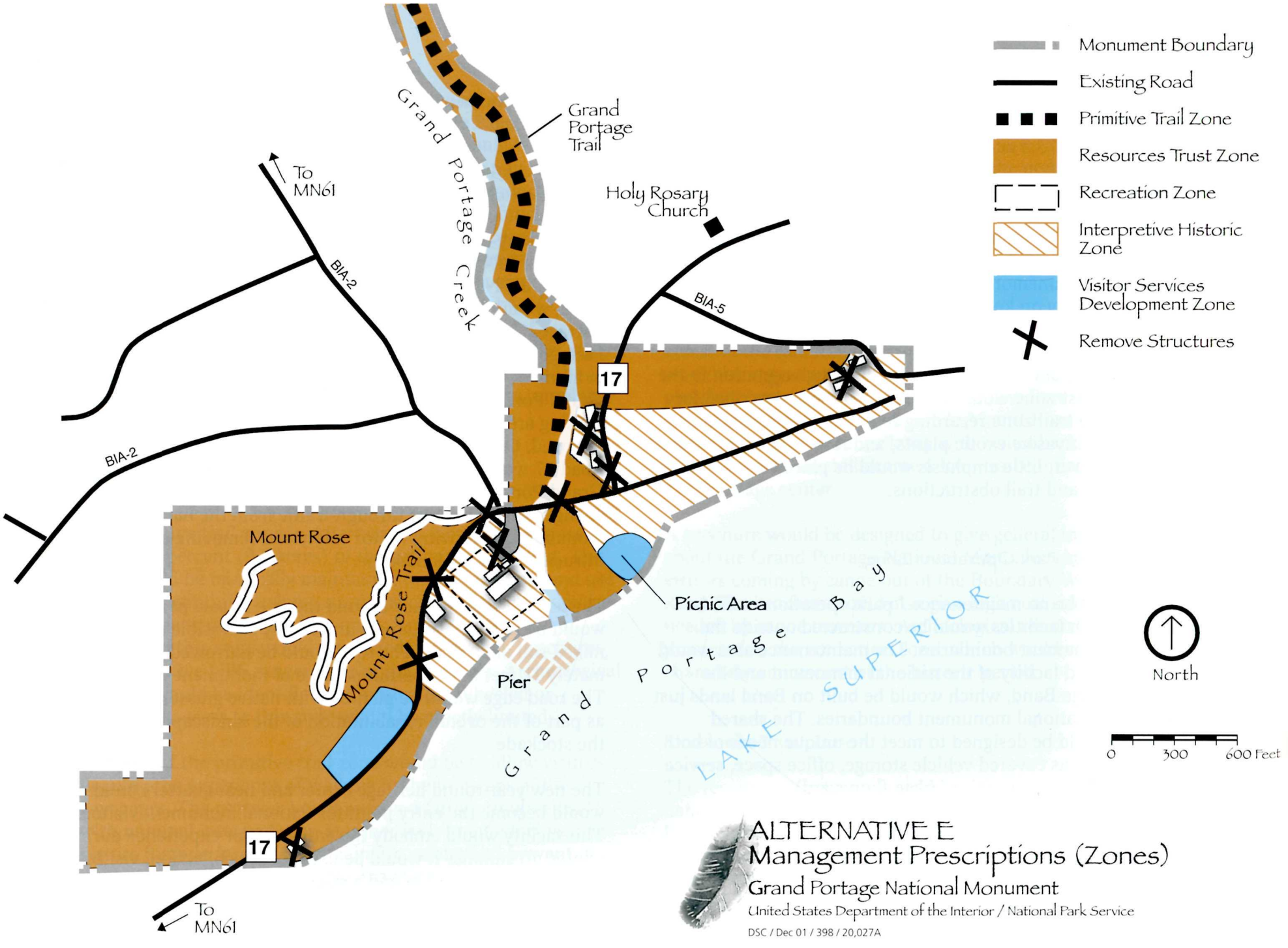
In this alternative, staff size would grow because of the increase in services and infrastructure. Further, because rental housing is scarce and expensive, housing for seasonal and permanent staff would be leased or constructed outside the national monument boundary, on lands owned by the Grand Portage Band.

Visitor Services and Development Zone

The gateway to the community of Grand Portage at the intersection of MN 61 and County Road 17, which would be developed by the National Park Service and the Grand Portage Band, would introduce visitors to the community of Grand Portage, Grand Portage National Monument, and the Grand Portage Casino. The existing County Road 17 within the monument would become a national monument road to a new Grand Portage heritage center at the current Isle Royale parking area. The road beyond the parking area would be removed. On the east side of the national monument, County Road 17 would be connected to BIA Route 2 via a bridge over Grand Portage Creek and the historic portage. Together, these changes would remove through-traffic from the national monument, improving visitor safety and removing a modern intrusion from the landscape.

The asphalt road surface beyond the Isle Royale parking area would be removed, leaving a universally accessible surface of mixed soil and gravel. The road could be narrowed to approximately 12 feet to the permit passage of monument vehicles. The road edge would be planted with native grasses and forbs as part of the overall rehabilitation of the landscape north of the stockade.

The new year-round heritage center and headquarters building would become the entry point for national monument visitors. This facility would embody the entire visitor experience during winter. In summer it would be used for fee collection, visitor orientation, a museum, and a sales facility, with visitors quickly moving on to the stockade.



ALTERNATIVE E
Management Prescriptions (Zones)
Grand Portage National Monument

United States Department of the Interior / National Park Service

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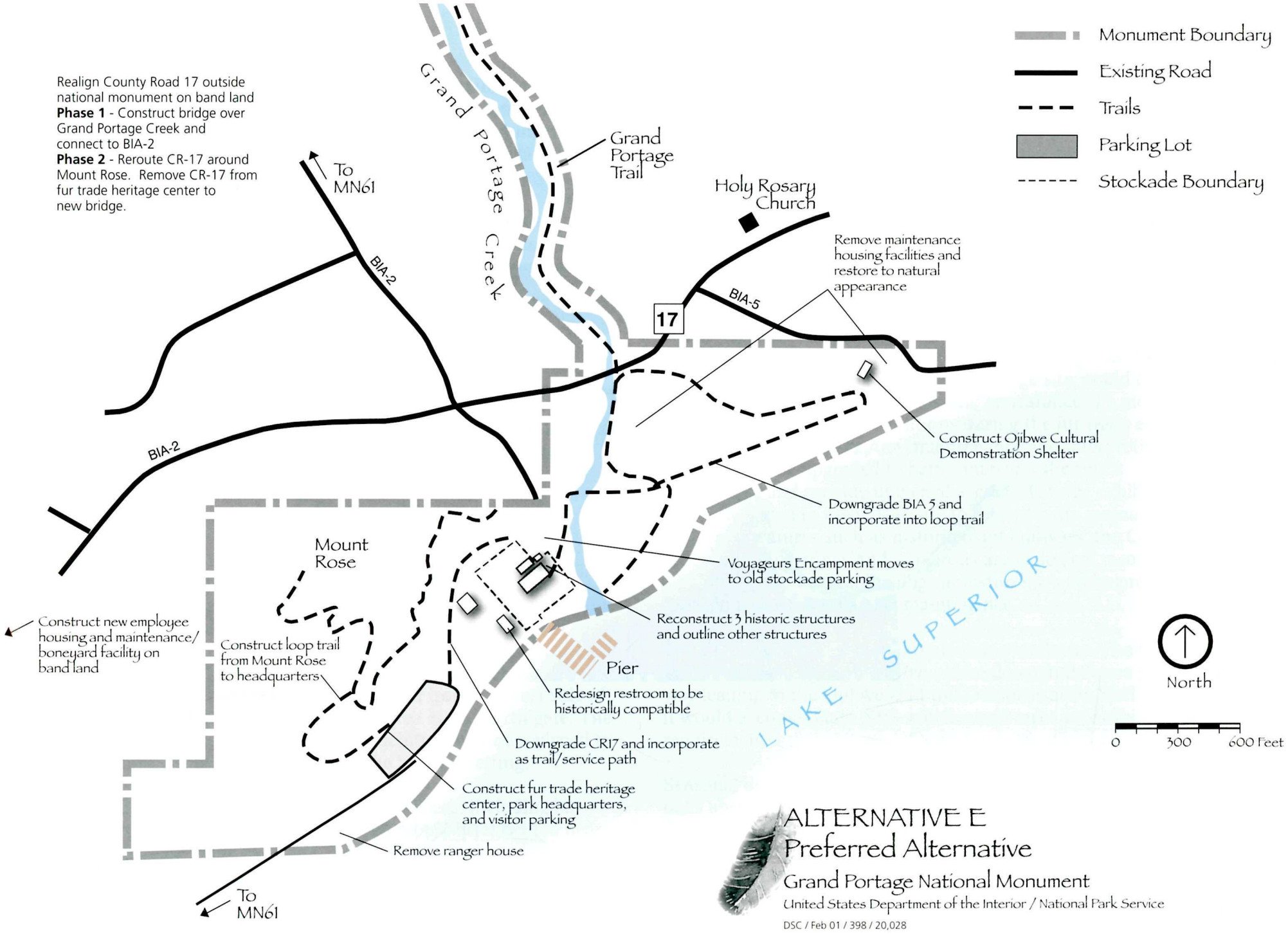
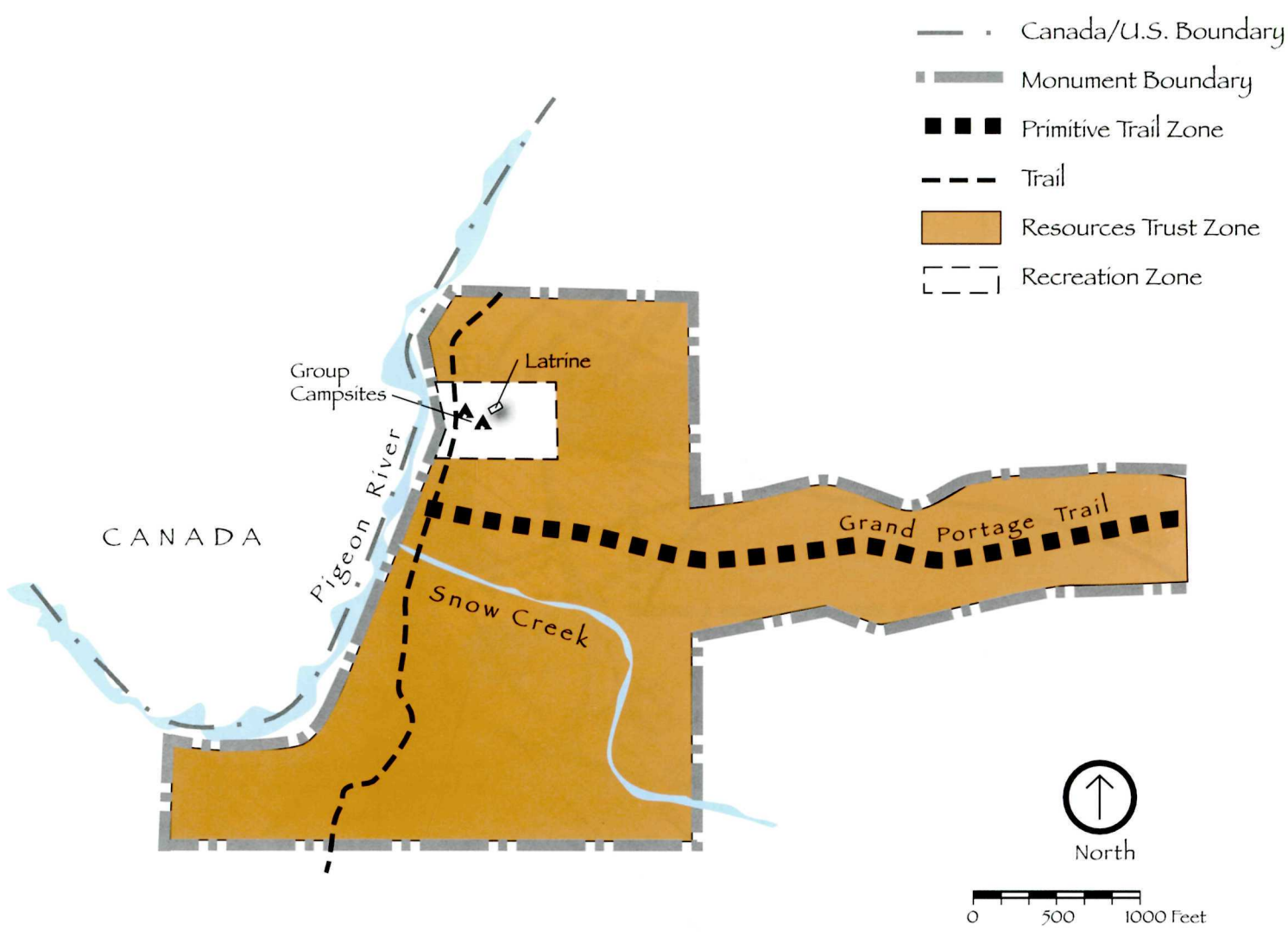

Realign County Road 17 outside national monument on band land
Phase 1 - Construct bridge over Grand Portage Creek and connect to BIA-2
Phase 2 - Reroute CR-17 around Mount Rose. Remove CR-17 from fur trade heritage center to new bridge.
Monument Boundary
Existing Road
Trails
Parking Lot
Stockade Boundary
Grand Portage Creek
Grand Portage Trail
To MN61
BIA-2
BIA-2
BIA-5
17
Holy Rosary Church
Remove maintenance housing facilities and restore to natural appearance
Construct Ojibwe Cultural Demonstration Shelter
Downgrade BIA 5 and incorporate into loop trail
Mount Rose
Voyageurs Encampment moves to old stockade parking
Reconstruct 3 historic structures and outline other structures
Construct new employee housing and maintenance/ boneyard facility on band land
Construct loop trail from Mount Rose to headquarters
Pier
Redesign restroom to be historically compatible
Downgrade CR17 and incorporate as trail/service path
Construct fur trade heritage center, park headquarters, and visitor parking
Remove ranger house
To MN61
LAKE SUPERIOR
North
0
300
600 Feet
ALTERNATIVE E
Preferred Alternative
Grand Portage National Monument
United States Department of the Interior / National Park Service
DSC / Feb 01 / 398 / 20,028



ALTERNATIVES A THROUGH E
Management Prescriptions (Zones)
Fort Charlotte, Grand Portage National Monument

United States Department of the Interior / National Park Service

DSC/ Feb 01 / 398 / 20018

Ojibwe crafts and cultural demonstrations would be offered at the new Ojibwe Cultural Demonstration Shelter near the eastern boundary of Grand Portage National Monument, which would be linked to the stockade and the portage trail by an interpretive loop trail.

The Isle Royale ferry operation would be moved offsite to allow for dock removal and placement of the heritage center. The visitor services and development zone would occupy about 5.1 acres (0.7 percent) of the national monument.

Interpretive Historic Zone

The interpretive historic zone, which would comprise the stockade and its immediate surroundings, would occupy 2.8 percent (20.1 acres) of the national monument. Efforts in this zone would focus on improving the historic accuracy of the stockade interior and setting to better represent its character during the fur trade era.

Three new structures would be constructed in the stockade area, and all other known structures would be outlined on the ground. The new structures would be used for interpretation and exhibitions, increasing the ability of monument staff to tell a more exciting and comprehensive story. Visitors would enter through the lake entrance. To improve access to the area, the voyageur encampment would be moved from the west side of the stockade to the former parking area at the north gate. The siding on the restroom/generator facility would be replaced to be more visually congruent with the historic setting.

Replicated small craft from the fur trade era, including bateaux, mackinaw boats, and canoes, would be exhibited near the dock or in the stockade. The National Park Service would offer information and programs about commercial and subsistence fishing, canoe building and paddling, and historic small boats used at the site.

The NPS ranger quarters at the west entrance would be removed and rebuilt nearby on land owned by the Grand Portage Band. The Isle Royale ferry operation and parking would be moved to an undetermined location outside the national monument boundary. The current parking area would become the location for the heritage center, as in Alternative B.

All structures in the existing maintenance / employee housing area would be removed so that the portage trail, which also would become a portion of a loop trail connecting with the stockade and the 20th century Ojibwe village site, could be restored to a semblance of its historic appearance. To more closely approximate the conditions during the fur trade era, vegetation management, trail maintenance and interpretive media would be upgraded to better interpret the trail's significance and provide universal access. Wayside exhibits would be added to the village site to interpret the remnant landscape features such as historic plant cultivars, the CCC bridge and pine grove, and numerous archeological resources. All aboveground and archeological features would be protected through a program of active maintenance.

The CCC stone bridge would remain as a walkway. The boneyard road (old BIA Route 5) would be downgraded to a pathway leading to the Ojibwe Cultural Demonstration Shelter, yet it would accommodate NPS vehicles and meet accessibility requirements.

Seasonal demonstrations of Ojibwe crafts and interpretive talks about Ojibwe heritage and history would be available at the Ojibwe Cultural Demonstration Shelter.

The objectives and methods of manipulating vegetation in the interpretive historic zone would be similar to those described

for the primitive trail zone, but greater emphasis would be placed on suppressing invasive exotic plants, removing hazard trees, dangerous fuels, and trail obstructions, and restoring historic forest cover. Rather than attempting a full restoration of the historic landscape of the Lake Superior shoreline to a specific period, the existing landscape would be treated and interpreted as part of the site's continuum of history. The interpretive historic zone would retain its beauty and wild appearance and a semblance of its historical character.

Cost

The estimated cost of Alternative E would be more than $16 million. See appendix C for assumptions made.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is defined by the Council on Environmental Quality as follows:

> . . . the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Generally this means the alternative that causes the least damage to the biological and physical environment. It also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources.

Alternative D is the environmentally preferable alternative for the following reasons:

- Alternative D is preferable over Alternative A because Alternative A does not address the high fuel loading problems that currently exist along the portage and Fort Charlotte areas. This would continue the trend of increasing risk of losing historic, cultural, and natural resources to wildfire. Alternative A would preclude the restoration of the cultural landscape of the portage area; Alternative D would improve the cultural landscape by removing and rehabilitating the boneyard, the maintenance/housing area, and the boneyard road. However, Alternatives C, D, and E all propose to construct a road bridge over Grand Portage Creek. This bridge would not be consistent with the cultural landscape surrounding the portage and would negatively affect visual quality and noise level. However, the bridge would remove vehicular traffic from the stockade, improve the historic character of the stockade, and improve visitors service by allowing visitors to become immersed in the historic atmosphere. Despite these impacts, Alternative D probably would improve the cultural landscape overall. In addition, Alternative D would remove the facilities at the existing maintenance and housing area, which is an archeologically sensitive area. In addition, Alternative D would greatly enhance the visitor experience of the national monument by providing a heritage center where additional themes not currently presented could be addressed.
- Alternative D is preferable over Alternative B because Alternative B would cause more new disturbance from new construction and road realignment. The proposed road realignment and Grand Portage heritage center in Alternative B would require large amounts of blasting and excavation, which would result in greater impacts on vegetation, soils, and archeological resources. Alternative B would have the greatest potential of all the action alternatives to affect air quality because of the amount of proposed landscape restoration that could use prescribed fire as a restoration tool. In addition, Alternative B would cause more potential impacts on water quality and aquatic species, even though it does not propose constructing a road bridge over Grand Portage Creek. Alternative B might require dredging at the new Isle Royale ferry operation and at the historic wharf site. This would be one more possible dredging operation than in Alternative D, so that Alternative B might have greater impacts on water quality and aquatic habitat than

would constructing a road bridge over Grand Portage Creek as proposed in Alternative D. Alternatives B and D both would greatly improve visitor interpretation and enjoyment by providing more exhibit and demonstration space. Alternative B would provide that space in reconstructed stockade structures and in the heritage center; Alternative D would provide such space in a year-round facility.

- Alternative D is preferable over Alternative C because the latter would include more new construction and road realignment, which would cause more new disturbance. The greater ground disturbance in Alternative C would result in more impacts on soils, vegetation, and archeological resources than in Alternative D. Alternative C also would have a greater potential for affecting air quality than Alternative D because Alternative C would include more landscape restoration, which could be carried out through the use of prescribed fire as a restoration tool. Alternative C would have slightly more potential to affect water quality and aquatic species because it would include reconstructing a footbridge over Grand Portage Creek and reconstructing a wharf. All other proposed activities, such as the road bridge construction and possible dredging operation at the new Isle Royale ferry operation, which could potentially affect water quality and aquatic species, would be the same in Alternative C as in Alternative D. However, from a visitor experience and interpretation perspective, Alternative C would be preferable because it would remove County Road 17 from the national monument, allowing a safer visitor experience. Removing the roadway also would allow the area to be returned to a more natural landscape. In addition Alternative C would include reconstructing several additional historic structures in the stockade.
- Alternative D is environmentally preferable over Alternative E mainly because Alternative E would cause the most new ground disturbance (both inside and outside the national monument) of all the action alternatives. Alternative E would result in the most potential impacts on soils, vegetation, and archeological resources. However, there are benefits in Alternative E that make it preferable to Alternative D. It would result in the landscape being returned to a more historic appearance around the stockade, and it would be more operationally efficient for both management and visitors (for example, one parking lot versus two widely separated lots in Alternative D). Pedestrian safety would improve in Alternative E through the removal of County Road 17 from the national monument. Alternative E would greatly improve the visitor experience in the stockade and enhance the presentation of the interpretive story of the contemporary Ojibwe culture. Although environmentally preferable, Alternative D would rely heavily on the heritage center for the interpretation of the national monument, making less use of the existing resources for this purpose.

DETERMINING THE PREFERRED ALTERNATIVE

All alternatives would preserve and protect the cultural and natural resources of Grand Portage National Monument for future generations. The differences lie in the level of development proposed, the level of impact on the historic scene, and the level and breadth of site interpretation that could be carried out in each alternative.

Alternative A would not include any development, nor would there be any actions that would change the scene either by making it more like the historic landscape or by adversely affecting the remaining significant landscape features. This alternative would have the least ability to tell a comprehensive interpretive story because it would not have the facilities for such interpretation and would be only a seasonal operation. The National Park Service does not consider this no-action alternative acceptable because it would leave inadequate administrative/operations facilities in place and would not offer the desired level of visitor safety, interpretation, and education.

Alternative B, "Fur Trade with Maritime Emphasis," proposes a moderate level of development (new heritage center and parking); other facilities not related to visitor experience or interpretation (maintenance, NPS ranger station, NPS ranger house) would be removed. Although County Road 17 would remain an intrusion, the site otherwise would be returned to a more authentic period appearance, and the bulk of the interpretive experience would be focused on the fur trade. This alternative would involve keeping the national monument open only seven months per year. Alternative B was not designated the preferred alternative because it would leave County Road 17 as a safety concern in the national monument, because it would not include as comprehensive an interpretive story as other alternatives, and because the proposed reconstruction of the *Otter* would dramatically increase staffing and maintenance costs, albeit substantially increasing visitation.

Alternative C, "Fur Trade and Ojibwe Heritage," would remove all administrative/operations facilities from national monument lands and would include a two-phased removal of County Road 17 from within the national monument. Limited restoration of the historic scene would be carried out. This alternative would offer a more balanced interpretation between fur trade and Ojibwe heritage by upgrading the exhibits and programs within and around the stockade and providing a new facility focusing on the Ojibwe. The national monument would be open year-round, although the stockade would be open only seven months. New visibility for the national monument would result from the creation of a fur trade heritage center north of the intersection of MN 61 and County Road 17. Alternative C was not designated as the preferred alternative because it would require two widely separated and redundant parking lots, one at the heritage center on MN 61 and one onsite. In addition, the heritage center site might not be agreeable to the Grand Portage Band.

Under Alternative D, "Heritage Center Focus," all administrative/operations facilities would be moved off the national monument, and County Road 17 would be removed from the CCC bridge north, leaving the segment from the national monument boundary on the west to the CCC bridge. The landscape would not change significantly, and the stockade would change relatively little. The new fur trade and Ojibwe heritage center would become the main focus of interpretation and remain open year-round. This alternative was not designated as the preferred alternative because it would not have solved the safety concern of visitors crossing County Road 17 and because the heritage center would have drained much of the interpretive excitement from the stockade. As with Alternative C, the heritage center in Alternative D might not be agreeable to the Grand Portage Band.

Following the development of Alternatives A through D, the team, using the "Choosing by Advantages" technique, developed a new alternative (E) to try to "capture" some of the advantages identified in the four alternatives so that the new alternative would be the best overall alternative.

Under Alternative E, the preferred alternative, a fur trade and Ojibwe heritage center would be added on national monument lands, but all other administrative/operations facilities would be offsite. A gateway would be created at the intersection of MN 61 and County Road 17 to serve as an inviting entry to the national monument, the Band Casino and Lodge, and the community of Grand Portage. County Road 17 would be removed from the national monument, but the landscape of the site would be left to reflect its evolution to the present. Inside and immediately surrounding the stockade, several structures would be reconstructed. Interpretation would be expanded during a seven-month season, but the heritage center would remain open year round. This alternative would offer the most interpretation of any of the alternatives, with three centers of activity: the heritage center, the stockade, and a new Ojibwe Cultural Demonstration Shelter.

MITIGATION

All actions proposed within this plan would be evaluated by the Minnesota State Historic Preservation Officer to ensure that appropriate mitigation of impacts was designed and undertaken to minimize loss of, or damage to, cultural resources. Monument staff would continue to develop inventories for and oversee research about Grand Portage's cultural resources. These resources would be managed according to federal regulations and National Park Service guidelines.

A number of archeological reports have been completed that cover work done within the stockade before ground-disturbing activities. However, a complete 100% archeological survey and evaluation of the national monument has not been undertaken. Until such a survey could be accomplished, archeological expertise would be sought before ground disturbance to determine the appropriate level of mitigation necessary.

A cultural landscape inventory has been completed for Grand Portage National Monument, and a full cultural landscape report is planned. A cultural landscape report would use the data from the inventory to analyze the site, explain the appearance of the landscape over the years, and make recommendations for treatment in keeping with the historic character of the national monument. Until that report can be completed, the national monument staff will work closely with landscape architects from the Midwest Regional Office to ensure that their actions do not diminish the importance of the existing landscape.

The management of exotic (non-native) species would be undertaken to the extent practicable and feasible. This would be accomplished through various methods, including pulling, burning, and mowing. Such management would be guided by the National Park Service *Management Policies* and other applicable laws and guidance and by the cultural landscape report. Also important to this effort would be consultation and partnership with the Grand Portage Band to coordinate efforts.

National Park Service staff would apply ecological principles to ensure that natural resources are maintained and not impaired. The staff would continue to inventory and monitor the monument's natural resources to avoid or minimize impacts resulting from future development. They would manage fire and other techniques to restore ecosystem integrity and use integrated pest management procedures when necessary to control nonnative organisms or other pests. Habitats for threatened and endangered species would also be conserved and restored.

The national monument staff would apply mitigation techniques to minimize the impacts of construction and other activities on the monument's resources. Facilities would be built in previously disturbed areas or in carefully selected sites with as small a construction footprint as possible. To prevent soil erosion, which can degrade water quality, best management practices such as thorough design analysis, the use of soil retention structures, and prompt revegetation would be applied to all disturbed sites associated with construction activities.

The national monument's resource management plan would be regularly updated to prioritize actions needed to protect, manage, and study the monument's cultural and natural resources. Areas used by visitors would be monitored for signs of the disturbance of native vegetation, trampling, trail erosion, or the development of social trails.

ACTIONS CONSIDERED BUT NOT ADDRESSED IN THIS *GENERAL MANAGEMENT PLAN*

As is described in the "Consultation and Coordination" chapter, the identification of actions and development of alternatives for this plan evolved through a series of meetings and other opportunities for public input. However, not all the issues raised by the public are included in this draft plan. The issues that were raised by the public but have not been

addressed in this plan are discussed in this section, along with the rationale for why each was not included.

As the National Park Service learned more about what concerned people, the alternatives were modified to address the public's concerns more effectively. Some management actions that had been proposed earlier were eliminated from further consideration. Some early proposals were unreasonable ideas, some would have been unreasonably expensive, and some were not technically or logistically implementable. Some proposals would have been inconsistent with carefully considered, up-to-date statements of purpose and significance or management objectives.

Some proposed actions, although seemingly reasonable, would have had severe environmental impacts or would have been undesirable to an outside neighbor. Other issues raised by the public were not considered because (a) they were not feasible; (b) they had already been prescribed by law, regulation, or policy; or (c) they would have violated existing laws, regulations, or policies. Such issues are briefly described below, as is the basis for excluding each from this plan.

Fee Collection

Fee collection is mandated by law, and the superintendent of the national monument chooses how fees are collected; hence, fee collection is not a general management plan issue.

Alternative Access to Fort Charlotte

Some visitors who would like to trek the portage and see the Fort Charlotte site are physically unable to do so because of the long hike and terrain. An alternative means of access was suggested. This alternative was dismissed from further consideration because such access would have been entirely on land owned by the Grand Portage Band, and their approval and adherence to their land use ordinance would have been required. Adding such access would have necessitated potential Band or public funding sources outside of the National Park Service. The national monument was wary of opening up access to Fort Charlotte without the likelihood of having the additional staff and funding necessary to make this suggested action feasible. In addition, providing vehicle access to Fort Charlotte would have been inconsistent with the desired primitive recreational experience the National Park Service would like to provide at this site.

Reconstructing Fort Charlotte

The idea of reconstructing Fort Charlotte was dismissed from further consideration for several reasons. Virtually all commenters agreed that greater emphasis should be placed on adding more facilities at the stockade area before any development at Fort Charlotte. Considerable expenditures for initial development and maintenance would have been necessary. Reconstructing buildings to replace the archeological site would have resulted in considerable impacts. Because the site is difficult to reach, a low number of visitors would have been expected to visit Fort Charlotte. Additional staff would have been required, or staff would have had to be removed from the lakeshore stockade on a daily basis to interpret Fort Charlotte and ensure its protection. Pressure to make the location more accessible probably would have been forthcoming from visitors physically unable to make the journey up the portage.

Snowmobile/ ATV Access

Members of the Minnesota Chippewa Tribe may cross the monument on snowmobiles and ATVs at designated crossing locations. The national monument devised the crossing locations to honor section 7 of the enabling legislation, Public Law (PL) 85-910, in which ". . . members of the Minnesota Chippewa Tribe shall not be denied the privilege of traversing the area included within the Grand Portage National Monument." Snowmobile and ATV access by tribal members is subject to reasonable regulation by the superintendent to ensure that no substantive resource degradation occurs. The National Park Service discourages any additional snowmobile uses, which would erode the historic values or protections for which the monument was created. Snowmobiles and ATVs driven by persons other than members of the Minnesota Chippewa Tribe can "cross" the monument on existing BIA or Cook County roadways. Currently, the amount of snowmobile use is low.

The state of Minnesota has for many years sought to build a snowmobile trail from Duluth across the monument to the international border crossing, linking with a proposed Canadian snowmobile trail to Thunder Bay. However, the monument manages the 8.5 mile portage as a historic trail on which motorized vehicular traffic is not allowed. The state of Minnesota has recently suspended interest in putting through the snowmobile trail.

The Grand Portage Band has renewed interest in providing a snowmobile trail from Thunder Bay to their Lodge and Casino. The trail is planned to cross the Portage at Old Highway 61, a public road and easement not owned by the national monument.

TABLE 4: COMPARISON OF ALTERNATIVES

ALTERNATIVE A: NO ACTION	ALTERNATIVE B: FUR TRADE WITH MARITIME EMPHASIS	ALTERNATIVE C: FUR TRADE AND OJIBWE HERITAGE	ALTERNATIVE D: HERITAGE CENTER FOCUS	ALTERNATIVE E: PREFERRED PROPOSAL
Headquarters would remain in Grand Marais.	Headquarters onsite or nearby and separate from heritage center.	Headquarters / heritage center on MN 61 in Grand Portage.	Headquarters / heritage center on MN 61 in Grand Portage.	Headquarters / heritage Center on Isle Royale former parking area.
No heritage center; limited seasonal operation; visitor orientation to site would be personnel-dependent.	Heritage center onsite and separate from headquarters; 7-month operation at Isle Royale former parking area; expanded curation/exhibits and visitor orientation.	Heritage center / headquarters on MN 61 in Grand Portage, open year-round; expanded curation/exhibits and visitor orientation.	Same as Alternative C.	Heritage center / headquarters on former Isle Royale parking area, open year-round; expanded curation/exhibits and visitor orientation.
Seasonal/employee housing would remain in maintenance area.	Seasonal/employee housing relocated south of Reservation.	Seasonal/employee housing relocated on Grand Portage Band lands just outside the national monument.	Same as Alternative C.	Same as Alternative C.
Ranger house would remain.	Ranger house removed; new housing constructed south of Reservation.	NPS ranger house removed; NPS ranger housed in new housing just outside the national monument.	Ranger house would remain.	Same as Alternative C.
No road realignment; CCC bridge would remain in use.	Segment of County Road 17 realigned slightly upslope from canoe warehouse to NPS ranger house so that heritage center could be placed on the lakeshore side of County Road 17; use of CCC bridge would continue.	Two-phase road realignment: (1) BIA 2 realigned to connect with County Road 17 east across Grand Portage Creek, (2) County Road 17 west of national monument realigned to connect with BIA 2; CCC bridge retained but used for trail and monument maintenance.	BIA 2 realigned to connect with County Road 17 across Grand Portage Creek; CCC bridge retained but used for trail and monument maintenance.	Three phase road realignment: (1) gateway to monument and community created to offer a sense of arrival (2) BIA 2 realigned to connect with County Road 17 east across Grand Portage Creek, (3) County Road 17 west of national monument realigned to connect with BIA 2.; CCC bridge retained but used for trail and monument maintenance, as in Alternative C.

TABLE 4: COMPARISON OF ALTERNATIVES (continued)

ALTERNATIVE A: NO ACTION	ALTERNATIVE B: FUR TRADE WITH MARITIME EMPHASIS	ALTERNATIVE C: FUR TRADE AND OJIBWE HERITAGE	ALTERNATIVE D: HERITAGE CENTER FOCUS	ALTERNATIVE E: PREFERRED ALTERNATIVE
Maintenance shop would remain on portage trail.	Maintenance shop moved to new site on Grand Portage Band land (possibly west of Mount Rose); portage restored.	Maintenance shop moved to new site on Grand Portage Band land (possibly west of Mount Rose); portage restored and a short accessible loop created up trail from stockade.	Same as Alternative C.	Same as Alternative C.
Maintenance "boneyard" retained.	Maintenance "boneyard" moved to new maintenance facility.	Same as Alternative B.	Same as Alternative B.	Same as Alternative B.
Stockade approach and restrooms unchanged.	Stockade approach changed to come from west to lake entrance; restroom facades redesigned and/or screened to be more historically compatible.	Same as Alternative B.	Same as Alternative B.	Same as Alternative B.
Inside of stockade retained unchanged.	Minimum of 3 more structures reconstructed within stockade to voyageur period: carpenter space / cooper shop, trading store, and manager's residence; "ghost" or outline rest of buildings.	Minimum of 3 more structures reconstructed within stockade to voyageur period: carpenter space / cooper shop, trading store, and clerk's/interpreter's quarters.	Historic structures not reconstructed to date; would be outlined or delineated.	Minimum of 3 more structures reconstructed within stockade to voyageur period: carpenter space / cooper shop, trading store, and clerk's/interpreter's quarters; rest of buildings outlined.
Great hall, kitchen, warehouse would continue to be primary interpretive and orientation areas; limited (seasonal) operation.	Reconstructed buildings would provide additional interior space for interpretive exhibits; limited (seasonal) operation.	Same as Alternative B.	Great hall, kitchen, warehouse would remain the only interpretive areas within stockade; limited (seasonal) operation.	Same as Alternative B.

TABLE 4: COMPARISON OF ALTERNATIVES (continued)

ALTERNATIVE A: NO ACTION	ALTERNATIVE B: FUR TRADE WITH MARITIME EMPHASIS	ALTERNATIVE C: FUR TRADE AND OJIBWE HERITAGE	ALTERNATIVE D: HERITAGE CENTER FOCUS	ALTERNATIVE E: PREFERRED ALTERNATIVE
Visitor parking would continue to be outside stockade entrance.	Visitor parking moved to west of Isle Royale parking site near new heritage center.	Visitor parking moved to heritage center site at MN 61 and County Road 17 and to former Isle Royale parking site.	Same as Alternative C.	Same as Alternative B.
Existing footbridge retained.	Footbridge removed and replaced with one more appropriate to the historic period.	Same as Alternative B.	Same as Alternative A.	Same as Alternative A.
Contemporary Ojibwe cultural demonstrations offered in Great Hall. Historic cultural demonstrations offered outside stockade at voyageur encampment site and Ojibwe village west of stockade.	Contemporary Ojibwe Cultural Demonstration Shelter expanded inside stockade but removed from Great Hall. Historic cultural demonstrations expanded at voyageur encampment site and Ojibwe village west of stockade.	Contemporary Ojibwe Cultural Demonstration Shelter / Ojibwe heritage greatly expanded at new facility off "boneyard road." Historic cultural demonstrations expanded west of stockade.	Contemporary Ojibwe Cultural Demonstration Shelter / Ojibwe heritage expanded at new heritage center. Historic cultural demonstrations expanded west of stockade.	Contemporary Ojibwe Cultural Demonstration Shelter / Ojibwe heritage greatly expanded at new facility off "boneyard road." Historic voyageur encampment moved to old parking lot site.
Maritime component interpreted within stockade.	Heavy maritime emphasis: *Otter,* small craft reconstructed; canoe programming expanded.	Maritime additions of small craft: batteaux, Mackinaw boat, and canoe programming.	Expanded canoe programming.	Same as Alternative C.
Isle Royale ferry would continue use of dock; parking would remain.	Isle Royale ferry moved offsite; dock removed; wharf reconstructed; parking removed.	Same as Alternative B.	Isle Royale ferry moved offsite; dock and parking removed.	Same as Alternative D.

TABLE 4: COMPARISON OF ALTERNATIVES (continued)

ALTERNATIVE A: NO ACTION	ALTERNATIVE B: FUR TRADE WITH MARITIME EMPHASIS	ALTERNATIVE C: FUR TRADE AND OJIBWE HERITAGE	ALTERNATIVE D: HERITAGE CENTER FOCUS	ALTERNATIVE E: PREFERRED ALTERNATIVE
Ranger station and parking would remain.	Ranger station and parking removed; function moved to new heritage center.	Ranger station and parking removed;. new parking and contact station on former Isle Royale parking site.	Same as Alternative C.	Same as Alternative B.
Landscape of lakeshore area kept as at present; no attempt would be made to restore to a historic appearance.	Landscape west of creek restored to a more historic appearance; east of creek would have a more 20th century appearance.	Limited restoration of landscape west of creek to North West Company era; east of creek would have a more 20th century appearance.	Landscape of lakeshore area managed to reflect the continuum of use through the site's history.	Same as Alternative D.
19th and 20th century Ojibwe village site left uninterpreted.	19th and 20th century Ojibwe village site preserved and interpreted; new trail added.	19th and 20th century Ojibwe village site preserved and interpreted; new trail and interpretive shelter would become focus of contemporary Ojibwe heritage.	19th and 20th century Ojibwe village site preserved but interpreted in heritage center.	Same as Alternative C.
Boneyard road retained.	Boneyard road would remain but would be diminished in scale to trail or monument-only road.	Boneyard road would remain but would be diminished in scale and become part of accessible loop trail leading to interpretive structure.	Boneyard road allowed to deteriorate back into landscape.	Same as Alternative C.
Contemporary Grand Portage community would continue to be uninterpreted.	Contemporary Grand Portage community interpreted through signs along trails and at heritage center.	Contemporary Grand Portage community interpreted at simple seasonal interpretive shelter and through a walking tour of landscape, using both monument and community resources (e.g., Holy Rosary Church).	Contemporary Grand Portage community interpreted at heritage center.	Contemporary Grand Portage community interpreted in a seasonal Ojibwe Cultural Demonstration Shelter developed north of boneyard road.

TABLE 4: COMPARISON OF ALTERNATIVES (continued)

ALTERNATIVE A: NO ACTION	ALTERNATIVE B: FUR TRADE WITH MARITIME EMPHASIS	ALTERNATIVE C: FUR TRADE AND OJIBWE HERITAGE	ALTERNATIVE D: HERITAGE CENTER FOCUS	ALTERNATIVE E: PREFERRED ALTERNATIVE
Fort Charlotte retained and interpreted as at present.	Fort Charlotte trail access improved; better signs and interpretive brochure.	Fort Charlotte retained as at present but with increased interpretation of importance of the Grand Portage; campsites improved but no new campsites added.	Same as Alternative C.	Same as Alternative C.
Collections would remain at Minnesota Historical Society, Midwest Archeological Center, and Grand Portage National Monument.	Collections would remain at Minnesota Historical Society, but collections at Midwest Archeological Center would be returned to national monument.	All collections returned to Grand Portage National Monument.	All collections at Minnesota Historical Society and Midwest Archeological Center returned to the national monument; library/archives expanded for public use.	Most collections would remain at Minnesota Historical Society, but those at Midwest Archeological Center returned to the national monument; library/archives expanded for public use.
Mount Rose trail retained as at present.	Mount Rose trail made into a loop connecting to new heritage center.	Same as Alternative A.	Same as Alternative A.	Same as Alternative B.

Future Grand Portage Reconstructions and National Park Service Policy

National Park Service policy generally discourages the reconstruction of "missing" buildings. The *National Park Service Management Policies, 2001* notes, "No matter how well conceived or executed, reconstructions are contemporary interpretations of the past rather than authentic survivals from it." Most importantly, any reconstructions must be based on detailed data from archeological, archival, historical, and other physical evidence. Accuracy in reconstruction is critical and must be based on strong documentary evidence, not conjecture or "architectural analogy" or buildings thought to be similar at another site (such as at Old Fort William in Ontario). More practical considerations include visitor satisfaction, interpretive needs, structural maintenance, archeological impacts, and improvements or impacts to the cultural landscape of the site.

Despite these strong general reservations about the appropriateness of future reconstructions at National Park Service sites, there are also many counterpoints to these issues that apply to Grand Portage. First, when the National Park Service acquired the site, it already included reconstructions. The National Park Service subsequently reconstructed three additional structures. In effect, the process of National Park Service reconstruction has already begun, although the current appearance is strikingly incomplete, and it is unclear to many visitors why the National Park Service would cease the reconstruction effort. Tremendous care and effort are currently lavished on the present (reconstructed) Great Hall, Kitchen, Canoe Warehouse, Stockade, gatehouse, and dock. Second, there was a congressional intent when the site was established that reconstructions be part of the "unique historical values" of the site. The Grand Portage Band donated approximately half of the lands that make up the 710-acre historic site, with the understanding that a visitor center and additional buildings would be constructed. There is a unanimous desire of visitors and groups commenting during the scoping process for the general management plan for additional reconstructions. And there are many critical park themes (for example, the role of local "exchanges" — trade, languages, ideas, family ties, technologies) that are not supported by the current infrastructure at the site or that of the proposed heritage center.

To determine whether further reconstructions are appropriate at the monument, five conditions, outlined in the *Management Policies*, must be met:

- There is no alternative that would accomplish the park's interpretive mission.
- Sufficient data exist to enable its accurate reconstruction based on the duplication of historic features substantiated by documentary or physical evidence, rather than on conjectural designs or features from other structures.
- Reconstruction will occur in the original location.
- The disturbance or loss of significant archeological resources is minimized and mitigated by data recovery.
- The Director of the National Park Service approves reconstruction.

Reconstructions are the most compelling means of accomplishing the monument's interpretive mission. The present reconstructions are effective and are the focal point of visitation at the site. Visitors enjoy and appreciate them. However, the present buildings primarily tell a fur trader story (Euro-American, business elites) as well as the colorful story of the voyageurs. The preferred alternative, which seeks to further integrate Ojibwe heritage into interpretive efforts, can be greatly improved by the reconstruction of the "guide and interpreter's quarters," as well as the "fur store," where local trading took place. In addition, further select reconstructions are the only means of providing visitors a physical sense of the scale, functional areas, and historic character of the stockade as a whole. In sum, additional buildings would improve the cultural landscape inside the stockade, diversify the interpretive message, and give visitors a better sense of what the site was like in its fur trade heyday.

Reconstructions would only be built on the original locations, as has already been done with the existing reconstructions. Many of the "missing" buildings have foundations within the stockade that have already been archeologically excavated. More than 75,000 artifacts have been recovered from archeological excavations at the national monument, and there has been much data recovery. Any additional archeological work to determine the character of proposed reconstructed buildings, or to ensure that no significant archeological resources are lost when the building is reconstructed, would be coordinated with the Minnesota State Historic Preservation Office. Informal conversations with that office indicate few concerns with the proposed reconstructions beyond archeological mitigation. The State Archeologist noted that there already has been a great deal of ground disturbance within the stockade because of earlier archeological work and the former bay road that ran through the site.

When adequate information is assembled, monument staff will request the National Park Service Director's permission to reconstruct the three proposed buildings of the preferred alternative. At present, detailed physical information is yet to be synthesized and perhaps uncovered. The preferred alternative of the *General Management Plan* proposes that additional research be done to gather adequate information about the physical character of the three proposed buildings. And if adequate information is forthcoming, there is no adverse effect to contributing archeological resources, and the Director's permission secured, then additional reconstructions should be built.

AFFECTED ENVIRONMENT

CULTURAL RESOURCES

Cultural Landscape

The Grand Portage cultural landscape is a mosaic of elements representing significant events in history. A cultural landscape is the physical result of generations of human activity at a place. The landscape has many layers, both visible and hidden, portraying its historic and contemporary significance. Cultural landscapes consist of both built and natural features. The depot, the village site, and the portage trail and surrounding forest are associated with the continuum of use from the original occupation through the fur trade and logging eras up to the most recent residential and recreational development of the Grand Portage community. Because the cultural landscape of Grand Portage National Monument has changed so dramatically over time, it does not simply resemble a single period in the past; however, it does function as an appropriate background for interpreting the site. The four primary component landscapes are the portage, the stockade, Fort Charlotte, and the site of the former Grand Portage village.

Archeology and History

Evidence from other sites in the Lake Superior region indicates that northern Minnesota and western Ontario were occupied as much as 8,000 years ago. However, the archeological record for Grand Portage National Monument is sketchy. From existing data it appears that the site was not regularly occupied during the prehistoric period, although the portage was known and used by American Indians. Nearby sites may have been occupied in sheltered locations or where fish were more bountiful, such as along the Pigeon River, but such sites do not appear to have been in the general area of the national monument. This is based on archeological work conducted mainly at the stockade and at Fort Charlotte, but it also includes archeological investigations that were conducted before other small ground-disturbing projects periodically undertaken by the National Park Service elsewhere in the national monument.

Further archeological work may change this assumption. However, most archeological resources found to date are identified with the post-contact British trader period and the later historic use of the Grand Portage. Little from the French period of use has been identified at the site. The present community of Grand Portage seems to have been an outgrowth of the North West Company depot.

The office of the Minnesota state archeologist contains three registered site numbers: 21CK6, which encompasses the whole of Grand Portage National Monument, the North West Company site north of Snow Creek (21CK7) and the XY Company site south of Snow Creek (subidentified as 21CKaa), and a multi-component site on the bay (21CK12). Grand Portage National Monument's cultural resource inventory (Woolworth and Woolworth 1982) lists 110 archeological features within (or potentially within) the boundary of the monument. Because much of the monument has not yet been archeologically surveyed (particularly the 8.5 mile Grand Portage itself) there

is great potential for adding more sites to this inventory. In addition, current research into the ethnohistory of Grand Portage, using oral interviews with tribal elders, has the potential to add sites of ethnographic or traditional cultural significance.

No architectural resources from the voyageur period remain. However, several reconstructed structures representative of the period exist on the site. These structures are a log palisade with gatehouse that enclosed the North West Company depot, the Great Hall, the kitchen, and an outdoor bake oven. Outside the palisade is the canoe warehouse. Other historic structures on the site from a later period are the dock and the CCC bridge over Grand Portage Creek.

More information on individual cultural resources is available in appendix D.

Sacred Sites

An Ojibwe Midewiwin sacred site may be on national monument property somewhere within the old Grand Portage community site. Its exact location is unknown and its current use by the community is also unknown. It is thought that the lodge associated with the Midewiwin ceremonies was replaced by the original wooden church in the community. That church was later moved and enlarged and is the current Our Lady of the Holy Rosary Church just outside the north boundary on County Road 17. Archeological remains of the lodge may still exist at the site. Current research into the ethnohistory of Grand Portage, using oral interviews with tribal elders, may help to place facilities and trails away from sites of traditional cultural significance, such as the Midewiwin site. At present, it is not certain whether any other sites considered sacred by the Ojibwe exist on national monument ground.

LOCAL AND REGIONAL TRANSPORTATION

MN 61 is the major regional and local transportation artery through the Grand Portage Reservation. It receives traffic flowing from Duluth on the south to Thunder Bay, Ontario on the north. It is a major truck route providing year-round access between the United States and Canada. During the visitor season, roughly May through October, this two-lane highway receives considerable traffic from visitors and "snowbirds" (summer only residents). During the rest of the year, MN 61 is relatively quiet. No other federal or state highways traverse the Reservation.

Through the Reservation, MN 61 provides a major artery for community traffic. The speed limit is 55 mph. Stemming off of it are local county and BIA roads that provide the community with access to residential, commercial, and cultural areas.

County Road 17 bisects the lakeshore portion of Grand Portage National Monument, southwest to northeast. At approximately its midpoint within the monument, the road forms a "T" intersection with BIA 2, which heads north past the community store and other Band facilities to MN 61. Both County Road 17 and BIA 2 are important transportation routes within the Reservation, allowing access to many Band facilities without having to drive on or cross MN 61. This is especially true of the period from May through October. Because most of the community is south of MN 61, County Road 17 is an important link between the housing area and casino on the west and the housing and community facilities to the north and east of the national monument. Traffic through the monument poses something of a hazard to pedestrians crossing County Road 17 to reach the portage trail or the Mount Rose trail. Sight distances are not good for visitors exiting the existing parking area at the stockade, and many near collisions have occurred. Traffic on County Road 17 often exceeds the posted 30 mph speed limit.

POPULATION, ECONOMY, AND LAND USE

Population

In 1999 the U.S. Census Bureau estimated the population of Minnesota at 4,775,508, ranking it the 20th largest state in the nation. Per capita personal income (PCPI) was $26,295 in 1997, or 104 percent of the national average ($25,298).

The 1999 Census Bureau estimate for the population of Cook County was 4,772, ranking it 84th of Minnesota's 87 counties. Cook County includes the Grand Portage Reservation, Grand Portage National Monument, and Grand Marais (where national monument headquarters are located). The per capita personal income for 1997 was $22,484, which is 86% of the statewide average and 89% of the national average (Bureau of Economic Analysis Regional Facts 1999). Cook County is experiencing a boom in vacation home construction for summer use and, less often, for winter use.

In 1997, 308 Grand Portage Band of Minnesota Chippewa members lived on the Grand Portage Reservation (with many more Band members living in Grand Marais and Duluth). That composed approximately 6.5% of the Cook County estimated population (4,744) for that year. Per capita personal income was $10,808, or 48% of the county average (41% of the state average) (Paula Giese, Grand Portage homepage).

Other ethnic groups (black, Asian/Pacific Islander) made up less than 1% of the county population in 1997.

Cook County is rural, with the vast majority of population along the MN 61 corridor in the unincorporated communities of Taconite Harbor, Schroeder, Tofte, Lutsen, Croftville, Hovland, Grand Portage, and the town of Grand Marais (population 1,200). However, within a radius of 50 miles (an hour's drive) live approximately 120,000 people. About 400,000 people live within 150 miles (a 3-hour drive), and within 300 miles (less than a day's drive) live an estimated 6.5 million people.

Lsnd Use

In 1997, Minnesota's largest industries were services (26.3%), durable goods manufacturing (12.6%), and state and local government (10.8%). For Cook County the largest industries were services (38.1%), state and local government (16.9%), and retail trade (13.9%). For the Grand Portage Reservation, the largest industry was hotel and gambling (percentage not available).

Within 100 miles of Grand Portage National Monument in Minnesota are a large number of state parks of interest, such as Split Rock Lighthouse State Historic Site, Tettegouche State Park, George H. Crosby Manitou State Park, Caribou Falls State Wayside Park, Cross River Wayside Park, Temperance River State Park, Ray Berglund State Wayside Park, Cascade River State Park, Kodonce River State Wayside Park, Judge C. R. Magney State Park, and Grand Portage State Park. Also within 100 miles are the Superior National Forest and the Boundary Waters Canoe Area, Finland State Forest, Pat Bayle State Forest, and the Grand Portage State Forest. Within 100 miles in Canada are Middle Falls Provincial Park, Kakabeka Falls Provincial Park, Quimet Canyon Provincial Park, Sleeping Giant Provincial Park, Quetico Provincial Park, and Fort William Provincial Park as well as several parks and museums in Thunder Bay.

Grand Portage National Monument bisects the Grand Portage Indian Reservation. The Reservation is approximately 47,000 acres of Lake Superior headlands, lakes, rivers, and forests of striking beauty. The center of the unincorporated community of Grand Portage is immediately outside and to the northeast

of the stockade. Housing is dispersed over a wide area but mainly south of MN 61.

Employment

The Grand Portage tribal government is a large employer of the Band members. Along County Road 17, just west of the national monument, is a hotel, conference center, and casino owned by the Grand Portage Band. These facilities employ approximately 175 people, many of them Band members. The hotel and casino complex draws on a market that includes Duluth to the south and Thunder Bay to the north, as well as the "snowbirds" who return from more southerly climes each summer to swell the north shore population. The Grand Portage Band also owns a construction company and a marina and boat rental/launch facility that provide seasonal employment. Other seasonal employment includes commercial fishing and logging. Still, about a fourth of the Band population is unemployed (26.5% in 1997, Giese, 2.8 percent statewide for 1999).

When Grand Portage National Monument was established in 1958, one of the implicit benefits was the employment of Grand Portage Band members. In an area of high unemployment, the hope was that the monument would become a generator of jobs for the area. Over the years, many Band members have worked at the national monument, but the number of jobs available at any one time has been small. This has been partly because the expected development of the national monument did not occur and partly due to the seasonal nature of site operation.

At the same time, the state of Minnesota has placed increased emphasis on the importance of tourism within the state as a means of generating jobs and helping the overall state economy.

Impact of the Monument on the Local Economy

The National Park Service uses a "money generation model" developed by Michigan State University to determine the economic impact of its units on the local community, defined as 90 miles along the North Shore of Lake Superior southwest of Grand Portage. This model helps to quantify the amount of visitor spending on goods and services and to identify the number of jobs that are directly attributable to the unit. The model is calibrated to assess the economic benefits of short-term visits, campers, and visits that include an overnight stay (which is approximately 10% of Grand Portage visitors). The model calculates, for example, that overnight visitation generates more than three times the economic impacts of the day visits.

The direct economic effect on sales in the local area was approximately $1,263,000, based on the 94,600 visitors who came to Grand Portage National Monument in 2000. Thirty-six jobs in the community and $465,000 in salaries were directly attributable to spending by monument visitors. Stated another way, without the national monument, $1,263,000 of goods and services such as hotels, restaurant food, and items sold in the community would not have been produced. There would be 36 fewer jobs in the community and a loss to the community of $465,000 in the salaries of those 36 people.

VISITOR EXPERIENCE AND INTERPRETATION

Grand Portage National Monument was established to preserve its "unique historical values." In the past 10 years, the yearly average of visitation has been more than 69,000 visitors per year. Visitors have come to the national monument primarily to learn about its history and to walk through the reconstructed structures. It is normally a quiet, contemplative place, a pleasant discovery on a journey to Canada rather than a

destination. Other experiences are also available. The portage and the Mount Rose trail allow visitors to see the change of seasons or simply to commune with nature in a forest setting. Grand Portage also gives visitors an opportunity to interact with Ojibwe culture and gain new insights into the human condition.

Most people come to Grand Portage National Monument to experience the reconstructed stockade and get a glimpse into the fur trade of the late 18th century. The encircling palisade with lookout tower, the Great Hall, the kitchen, the canoe warehouse, and the fur press all give visitors some sense of what the original fur trading post was like when it was a key component of the North West Company's fur trade business. Visitors can learn about the fur trading business in the Great Hall; see demonstrations of foods and food preparation techniques used in the late 1700s; try on fur trade period clothing; watch furs being pressed for shipment; experience a voyager encampment; see weapons from the period demonstrated; learn about canoe construction and use; and interact with interpreters costumed like people of the fur trade period, who will discuss the details of stockade life.

However, many visitors know little of the complexity and importance of the fur trade or of Ojibwe heritage before their arrival. Contemporary elements, such as orientation signs, wayside exhibits, and access ramps may be installed at the stockade. While they would help visitors, these features might also compromise the power of the reconstructed buildings to convey a sense of history. The highway, parking area, and orientation exhibits represent an even more dramatic introduction of the modern world to the front gate of the stockade.

Visitors going inside the Great Hall for orientation to the fur trade story encounter uniformed NPS rangers and such modern items as a television monitor, a video player, a selection of interpretive videos to view, interpretive brochures, a bookstore, and a cash register. The Great Hall also now houses contemporary Ojibwe arts and crafts.

Opportunities to learn about the Ojibwe culture are limited to the interpretive programs and cultural demonstrations given by appropriately costumed interpreters in the Ojibwe village adjacent to the stockade. These programs are usually available from mid-June through Labor Day. Visitors receive a vignette of Ojibwe culture that depends on the program available when they arrive and how much time they have to spend at the village site. They also can spend time with Ojibwe cultural demonstrators (elders).

Grand Portage is also the "end of the trail" for many visitors coming by canoe from the Boundary Waters Canoe Area. Canoers generally arrive at Fort Charlotte on the Pigeon River and camp overnight or head down the trail to be picked up at the stockade. While they generally are more interested in the physical outdoor experience than the interpretive experience of Grand Portage National Monument, the experiences of canoeing, camping, and the continued primitive character of the portage trail give canoe travelers real insights into the experiences of the voyageurs.

Because of the climate of northern Minnesota and the unwinterized reconstructed buildings of the stockade, the stockade is open to the public only from mid-May to mid-October. Visitors coming to Grand Portage National Monument in other seasons have little opportunity to learn about the fur trade history of the site. Some interpretive materials are available year-round at national monument headquarters in Grand Marais, but onsite experiences in the off-season are limited to hiking or skiing the portage and looking at the stockade's exterior. Housing for seasonal employees is not winterized, and this limits the national monument's capability to remain open in winter.

Most visitors stay overnight within an easy day's drive of the national monument. The primary overnight use is along the North Shore and MN 61 between Duluth, Minnesota and Thunder Bay, Ontario. The average visit to the Grand Portage National Monument is between 30 minutes and one hour. This allows enough time to see the reconstructed fur trade post and perhaps hike the Mount Rose trail. Because the stockade is closed during winter, winter visitors come primarily to ski the Grand Portage, and their length of stay varies from several hours to all day.

NATURAL RESOURCES

Soils

Grand Portage National Monument is wholly within the Canadian Shield, a large area made up of hard, dense rocks that are very old (Precambrian in age). Geologic formations underlying Grand Portage National Monument consist of the Rove Formation and the Logan intrusions. The Rove Formation, which is about 1.8 billion years old and is thought to be 3,200 feet thick, consists of sedimentary layers of shale and graywacke sandstone that have been changed through contact with molten Logan magma to metamorphic rocks of slate and quartzite. The strata of the Rove Formation are tilted toward the south-southeast. About 1.1 billion years ago, molten magma was intruded into the Rove Formation. As hot liquid Logan magma rose through the earth's crust it followed the natural planes of weakness parallel and perpendicular to the layering in the Rove Formation creating sills and dikes of variable thickness. As the magma cooled, it crystallized into dense black igneous rock known as diabase, and resulted in alternating layers of sedimentary and igneous rocks. This diabase is more resistant to erosion than the sedimentary rocks of the Rove Formation. Over a long period of time, erosion and glacial scouring wore away the Rove Formation more rapidly than the diabase, resulting in the present-day surface topography of long and narrow depressions, underlain by the Rove Formation, separated by high ridges of diabase (Boerboom 1999). The high falls on the Pigeon River are formed where the river flows over the more resistant diabase intrusions. These falls made the river impassable and required a bypass of the Pigeon River on the 8.5 mile overland route that is now known as the Grand Portage.

Most of the soils in Grand Portage National Monument owe their origin to glacial deposition. Depressions at the monument are partially filled with coarse glacial till that was deposited by receding glaciers about 10,000 years ago. Soils in the lower part of the monument tend to be sandy and gravelly sandy loams. They are subject to erosion, especially where exposed on creek banks and in other locally steep areas. Other soils in the area tend to be shallow, coarse, stony, and acidic.

Soils in the developed area of the monument tend to be susceptible to frost heave due to climate, soil types, topography, depth to bedrock, and high groundwater content relatively close to the surface. The cold climate of northern Minnesota, combined with the fine-grained nature of the soils at Grand Portage National Monument, provides the conditions for the formation of ice lenses as frost penetrates the ground. The local topography tends to drain water toward the developed area of the monument; this and the relatively shallow depth to bedrock exacerbate frost heave conditions as groundwater sheet flows through the lower portion of the monument toward Lake Superior. This high amount of groundwater below the frost line but within the influence of capillary forces caused by ice lens formation creates the conditions necessary for frost heaving. Future construction projects would need to consider frost heaving mitigation such as locating foundations below frost penetration levels, replacing frost susceptible soils, or restricting water to the frost zone.

Air Quality

The weather at Grand Portage National Monument is conrolled by three major air masses: the Continental Polar, Maritime Tropical, and Maritime Polar. The Continental Polar air mass from the Arctic brings cold, dry weather in the winter and cool conditions in the summer. The Maritime Tropical air mass from the Gulf of Mexico brings warm, moist winter weather and hot, humid summer conditions. The Maritime Polar from the northern Pacific Ocean brings mild weather with little precipitation (Albert 1995).

In addition to the influences of the major air masses, Lake Superior affects the weather at Grand Portage National Monument. Lake Superior tends to intensify storms in late fall. It also tends to decrease the intensity of storms and increase the stability of air masses during spring and summer (Albert 1995).

The total annual precipitation at the monument averages about 27 inches, with May through September receiving the heaviest rainfall. Snow accumulations from November through March frequently exceed 10 inches a month, with a mean annual accumulation of 78 inches (NPS 1991). A weather station in Grand Marais, approximately 35 miles south of Grand Portage National Monument, indicates that July tends to be the warmest month, with average daily maximum temperatures of about 70° F. The coldest month is January, with average daily minimum temperatures of about 4°F (NRCS n.d.).

Grand Portage National Monument is a class II air quality area (airshed) under the Clean Air Act. The nearest class I airsheds to the national monument are Boundary Waters Canoe Area, about 10 miles west, and Isle Royale National Park, about 20 miles east. Air pollution sources generally are from automobile emissions, wood burning for home heating, prescribed fire, and industries in nearby population centers. Thunder Bay, Ontario, with approximately 114,000 residents, about 45 miles northeast of the monument, is the nearest large population center. A coal-fired power plant exists near Schroeder, Minnesota, about 70 miles southwest of the monument. Effects from these pollution sources have not been noticed in the monument.

In general, the air quality at Grand Portage National Monument is considered good. It is likely that air quality at the national monument is in attainment of state air quality standards, although there are no air monitoring stations at the monument to substantiate this. However, there are no indicators that air quality is a problem at the monument. Lichens are known to be good indicators of air quality because of their sensiivity to low levels of many atmospheric pollutants. Elemental analysis of lichens in 1991 indicate no abnormal accumulations of polluting elements at any location in the national monument except for manganese at Fort Charlotte (Wetmore 1992). The reasons for these unusually high levels of manganese are unknown. There is no indication that lichens at the monument are being damaged by air quality (Wetmore 1992), and the lichens within the monument appear healthy.

Water Quality and Aquatic Species

The dominant hydrologic feature of Grand Portage National Monument is Grand Portage Bay of Lake Superior, which lies immediately east of the monument. High water levels on Lake Superior have caused erosion along the shoreline. However, erosion control measures (riprap) along the lakeshore and banks of Grand Portage Creek appear to have ameliorated this problem.

Major streams passing through Grand Portage National Monument include Grand Portage, Poplar, and Snow Creeks.

Grand Portage Creek flows into Lake Superior at Grand Portage Bay. Poplar and Snow Creeks flow into the Pigeon River, which flows into Lake Superior at Pigeon Bay. The Pigeon River also defines the western boundary of Grand Portage National Monument.

Grand Portage National Monument is within the U.S. Geological Survey delineated Baptism-Brule watershed (hydrologic unit code 04010101). The U.S. Environmental Protection Agency has characterized the overall watershed as "better water quality–low vulnerability" based on indicators of watershed health (EPA 1999).

Water quality data collected from 28 monitoring stations between 1968 and 1994 were recently summarized (NPS-WRD 1999). Water quality parameters from monitoring stations in the national monument did not exceed any water quality criteria. For monitoring stations adjacent to the monument's boundaries, five parameters (turbidity, total coliform, fecal coliform, copper and lead) exceeded water quality criteria; however, these parameter data were collected in the late 1960s to mid-1970s. Seven out of eight (88%) of the exceedances occurred in just one of those years, and the proportion of exceedance (number of exceedances/total number of observations) ranged from only 1.7% to 8.8%. Therefore, the water quality at the national monument over that timeframe appeared good. All three streams that flow through the monument were monitored for 28 water quality parameters from May to November 2000 (Draft Baseline Water Quality Report, March 2001). No parameters exceeded water quality criteria during the study period. Improved forestry practices on surrounding Reservation lands and a recently constructed waste-treatment facility for residents suggest the water quality in and around Grand Portage National Monument will remain good.

Groundwater in the area is generally shallow and not abundant due to the impervious bedrock. The groundwater is generally hard, and the basaltic lava creates an unpredictable aquifer; private wells have revealed a wide variety of subsurface conditions, yield, and character (NPS 1997).

Fish-bearing streams in Grand Portage National Monument include Grand Portage, Poplar, and Snow Creeks. Inventories indicate that abundant and common fish species include white suckers (*Catostomus commersoni*), mottled sculpin (*Cottus bairdii*), slimy sculpin (*Cottus cognatus*), lake chub (*Couesius plumbeus*), coho salmon (*Oncorhynchus kisutch*), rainbow trout (*Oncorhynchus mykiss*), smelt (*Osmerus mordax*), brook trout (*Salvelinus fontinalis*) and creek chub (*Semotilus atromaculatus*). In addition, fish species that were inventoried occasionally or rarely include long nose sucker (*Catostomus catostomus*), lake herring (*Coregonus artedi*), Johnny darter (*Etheostoma nigrum*), burbot (*Lota lota*), yellow perch (*Perca flavescens*), round whitefish (*Presopium cylindraceum*), and walleye (*Stizistedion vitreum*).

Grand Portage Creek flows directly into Lake Superior and provides spawning habitat for many lake species. Many of these lake species move from the deep waters of Lake Superior to shallow shoreline areas and adjacent tributaries, such as Grand Portage Creek, to spawn. One such species of note is brook trout (locally known as coasters), which were virtually eliminated by the early 1900s by fishing, degradation of habitat, and competition from exotic salmonids (rainbow trout and coho salmon). From 1991 to 1995, a program for reintroducing brook trout to Grand Portage Creek was initiated. Eggs were stocked annually in Grand Portage Creek from 1991 to 1995. Fry were stocked annually from 1992 to 1995. This reintroduction effort appears to have been successful; fish surveys indicate that brook trout are now common in Grand Portage Creek.

Baseline aquatic habitat data have been collected for Grand Portage and Poplar Creeks. Temperature, substrate size,

dissolved oxygen concentration, pH, nitrogen concentrations, phosphorus concentrations, and benthic macroinvertebrate density have been collected. This data can be used during future monitoring efforts as a baseline to determine changes in aquatic habitat.

General Vegetation

Grand Portage National Monument lies in a transition zone between northern hardwood forests, which stretch south and west to the grasslands of the plains, and the boreal forest of the north latitudes. The monument is dominated by forest community types interspersed with small openings created by rock exposures, grassy meadows, and shrub fields dominated by alder (*Alnus* spp.) and willow (*Salix* spp.).

Most of the forested acreage in Grand Portage National Monument is dominated by quaking aspen *(Populus tremuloides)*, paper birch (*Betula papyrifera*), white spruce (*Picea glauca*), and/or balsam fir (*Abies balsamea*) occurring within two major forest community types: aspen-birch and spruce-fir. Generally the aspen-birch community type becomes established following a major vegetation altering disturbance such as insect or disease outbreak, wildfire, or logging. Aspen-birch generally succeeds to spruce-fir community type in the absence of any disturbance. The spruce-fir community type is a climax community and can eventually develop into old growth.

Most of the aspen-birch community type in Grand Portage National Monument is in the eastern part of the monument and was established following logging that occurred through the 1940s. Many of these stands are beginning to succeed into the spruce-fir community type, as evidenced by the declining aspen-birch overstory and the second layer of spruce-fir. These stands will eventually grow into mature spruce-fir stands in the absence of any disturbance.

The majority of the spruce-fir community type in the national monument is found in the western part of the monument. Many of the mature spruce-fir stands in the monument have recently succumbed to a spruce budworm outbreak. Aspen and birch are now becoming established in the openings created by the dead and dying spruce and fir. Many of these dead and dying spruce and fir have blown down, particularly along the western part of the portage trail. This blowdown and a dense brush layer are creating a fuel loading concern, which in turn creates a wildfire control and firefighter/public safety concern.

In addition to the dominant tree species, other notable species found in Grand Portage National Monument are red pine (*Pinus resinosa*), white pine (*Pinus strobus*), jack pine (*Pinus banksiana*), white cedar (*Thuja occidentalis*), black spruce (*Picea mariana*), balsam poplar (*Populus balsamifera*), sugar maple (*Acer saccharum*), red maple (*Acer rubrum*), heartleaf birch (*Betula cordifolia*), and black ash (*Fraxinus nigra*). Many of these trees occur in association with the aspen-birch and spruce-fir community types, as well as in other forest community types. Other notable forest community types in the monument are red pine, white pine, white cedar, and black ash community types.

Red pine community types exist near the stockade and in T64N, R5E, section 25. The red pine stand near the stockade was planted and is now a mature stand. This stand is healthy and has not developed a second layer. Pure red pine stands probably never existed near the stockade, because it is a fire-dependent community type, and it is unlikely that frequent fire ever played a major role adjacent to Lake Superior. The red pine stand in T64N, R5E, sec. 25 is larger than the stand near the stockade. A second layer of balsam fir and white spruce has developed under the red pine layer, but the red pines appear to be healthy. Most of the native red pine stands in Minnesota have been converted to other forest community types by logging and succession (MN DNR 1993).

White pine community types are found in the western part of Grand Portage National Monument. The stands in the monument generally are healthy, despite the presence of a dense understory in many stands. White pine blister rust does not appear to be affecting the white pines, and the alternate hosts gooseberry (*Ribes hirtellum*) and currant (*Ribes spp.*) have no indication of rust. White pines, which were a major old-growth forest type in Minnesota, historically were maintained by periodic ground fires. Old growth white pine stands are not common now because of white pine blister rust, harvesting (it is a desirable commercial species), fire suppression, and natural succession.

A band of upland white cedar community type occurs along the western portion of the portage. These almost pure stands of white cedar with little or no understory appear not to be reproducing. This could be attributed to deer browsing, which has been known to substantially impact white cedar reproduction.

Black ash community types occur as narrow zones along wet draws and as wetland inclusions. Historically, flooding (especially that caused by beaver dams) and windthrow were the dominant disturbance regimes affecting this community type (MN DNR 1993).

Major disturbance factors affecting vegetation at Grand Portage National Monument include insects, disease, windthrow, wildfires, fire suppression, and timber management. Disturbance events from insects, disease, and windthrow have impacted the vegetation periodically throughout history and generally have created conditions that favor early successional species. In addition, impacts from insects, disease, and windthrow often have set up the landscape for stand replacement fires by increasing fuel loads and creating environments for a dense second layer within stands that act as ladder fuels to surviving overstories.

The historic fire regimes at the national monument generally were characterized by stand replacement fires with long return intervals (NPS 1997). The historic average return intervals of the monument's two major forest community types (aspen-birch and spruce-fir) probably were about 70 to 110 years (Heinselman 1996). Since European settlement of northern Minnesota, the historic fire regimes have been altered through large scale landscape modification and fire prevention and suppression efforts. This probably has resulted in increased fuel loadings and a decrease in fire dependent community types.

Past timber harvesting throughout and adjacent to the national monument has resulted in large tracts of second growth aspen-birch community types. No timber has been harvested in the monument for more than 50 years. Timber is still being harvested in adjacent areas, with the majority being managed under an even-aged system.

Threatened or Endangered Species or Species of Concern — Plants

No plant species federally listed as proposed, threatened, or endangered are known to inhabit Grand Portage National Monument; however, the Minnesota Department of Natural Resources (DNR), Section of Ecological Services, has documented 17 species, as listed in table 5, below.

Many state-listed threatened and endangered species occur in the vicinity of Mount Rose and the beaver ponds along the trail corridor. The unique microhabitat provided by the rock outcrops and scree slopes on Mount Rose and the wetland habitat at the beaver ponds make these areas a special concern for plant habitat.

TABLE 5: DOCUMENTED PLANT SPECIES OCCURRING IN THE MONUMENT

SPECIES	STATUS
lichen (*Parmelia stictica* (Duby) Nyl.)	endangered
wild chives (*Allium schoenoprasum* L. var. *sibiricum (L.) hartm.*)	threatened
moonwort (*Botrychium lunaria* (L.) Sw.)	threatened
black-fruited hawthorn (*Crataegus douglasii Lindl.*)	threatened
Chilean sweet cicely (*Osmorhiza berteroi*)	threatened
smooth cliff fern (*Woodsia glabella* R. Br.)	threatened
Rocky Mountain cliff fern (*Woodsia scopulina* D. C. Eat.)	threatened
least moonwort (*Botrychium simplex*)	special concern
wavy hairgrass (*Deschampsia flexuosa* (L.) Trin.)	special concern
rock whitlow grass (*Draba arabisans* Michx.)	special concern
creeping juniper (*Juniperus horizontalis* Moench)	special concern
blunt-fruited sweet cicely (*Osmorhiza depauperata* Phil.)	special concern
satiny willow (*Salix pellita Anderss.* ex Schneid.)	special concern
Torrey's manna grass (*Torreyochloa pallida* (Torr.) Church)	special concern
moonwort fern (*Botrychium matricariifolium*)	tracked
intermediate sedge(*Carex media*)	tracked
mountain cliff fern (*Woodsia oregana)*	tracked

ENVIRONMENTAL CONSEQUENCES OF THE ALTERNATIVES

The National Environmental Policy Act requires that environmental documents disclose the environmental impacts of the proposed federal action, reasonable alternatives to that action, and any adverse environmental effects that cannot be avoided should the Preferred Alternative be implemented. This section analyzes the environmental consequences of the five alternatives on the impact topics. This analysis provides the basis for comparing the alternatives.

METHODOLOGY

The impact analysis and conclusions were based on the national monument staff's knowledge of the resources and site; review of existing literature and studies; information provided by experts in the National Park Service and other agencies; and professional judgment.

Intensity

Intensity refers to the degree or severity of an impact. Impacts are described as adverse or beneficial and levels of intensity for each impact topic were determined using the definitions presented in the following sections.

Cultural Resources (cultural landscape, archeology and history, sacred sites). The intensity of impacts on cultural resources was determined using the following definitions:

- *Negligible:* the impact would be barely perceptible and not measurable and would be confined to a small area or a single contributing element of a historic structure, site, or archeological resource.
- *Minor:* the impact would be perceptible and measurable and is confined to a small area or a single contributing element of a historic structure, site, or archeological resource.
- *Moderate:* the impact would be sufficient to cause a change in the character-defining features of a resource and generally involves a single or small group of contributing elements of a historic structure, site, or archeological resource.
- *Major:* the impact would result in substantial and highly noticeable change in character-defining features of a resource and involves a large group of contributing elements and/or an individually significant historic structure, site, or archeological resource.

Visitor Experience and Interpretation. The intensity of impacts on visitor experience and interpretation was determined using the following definitions:

- *Negligible:* the impact would not be detectable by visitors and would have no discernible effect on their experience.

- *Minor:*-the impact would be slightly detectable by visitors but would not affect overall visitor use and/or the visitor experience.
- *Moderate:* the impact would be clearly detectable by visitors and could have an appreciable effect on the visitor experience.
- *Major:* the impact would have a substantial, highly noticeable influence on the visitor experience and could permanently alter access, use, and availability of various aspects of the visitor experience.

Local and Regional Transportation. The intensity of impacts on monument operations, facilities, partnerships, and the local and regional transportation network was determined using the following definitions:

- *Negligible:* the impact would be barely detectable and would have no discernible effect on park operations and facilities.
- *Minor:* the impact would be slightly detectable but would not affect the monument's overall ability to provide services and maintain facilities.
- *Moderate:* the impact would be clearly detectable and could have an appreciable effect on park operations and facilities.
- *Major:* the impact would have a substantial, highly noticeable influence on park operations and facilities and could reduce the monument's ability to provide adequate services and/or maintain facilities.

Economy, Population, and Local Land Use. The intensity of impacts on the economy, population, and local land use was determined using the following definitions:

- *Negligible:* the impact would be barely detectable and would have no discernible effect on the local community.
- *Minor:* the impact would be slightly detectable but would not have an appreciable effect on the local economy or population, nor affect local land use within the community.
- *Moderate:* the impact would be clearly detectable and could have an appreciable effect on the local economy and population, and it could affect local land use within the community.
- *Major:* the impact would have a substantial, highly noticeable influence on the local economy and population and would result in local land use changes.

Natural Resources. For the purposes of the natural resources analysis, intensity of impact is defined as follows:

- *Negligible:* the impact would be barely perceptible or not measurable and would be confined to a small area.
- *Minor:* the impact would be perceptible and measurable and it would be localized.
- *Moderate:* the impact would be clearly detectable and could have appreciable effect on the natural resource.
- *Major:* the impact would have a substantial, highly noticeable influence on the natural resource.

Duration

Duration refers to the time period over which the effects of an impact persist. For impact topics evaluated in this document, the duration of impacts across all categories was determined using the following definitions:

- *Short-term:* the impact would last less than one year.
- *Long-term:* the impact would last one year or longer.

Cumulative Impacts

Cumulative impacts are impacts on the environment that result from the incremental (i.e., additive) impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what entity (federal or nonfederal) undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Cumulative impacts analyzed in this document consider the incremental effects of the no-action alternative and each of the action alternatives in conjunction with past, current, and future actions at Grand Portage National Monument. These actions include the following planned or ongoing activities:

- Development by the Grand Portage Band of the Grand Portage Lodge, Casino, and Marina facilities is ongoing. The Band is constantly improving facilities to attract visitors to the area. Until a large casino was constructed at Thunder Bay, Ontario, much of the Casino business came from Canada. That business has dropped off considerably, and now the Band is working to attract more visitors from the Duluth area and to win back visitation from Ontario. One of the actions being undertaken is an enlargement of the marina.
- Potential development of a combination state tourist information center and semi-trailer truck rest area. This has been an on again, off again proposition for many years. It would replace the existing Tourist Information Center now located high above MN 61 near its intersection with BIA 2. The existing facility is seasonal and cannot handle large trucks. The plan would provide a place for visitors to the region to receive information about local and state attractions and for drivers of large trucks to rest, as required by daily legal driving time constraints.
- Development of Grand Portage State Park to interpret the Pigeon Falls. Grand Portage State Park is a relatively new state park that interprets Pigeon Falls and the local community/region. Facilities are cramped, and funding within the foreseeable future for any development will depend upon availability of state funds.
- Controlled burning of Band lands to improve habitat and forest health. The Grand Portage Band practices controlled burning of small portions of its land in order to prevent forest fires, to improve forest health and habitat, and to encourage the growth of certain species such as blueberries.
- Purchase of the Voyageurs Marina by the Grand Portage Band. The Voyageurs Marina was a private marina that provided a landing for one of the boats taking visitors to Isle Royale National Park. The Band plans to upgrade facilities in the future and continue to provide this service. Because this marina has deeper water, it is especially valuable during low water years. The purchase is so recent that no plans have been developed, although a campground is a possibility.
- The designation of a snowmobile route from Canada to the Grand Portage Lodge and Casino. A snowmobile trail from the Canadian border to the casino would be designated by the Band. It would cross the Grand Portage at old MN 61.
- Development by the Grand Portage Band of housing and infrastructure for Band members. The Grand Portage Band is developing a new housing area west of the casino and along the Bay Road. In conjunction with the Indian Health Service, the Band has upgraded its water and sewer lines throughout the community. At present County Road 17 through the national monument is a major route used by local people to access the Band's facilities along BIA 2 and northeast of the national monument.

- The state of Minnesota is seeking a designation of MN 61 as a national scenic byway. Such a designation would provide another incentive for people to drive this route.
- The Band is contemplating a new tribal council office, but no location has been designated. There is also discussion of a museum to interpret the history of the Grand Portage Band.
- A new clinic has been constructed by the Indian Health Service and the Band near the log schoolhouse in the community.
- The U.S. Forest Service is undertaking an environmental impact statement dealing with the aftermath of the July 4, 1999 blowdown in the Superior National Forest. Much of the blowdown is near the Fort Charlotte unit within designated wilderness.
- A cultural landscape report is planned to provide the data needed to determine the proper treatment for the entirety of the national monument landscape.

Mitigation

Mitigation is a key concept in resource management planning because it accommodates interactions between visitors and NPS operations with natural and cultural resources and their tolerance for disturbances. Mitigation and best management practices are regularly used to ensure that natural and cultural resources are protected and preserved for future visitors with minimum impairment. In the legislation that created the national park system, Congress charged the National Park Service with managing lands under its stewardship "in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" (NPS Organic Act, 16 USC 1). As a result, the National Park Service routinely evaluates and implements mitigation whenever conditions occur that could adversely affect the sustainability of the resources in national parks and national monuments.. Mitigation was included in the formulation of the alternatives for Grand Portage National Monument (discussed in this document), such as considering different locations for administrative offices, maintenance facilities, and employee housing.

Impairment of National Monument Resources

In addition to determining the environmental consequences of implementing the preferred and other alternatives, NPS policy (*Interpreting the National Park Service Organic Act, National Park Service Management Policies*) requires analysis of potential effects to determine whether or not actions would impair site resources.

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 national park resources and values (in this case Grand Portage National Monument). NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on such resources and values. However, the laws do give the National Park Service the management discretion to allow impacts on resources and values when necessary and appropriate to fulfill the purposes of a national monument, 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 the national monument, that discretion is limited by the statutory requirement that the National Park Service must leave resources and values *unimpaired*, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible manager, would harm the integrity of national monument resources and values, including the opportunities that otherwise would be present for

the enjoyment of those resources or values. An impact on any national monument 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 for the national monument
- key to the natural or cultural integrity of the national monument or to opportunities for enjoyment of the national monument
- identified as a goal in the national monument's *General Management Plan* or other relevant NPS planning documents

Impairment may result from NPS activities in managing the national monument, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the national monument. A determination on impairment is made in the "Environmental Consequences" section in the conclusion section for each impact topic.

All actions proposed in this plan would be evaluated by the Minnesota State Historic Preservation Officer to ensure that appropriate mitigation of impacts is designed and undertaken to minimize the loss of, or damage to, cultural resources. The Monument staff would continue to develop inventories for and oversee research about Grand Portage's cultural resources. These resources would be managed according to federal regulations and NPS guidelines.

A number of archeological reports covering work done within the stockade and before ground disturbing activities have been completed. However, a complete archeological survey and evaluation of the national monument has not been undertaken. Until such a survey can be accomplished, archeological expertise would be sought before any ground disturbance to determine the appropriate level of mitigation necessary.

Soil Analysis Assumptions

The following assumptions were made to simplify the analysis of impacts on the soil resource.

Roads. The lineal distances for roads were derived from geographic information system (GIS) maps. Construction disturbance from roads was assumed to be 60 feet in width for all existing and proposed road segments. The 60-foot width was based on several measurements of average visible road corridor widths from orthographic photos of the Grand Portage area.

Gateway. It was estimated that the "gateway" development proposed in Alternative E near the intersection of County Road 17 and MN 61 would impact about 3 acres, based on knowledge of the site.

Heritage Center / Headquarters. Preliminary design for a proposed visitor center / headquarters facility completed 10 years ago indicated an impact area of about 3 acres for the facility and associated parking lot. These designs were the basis for the assumptions of the impact area for the proposed heritage center / headquarters. For the two separate heritage center and headquarters buildings in Alternative B, it was assumed that the areas impacted would be 2.75 acres and 2 acres, respectively, which would be slightly smaller than the preliminary design of the combined facility. For Alternatives C and D, it was assumed that 3 acres would be impacted for the combined facility, based on the preliminary design. For Alternative E it was assumed that the impact area would be 2.75 acres because it would be located on the existing Isle Royale parking lot, which is about 0.25 acre.

Housing. No site has been selected as a location for housing, but standard NPS architecture would be used, or the equivalent if the housing was built by the Grand Portage Band. The proposed housing probably would consist of two duplex-type buildings slightly larger than the existing NPS ranger quarters and a dormitory. On the basis of this assumption, it was assumed that the impact area for the proposed new housing would be about 0.5 acre.

Maintenance Facility / Boneyard. No preliminary design work exists for the proposed combined maintenance facility and boneyard; however, the existing maintenance facility and boneyard occupy 0.7 and 0.5 acre, respectively. The proposed facility probably would be larger than the existing two facilities; it was assumed that the combined facility would impact about 3 acres.

Total Estimate. The estimate for the total soil disturbance from proposed developments for each alternative was rounded to the nearest half acre.

IMPACTS OF ALTERNATIVE A: NO ACTION

Cultural Landscape

The housing area and maintenance facility have obliterated what is believed to be the southern terminus of the Grand Portage. Alternative A would not restore the Portage. Visitors would continue to use an alternative route for the first several hundred feet of the portage trail.

Although the landscape of the national monument does not look like it did during the historic period, it provides a rustic background for interpreting the stockade and the portage trail. Some modern day intrusions would continue to mar this background; examples are a parking area and a ranger office at the stockade front gate, an NPS ranger house near the monument entrance, County Road 17, the boneyard, the picnic area, the Isle Royale parking area, and a campground at Fort Charlotte.

Within the stockade, the landscape would continue to be a large grassy area unlike its historic appearance.

There would be no change in the landscape appearance of the Fort Charlotte portion of the national monument. Likewise, the landscape of the Grand Portage Village site would retain its presence appearance.

Cumulative Impacts. Over the years since the Grand Portage was abandoned and operations were moved to Fort William, a variety of changes have occurred. The forest has been logged, with the result that the species types, size, and mix of trees have changed. The area around the national monument has been designated a Reservation and the community of Grand Portage has been developed as a modern community with roads and facilities that surround and traverse the national monument.

Several species of exotic, invasive species have become established in the monument. In addition, since designation as a national monument, the landscape has been maintained for ease of management rather than to recreate the appearance of a historic landscape.

In the future, it is expected that the landscape would remain much as at present with the emphasis on removal of exotic species that can be removed, replacement of landscape features that are lost or damaged, and removal and replacement of the maintenance shops, and employee housing with new, more sensitively designed facilities.

Conclusion. The historic landscape of Grand Portage would not be restored. Intrusive development would continue to exist within the most historic areas of the national monument. The no-action alternative would have a minor long-term impact on the cultural landscape.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently there would be no impairment of resources or values associated with cultural landscapes.

Archeology and History

Archeological resources would continue to be identified during ground-disturbing activities and as a result of other monument actions taken to identify such resources within the national monument. At such time as the maintenance and housing facilities were to bereplaced, archeological investigations would be undertaken to determine whether any resources remained within the area and how best to preserve them. Historical research would continue.

Archeological resources associated with the Grand Portage trail could be lost during construction of new maintenance and housing proposed for the location of existing such facilities. The likelihood of such loss would be minimized by testing and/or excavation before construction.

Cumulative Impact. In the past, decisions about site development were made that, in hindsight, may not have been best for the archeological and historic resources. Such decisions include the placement of parking on the site and maintenance and housing facilities, which were probably constructed on top of archeological resources.

Archeological or historic resources associated with Grand Portage National Monument may exist on Grand Portage Island or as underwater archeological features of the bay. However, such resources have not been identified to date.

Conclusion. Archeological and historic investigations would be undertaken before development to ensure that such resources were understood and that they would not be damaged or lost as a result of NPS actions. There would be a minor long-term impact on the archeological resources of the national monument. There would be no impact upon the historical significance of the site.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with archeological or historic resources.

Sacred Sites

A Midewiwin site sacred to the Ojibwe may be located on national monument property. However, its exact location is unknown. Alternative A does not propose any changes that would impact the suspected general area. No other sacred sites have been identified.

Cumulative Impact. It is possible that maintenance activities conducted since the national monument was established, such as mowing, are having an ongoing impact on the Midewiwin site. Development of the community outside the monument boundaries may also have an effect through erosion or some other secondary impact.

As sacred sites outside the monument are lost, those remaining, such as the Midewiwin site, become more significant to the Grand Portage Band. Protection of the likely location by the National Park Service would allow any existing remains to be preserved and allow the Ojibwe to use the site.

Conclusion. If the Midewiwin ceremonial site is indeed on national monument lands, it would be preserved and protected for future use by the Grand Portage Band. Impacts would be characterized as negligible but long term.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with sacred sites.

Local and Regional Transportation

Alternative A would not include any changes to the local or regional transportation systems, nor would it allow for a large increase in visitors, which would necessitate additional transportation planning.

Cumulative Impact. Alternative A would not result in any cumulative impacts on local or regional transportation.

Conclusion. No short or long-term impacts on local or regional transportation would result from Alternative A.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with local and regional transportation.

Population, Economy, and Land Use

The "no action" alternative would have no effect on the local population surrounding Grand Portage National Monument, nor would it change any land uses outside monument boundaries. Visitation to the monument may grow along with the growth of tourism in the region but visitor length of stay would not likely increase without an additional interpretive draw, resulting in no appreciable spur to the local economy.

Cumulative Impact. The Grand Portage Band is actively working to upgrade water, sewer, housing, schools, and other facilities within the Reservation to benefit all Band members. One of the goals is to provide an incentive for job creation that would allow Band members living elsewhere to return to the Reservation and make a good living. Alternative A neither supports this initiative nor detracts from it.

Conclusion. Alternative A would have a negligible long-term impact on the local population, economy, or land use.

No actions proposed would constitute impairment.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with population, economy, or land use.

Visitor Experience and Interpretation

Under the no-action alternative, visitors to Grand Portage National Monument would continue to arrive at the stockade without the opportunity to receive orientation to interpretive stories, site significance, or available activities before reaching the stockade. Without this basic information before the stockade experience, many visitors would not be able to appreciate the stockade's resources in their historic context. The stockade would continue to serve the dual functions of visitor center and late 18th century fur trade post / living history site. With the highway and parking lot directly in front of the stockade, visitors still would have little opportunity to transition from the present to an immersion experience of the fur trade period.

Inside the stockade, modern intrusions would continue to mar the historic scene and ambience. The Great Hall still would serve as an orientation site and a sales area, in addition to its role in interpreting the North West Company and the business side of the fur trade. With only the Great Hall, the kitchen, the fur press, and the warehouse, it still would be difficult for visitors to see the stockade as it was during the fur trade era, when more than a dozen buildings were inside the palisade. This lack of historic structures would give visitors the impression of a large, grassy, and sleepy stockaded fort, missing the historical reality of a bustling, crowded commercial depot of international significance.

The current interpretive infrastructure, which would continue under Alternative A, would not support telling the broader story of the fur trade's role in the exploration, mapping, and settlement of the northwestern section of the United States and western Canada. There still would be few opportunities for visitors to appreciate the complexity of the fur trade and its impacts. Other interpretive themes that would not be presented are exploration, maritime history, and information about local fur trade interactions.

Opportunities to learn about Ojibwe culture would be constrained to the interpretive programs and cultural demonstrations in the Ojibwe village area. There would be little interpretation of contemporary Ojibwe culture, and visitors still would have little opportunity to understand the continuum of Ojibwe culture and heritage.

Winter and "shoulder season" visitors to Grand Portage National Monument would have little opportunity to understand the significance of the site and its resources.

Cumulative Impacts. Under the no-action alternative, the visitor experience of the stockade and other cultural resources would not be as rich and personal as they could be. Visitors would have little opportunity to receive basic information about the fur trade or the Ojibwe culture before they got to the stockade. This would diminish the interpretive potential of the stockade. Not all the primary interpretive themes would be interpreted.

Winter and shoulder season visitors would have little opportunity to understand the significance of the national monument.

Conclusion. Under Alternative A, the opportunity for visitors to understand and appreciate the significance of the monument's resources would be limited over the long term.

No actions proposed would constitute impairment.

Soils

No direct or indirect impacts on the soil resource would be expected under Alternative A, because no developments or road realignment are proposed under this alternative.

Cumulative Impacts. Alternative A would not contribute to cumulative impacts. However, impacts from existing roads and developments in the national monument would remain under the no-action alternative. In addition, foreseeable future actions of further developments in the vicinity of Grand Portage National Monument would adversely impact the soil resource through compaction and displacement from construction activities.

Conclusion. There would be no change to the soil resource, and no direct, indirect, or cumulative impacts would be expected.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with the soil resource.

Air Quality

Alternative A would have no direct impacts on air quality. Since monument operations would remain the same and no substantial increase in the number of visitors would be expected, there would be no substantial increase in vehicle emissions and no change in potential sources of air pollution.

An indirect effect of implementing this alternative would be an increased potential for higher particulate matter emissions from wildfires as fuel loads and understory biomass increased. When fuel loads increase, so does the potential for wildfire. Wildfires tend to have a greater impact on air quality than prescribed fires due to greater fuel consumption, fire intensities, and atmospheric conditions (prescribed fires are ignited during favorable atmospheric conditions to minimize impacts). The increased emissions from wildfires would constitute a periodic short-term negligible adverse impact.

Cumulative Impacts. The air quality would continue to be adversely affected by vehicle emissions, wood burning for home heating, prescribed fire, and industries in nearby population centers. The levels of emissions from these sources could change slightly in the near future, but any change would be negligible and would not measurably change air quality. The foreseeable future action that would be most likely to cause the most impacts on the national monument's air quality would be the prescribed burning of adjacent Band lands to improve habitat and forest health. Prescribed fire would cause periodic episodes of degraded air quality. The implementation of Alternative A in combination with past, present, and foreseeable future actions would result in periodic short-term minor

adverse impacts on air quality mainly from prescribed fire activity adjacent to the monument.

Conclusion. The air quality at Grand Portage National Monument would remain good under Alternative A. No direct impacts would be expected from implementing Alternative A. Indirect impacts of increased emissions from wildfires would constitute a short-term negligible adverse impact. Cumulative impacts mainly from adjacent prescribed fire activity would result in a short-term minor adverse impact.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with air quality.

Water Quality and Aquatic Species

Alternative A would have no direct or indirect impacts on water quality or aquatic species. No ground disturbance would occur, monument operations would remain the same as at present, the existing dock would remain in place, and the number of visitors to Grand Portage National Monument would not be expected to increase. There would be no substantial changes in the water quality or aquatic habitat. Therefore, no impact on aquatic species would be expected.

Cumulative Impacts. No change in impacts on water quality or aquatic species would be expected under Alternative A. The sources of impacts on water quality and aquatic species outside and within the national monument would remain at about existing levels; consequently, no cumulative impacts would be anticipated under Alternative A.

Conclusion. The water quality and aquatic habitat at Grand Portage National Monument would remain good under the no-action alternative. There would be no perceptible impacts on water quality.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with water quality or aquatic species.

General Vegetation and Fuel Loading

The existing mowing and maintenance practices would continue, and no vegetation manipulation is proposed under this alternative. In the short term, plant communities would appear the same. However, in the absence of disturbance, many of the forest community types would eventually succeed to a later successional community type. Shrubs and forest vegetation would encroach on natural openings. Aspen-birch community types would convert to a spruce-fir community type. The jack pine, red pine, white pine, and white cedar stands would slowly decline and eventually would become associated with a spruce-fir community type. These changes cannot be characterized as either beneficial or adverse. However, these changes would be considered a long-term moderate impact.

Periodic disturbances in the backcountry would continue to occur, resetting the successional clock of many stands. Most disturbances would be small and localized, such as windthrow pockets, individual dying trees, or fires where suppression action would keep them small. Pioneer communities such as aspen-birch or shrub community types would be established in forest openings created by these disturbances. The impact of these periodic disturbances and the resulting pioneer communities cannot be characterized as either beneficial or adverse; however, these changes would be considered a long-term moderate impact.

The existing pockets of high fuel loads caused by the recent outbreak of spruce budworm and windthrow in the backcountry would be augmented by the continual input from dying vegetation. The current trend of increasing fuel loads would continue, resulting in a trend of increasing risk of stand replacement fire. This increased risk would translate to increased difficulty of wildfire and would constitute a long-term minor to moderate adverse impact.

Cumulative Impacts. Timber harvest in areas adjacent to and near the backcountry portion of Grand Portage National Monument would continue, and even-aged harvest practices probably would continue to be the dominant silvicultural system used. Therefore, early successional forests and young age classes would continue to be represented across the region. Older age class stands (more than 100 years) would continue to be represented below historic levels due to previous and continued timber harvest.

Many harvested areas would be artificially regenerated to species that historically occurred in the region but are now underrepresented, such as red pine and white pine. However, aspen-birch and spruce-fir would remain the dominant community types of the region. These impacts from harvesting would constitute a long-term moderate impact.

Active and successful fire suppression probably would continue throughout the region. Fuel loading on land not actively managed would continue to increase, resulting in increased risk of stand replacement fire. Fuel loading at the monument would contribute to this potential. The increased risk would be considered a long-term minor to moderate adverse impact.

Initial discussions with the Grand Portage Band have occurred regarding cooperative prescribed fire management programs. Reasonable levels of interest have been expressed, and there is a possibility for future cooperative vegetation management and fuel reduction efforts, which would be a beneficial effect.

Implementing Alternative A in combination with past, present, and foreseeable future actions would result in a long-term minor to moderate adverse impact. This would be mainly due to the increased risk of stand replacement fire.

Conclusion. Implementing Alternative A would result in a long-term minor to moderate adverse impact. This would be mainly due to fuel loadings increasing over time, resulting in an increased risk of stand replacement wildfire. However, vegetation would remain natural-appearing and largely unaffected by active management, other than fire suppression.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of

resources or values associated with general vegetation or fuel loading.

Threatened or Endangered Species and Species of Concern — Plants

No direct or indirect effects on any listed plant species would be expected under this alternative, which would not include any developments or road realignment.

Cumulative Impacts. Since existing conditions would be retained under the no-action alternative and existing developments and park operations would continue, there would be no new impacts on any listed plant species.

Conclusion. There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with plants listed as threatened, endangered, or species of concern.

IMPACTS OF ALTERNATIVE B: FUR TRADE WITH MARITIME EMPHASIS

Cultural Landscape

The housing area and maintenance facility have obliterated what is believed to be the southern terminus of the Grand Portage. Alternative B would remove the housing area, the maintenance facility, and associated roads and parking near the southern terminus to allow restoration of the trail to its original location and the forested landscape to a semblance of its historic appearance.

Realigning the entrance road closer to Mount Rose and shifting the parking area toward the lake would possibly make parking more visible from the stockade.

Shifting the main visitor entrance of the stockade from the north to the more historically accurate lake gate and installing a more historically accurate footbridge over Grand Portage Creek would enhance the integrity of the stockade landscape. Removing some existing vegetation to create more open views and replanting other areas — the former roads, the parking lot, and the NPS ranger station — would create an open space around the stockade reminiscent of the fur trade era.

Clearing and grading areas in or adjacent to the national monument as part of the realignment of County Road 17 and construction of the heritage center would help to restore the natural drainage and vegetation.

In the primitive trail, resource trust, and interpretive historic zones, selectively using prescribed fire, hand-piling and burning woody fuel, and suppressing invasive exotic plants would help to restore historic forest cover, maintain safety, and prevent dangerous levels of fuel loading, as would removing hazard trees and other forms of vegetation manipulation.

Within the stockade, reconstructing at least three historic structures and outlining all other known structures would not restore the historic landscape, but the area would take on a much more historic appearance than at present.

Cumulative Impact. Should the upgrading of facilities at the national monument be successful in increasing visitation and keeping visitors longer, development around the national monument and within the community could grow with a corresponding change in the landscape. Developing a landscape in the national monument to have a more historic "feel" would have a major long-term beneficial effect on the cultural landscape, providing a more appropriate backdrop for the cultural resources.

Conclusion. Alternative B would have a moderate long-term beneficial effect on the national monument's cultural landscape, which would result from the continued gradual upgrading to a more appropriate setting.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with the cultural landscape.

Archeology and History

Preconstruction archeological evaluation would be carried out before any proposed ground-disturbing activity. This would lessen the likelihood that archeological resources associated with the fur trade or with prehistoric use of the site would be damaged or lost. The National Park Service also would conduct archeological evaluations of sites proposed for facilities outside the national monument.

Because the headquarters complex would include collections storage and management space large enough to include the collections now housed at the Midwest Archeological Center, the national monument would have better accessibility for research and display purposes.

At historic Fort Charlotte, the portage, and the Grand portage village the presence of more visitors could result in increased wear and tear on the resources and a greater possibility of disturbing archeological deposits.

Cumulative Impacts. As archeological sites in the region associated with the fur trade are lost or destroyed due to development, the resources of the national monument become even more significant for scientific study and interpretation. Likewise, the historic and archeological resources of Grand Portage National Monument could pique interest in the fur trade era that would result in the preservation of sites elsewhere in the region.

Previous archeological and historical research at the site preceded the reconstruction of the stockade, canoe warehouse, kitchen, and main hall. Work was accomplished using the best scientific methods and techniques of the day. However, the excavation may have resulted in a loss of data that could have been preserved using modern techniques. Proposed archeological work would be preceded by considerable historical research and preparation.

Conclusion. Under Alternative B the loss or destruction of many of the national monument's historic and archeological resources would be minimized, and the ability to make informed decisions about such resources would be enhanced.

Alternative B would result in a moderate short-term adverse impact due to the extensive amount of archeological excavation required and the fact that the site is usually destroyed in the process. This loss would be mitigated to the extent possible by the data collected in the process.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of

resources or values associated with archeological and historic resources.

Sacred Sites

The exact location of the Midewiwin ceremonial site is unknown. Alternative B would include building a trail through the general area with interpretive signs explaining the significance of the early 20th century town center. To avoid construction near the site, the National Park Service would consult with the Grand Portage Band of Minnesota Chippewa, and the trail would be designed after archeological evaluation; therefore, there would be no effect on any archeological remains. Members of the Grand Portage Band would be able to use the site for religious purposes. No other sacred or ceremonial sites would be affected by implementing Alternative B.

Cumulative Impacts. How much use of the Midewiwin ceremonial site is made by the Grand Portage Band is unknown. How many such sites exist outside the national monument is also unknown. However, because it is in an area away from visitor facilities, this site is believed to be relatively unaffected by visitor activities and programs. Adequate consultation with Band members with knowledge of the Midewiwin ceremonial site and predesign archeological evaluation, if acceptable to its users, would allow the site to remain unaffected by trail construction or the presence of visitors. With the subsequent loss of sacred sites outside the Reservation, this site would become more significant to the Grand Portage Band.

Conclusion. Alternative B would not result in any impacts on sacred sites.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with sacred sites.

Local and Regional Transportation

Alternative B proposes a minor realignment of County Road 17 to provide more room on the lake side for construction of the heritage center. That road would not be closed, but there would be some inconvenience during construction. Because the road would be moved slightly away from the reconstructed warehouse, there would be better visibility and less possibility of pedestrian-automobile accidents. The use of the road probably would increase because of the heritage center, and this could cause some minor congestion at the entrance to the parking area. This would be offset somewhat by the loss of Isle Royale ferry traffic in the early morning and late afternoon.

Cumulative Impact. There would be no cumulative impacts deriving from this alternative.

Conclusion. The impact of Alternative B would be a minor short-term inconvenience during construction of the new alignment and during construction of the heritage center. There would be no long-term cumulative impact on the local or regional transportation network.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS

planning documents. Consequently, there would be no impairment of resources or values associated with local and regional transportation.

Population, Economy, and Local Land Use

Federal property such as Grand Portage National Monument is not generally subject to local land use plans. However, the management and activities of the national monument are consistent with existing local land use plans and policies of the Grand Portage Reservation. Alternative B would not include any actions that would change this situation.

Except for the heritage center, most new facilities in Alternative B would be built outside the Reservation to the west. A new maintenance facility that would be constructed on the Reservation would conform to any local land use plans. Building this facility would be a partnership effort between the Grand Portage Band and Grand Portage National Monument.

An extended 7-month visitor season could make commercial development such as gas stations, convenience stores, or restaurants more feasible outside national monument boundaries.

During construction, there could be a temporary economic benefit from workers staying in the local area and using commercial establishments. Construction companies also could employ local workers, temporarily augmenting the economy.

Following construction, national monument staff occupying the new housing would use some of the local commercial outlets for food and supplies, although most purchases probably would be made in Grand Marais. Because NPS employees would not live on the Reservation in Alternative B, there would be no change in the population of the Reservation.

Cumulative Impact. Building a new heritage center and extending the monument's season could complement the Band's efforts to increase visitation to the hotel, casino, and marina by providing a more comprehensive destination for visitors. Depending upon the location selected, a maintenance facility outside monument boundaries could result in the development of more homes or businesses at or near that location that might take advantage of a new entry road.

Conclusion. There would be a minor short-term impact during construction and a minor long-term impact after construction.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with the economy, population, or local land use.

Visitor Experience and Interpretation

Alternative B would result in opportunities for visitors to receive orientation and some in-depth interpretation of the fur trade story and Ojibwe culture and history at the Grand Portage heritage center before experiencing the monument's resources. Keeping the heritage center open for seven months each year would enable more visitors to learn about the significance of Grand Portage National Monument.

Realigning County Road 17 closer to Mount Rose and a consequent shift of the parking and heritage complex toward the lake would improve visitor safety because visitors would not

have to cross County Road 17 to reach the stockade. However, those changes could make these facilities more visible from the lakeshore and stockade.

Removing parking from in front of the stockade would create a more historically correct setting for the stockade. Having visitors approach the stockade from the lake side would present a view that would more closely represent the late 18th century historic scene and focus their attention on the important role the lake played in both the daily life of the stockade and the business of the fur trade. The walk from the parking area to the stockade would enable visitors to experience a better transition from the heritage center's modern exhibits to the historic fur trade era. With the reconstructed dock, the reconstructed vessel *Otter,* and other period watercraft at the dock, visitors could better understand the pivotal role of the portage between the fur trapping regions and Montreal. These watercraft, coupled with expanded canoe programming, would give visitors an opportunity to learn more about the overall story of the transportation that brought trade goods into the region in exchange for furs.

With all the structures in the stockade furnished as they were during the height of the fur trade and interpreters dressed in period clothing, visitors would be better able to immerse themselves in the 18th century experience. Adding at least three more reconstructed and historically furnished structures (the carpenter/cooper shop, the trading store, and the manager's residence) and ghosting or outlining the remaining missing stockade structures would enable visitors to more easily imagine the stockade as it was during its heyday and to better understand what life was like during the fur trade period.

The new interpretive trail through the 20th century Ojibwe village site, added to the interpretation of Ojibwe culture and history in the heritage center, would enable visitors to experience more of the cultural continuum that made up the history and heritage of the Ojibwe at Grand Portage.

Cumulative Impacts. The visitor experience at the new heritage center would complement that at the Grand Portage State Park and would greatly expand the understanding of Ojibwe culture that is a goal of the Grand Portage Band of Minnesota Chippewa. It would also provide another facet in a wide variety of activities, from snowshoeing and snowmobiling in the community to gambling at the casino, and sailing at the marina.

Conclusion. Alternative B would improve visitor experience opportunities, and the expanded season would enable more visitors to understand the significance of Grand Portage National Monument, which would have modestly enhanced its potential as a destination. The change would be a major long-term beneficial effect because visitors could gain a comprehensive understanding of the Grand Portage role in the fur trade.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with the visitor experience and interpretation.

Soils

Implementing Alternative B would directly affect about 10 acres of the soil resource from new developments and road realignment. These developments would compact and displace soil at the proposed construction sites. Adverse impacts associated with compaction include reduced water infiltration and

soil porosity, less water-holding capacity, reduced aeration of the soil, increased surface runoff, and increased soil erosion. Adverse impacts associated with displacement include removal of the nutrient surface layer and soil profile disruption.

The proposed realignment of County Road 17 slightly upslope (west) of the existing alignment to accommodate the Grand Portage heritage center on the lakeshore side of the road would require large amounts of blasting and excavation of a rock lobe that extends west to east through the proposed new alignment. Excavating the rock lobe to accommodate the new alignment would require stockpiling topsoil adjacent to the road shoulders in the disturbance area so that the stockpiled soil could be applied after the excavation. The adverse impacts on the soil resource from Alternative B would be long-term and minor because they would be localized and limited to 10 acres.

Cumulative Impacts. The existing developments and roads in the national monument impact about 13 acres of the soil resource. Alternative B would result in about 4.5 acres of new disturbance within the monument. In addition, about 3.7 acres of soil would be rehabilitated by reclaiming the NPS ranger quarters site and part of the boneyard road and County Road 17. Implementing Alternative B, combined with past, present, and foreseeable future actions within the monument, would impact about 15 acres of the soil resource, which equates to about 2 percent of the monument.

Most of the impacts on the soil resource would occur outside the national monument from the proposed headquarters, housing, maintenance facility, and boneyard. About 5.5 acres of the soil resource outside the monument would be affected by Alternative B. These 5.5 acres, combined with past, present, and foreseeable future actions outside the national monument, would continue the trend of urban development and compaction and displacement due to construction activities. The cumulative adverse impact on the soil resource from implementing this alternative would be long-term and minor due to this continuing trend.

Conclusion. Implementing Alternative B would result in a long-term minor adverse impact on the soil resource. There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Therefore, there would be no impairment of resources or values associated with the soil resource.

Air Quality

Alternative B would involve increased use of prescribed fire as part of the landscape restoration effort. This alternative probably would use prescribed fire more than the other action alternatives because it is the most aggressive alternative in terms of restoring the landscape to a historic appearance. This would increase smoke production and reduce visibility, but the extent and duration of these impacts would be limited. Prescribed fire would be initiated under conditions for good smoke dispersal. Weather forecasts, smoke management forecasts, atmospheric stability, fuel loadings, fuel moisture, the amount of fuel consumed, and local and upper level winds all would be evaluated to minimize the effects of smoke from any prescribed fire. The use of prescribed fire would result in a short-term minor adverse impact on air quality.

Construction projects would potentially result in an increase in dust from soil exposure and disturbance. However, this effect, which would occur only during the construction period, would be limited in extent and duration. In addition, mitigating mea-

sures would be implemented to minimize dust from construction activities, such as applying water or dust control agents. Construction activities would result in a short-term minor adverse impact on air quality.

Increased visitation would lead to a minor increase of vehicles in the national monument; however, vehicle numbers in the monument would remain low; thus, vehicle emissions from visitors would remain low. Relocating the headquarters from Grand Marais would reduce the distance traveled for trips between the headquarters and the monument, thus reducing vehicle emissions from administrative trips. However, the reduction in emissions would be small and would not measurably change the air quality. The change in air quality from vehicle emissions would result in a long-term negligible adverse impact.

Cumulative Impacts. Impacts from vehicle emissions, wood burning for home heating, and industries in nearby population centers would continue at about the same level. Smoke from prescribed burning adjacent to the national monument would increase, but the impacts would be localized because burning would be done during conditions with good smoke dispersion. Overall, the levels of emissions from all sources would increase slightly, but any adverse impact would be negligible and would not measurably change the air quality in the long term.

Conclusion. The air quality at Grand Portage National Monument would decline at a local level but remain good. The only noticeable impact on air quality from this alternative would be an increased number of days on which the air quality and visibility were locally affected by prescribed fire or construction projects. Alternative B would have the greatest effect on air quality of the action alternatives. Implementing this alternative would result in a short-term minor adverse impact and a long-term negligible adverse impact on air quality.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with air quality.

Water Quality and Aquatic Species

Proposed developments and road realignment would have the potential to impact water quality and aquatic habitat through ground disturbance, which would result in increased surface runoff and soil erosion. However, because the proposed development would be limited to 10 acres and best management practices would be implemented to control soil erosion, increased sedimentation and turbidity would be minimal and limited to the period of construction and vegetation recovery. Development activities would result in a short-term negligible adverse impact on water quality and aquatic species.

The primary impact on water quality from removing the existing dock and constructing a historical wharf and a historical ship would be increased turbidity. However, this would be limited to the period of demolition/construction activities and shortly thereafter. This adverse impact would be negligible and short term.

Dredging might be needed along the proposed wharf to provide navigable waters for the historical ship. The primary impacts on water quality from dredging would be resuspension of sediment, increased turbidity, reduced light penetration, and potential release of pollutants incorporated with lake bottom sediments. The intensity and duration of these effects on water quality and aquatic species is unknown because the sediment

type (sand, silt, organic material) and sediment contaminants (heavy metals, phosphates, pesticides) associated with the dredging area are unknown.

The primary impacts on aquatic species from dredging would be the destruction of benthic habitat and the loss of individuals. However, this would occur only along the actual dredging trench, which would be limited to the dock area and channel to deeper water. In addition to impacts on benthic habitat and individuals, increased sedimentation from construction activities, dock removal, wharf reconstruction, and dredging could affect aquatic species by filling interstitial spaces within spawning gravel. Many aquatic species such as the brook trout need clean interstitial spaces within gravel for successful spawning and incubation. These spaces in the spawning beds allow for the infiltration of water to incubate the eggs. In addition, they provide cover for eggs and fry when they emerge from the eggs and are still dependent on their yolk sacs for nutrients.

The disposal of dredge material also would have the potential to adversely impact water quality and aquatic species. Adjacent water bodies and/or groundwater can be impacted by seepage out of the fill area. The primary concern with potential seepage would be leaching of soluble minerals, chemicals, or toxic substances. Again, the intensity and duration, or whether there would be impacts at all, are all unknown because the nature of the dredge material, the disposal location, and the characteristics of the disposal site must be known to understand the impacts. Additional site-specific analysis would be needed if dredging operations were conducted.

Cumulative Impacts Alternative B proposes the removal of the Isle Royale ferry operation from the national monument. Of the two ferries that leave from Minnesota, the *Wenonah* leaves from the dock at the national monument and the *Voyageur* leaves from a private dock at the Voyageurs Marina recently purchased by the Grand Portage Band. There are two possible locations to which the *Wenonah* could move, the Grand Portage Marina or the Voyageur Marina dock. The Voyageur Marina is a deeper water marina and could accommodate the *Wenonah* with no additional dredging. The Grand Portage Marina performs occasional dredging and probably could accommodate the *Wenonah* with more frequent dredging. This plan can only speculate about the impacts of either site because the decision about where to relocate the *Wenonah* probably would be made by Isle Royale National Park, the concessioner, and the Grand Portage Band rather than by Grand Portage National Monument. However, if dredging was necessary, there would be some degradation of water quality and aquatic habitat in the immediate Grand Portage Bay, the primary impact being increased turbidity and resuspension of sediments during dredging and for a short time thereafter.

Conclusion. Alternative B would result in more impacts on water quality than any of the other alternatives; however, impacts on water quality and aquatic species would not be of concern except in Grand Portage Bay because of the limited proposed development and site disturbance. Other than Grand Portage Bay, water quality would remain good and any impacts on aquatic habitat from proposed developments and park operations would be minimal.

The potential dredging operations might cause some degradation of water quality and aquatic habitat in Grand Portage Bay. The primary impact probably would be the increase in turbidity and resuspension of sediments, which would be limited to the period of the actual dredging and a short time thereafter. The impacts from resuspending pollutants would not be likely to be of concern because Grand Portage Bay probably has relatively low levels of critical pollutants. This is probable because the area surrounding Grand Portage Bay is not industrial or agricultural and it is relatively far from any major source of critical pollutants.

Implementing this alternative would result in a short-term negligible adverse impact on water quality and aquatic habitat in Grand Portage, Snow, and Poplar Creeks, and there would be a long-term minor to moderate adverse impact on water quality and aquatic habitat in Grand Portage Bay.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with the water quality or aquatic species.

General Vegetation and Fuel Loading

Removing vegetation from about 10 acres at proposed development and road realignment sites would disturb adjacent vegetation, remove biomass, reduce nutrient capital, and increase the risk of noxious weed introduction and spread. However, the extent of the vegetation removal would be minor and limited to the area proposed for development.

Some existing pockets of high fuel loads caused by the recent outbreak of spruce budworm and associated windthrow would be eliminated by continuing the current levels of maintenance and increasing fuel reduction efforts along the trail corridor and in the Fort Charlotte area. This would decrease the difficulty of wildfire control.

Manipulating vegetation in the eastern part of the national monument would help to return the area to a historical landscape. The area west of Grand Portage Creek would be restored to the Northwest Company era, and the area east of the creek would be restored to an early 20th century village setting. It is likely that the vegetation in those two periods was very similar — stands of large trees with low fuel loadings. Sometime during the early 20th century, timber harvest dramatically changed the landscape. Before the early 20th century, forest stands probably consisted of large trees because minimal timber harvesting was occurring except for onsite construction needs. Fuel loading in the eastern part of the monument would have been low due to fuel wood consumption for heating and cooking.

In natural openings that are relatively well drained, encroaching shrubs and trees would be removed, effectively increasing the size of the openings. This would be achieved through mowing, manual cutting, prescribed fire, or a combination of all those activities.

The red pine stand eventually would be removed from the landscape because pure red pine stands probably never existed at this site. This stand could be allowed to succeed to a different community type through natural succession and the suppression of fires, but it could be 200 years before another community type could be established. Removing the red pine stands would be a reduction in vegetative diversity and a unique community type for the monument.

The management of the aspen-birch and spruce-fir community types within the area proposed for a historical landscape would focus on fuel reduction. This would probably entail hand piling and pile burning. Overall, the vegetation manipulation and fuel loading reduction activities would result in a long-term minor beneficial effect. This would be mainly due to the reduction in fuel loading and the corresponding reduction in risk of stand replacement fire.

Cumulative Impacts. Despite the active vegetation manipulation along the lakeshore portion of the national monument, the

cumulative impacts on vegetation from Alternative B would be similar to those of Alternative A, mainly because of the relatively small area proposed for vegetation manipulation. As in Alternative A, early successional forests and young age classes would continue to be represented, and older age class stands would remain underrepresented. Regeneration efforts from foreseeable future actions outside the monument would lead to continued regional increases in white and red pine stands, but they would remain below historic levels. Active and successful fire suppression efforts would continue the trend of increasing fuel loads across the landscape, particularly in forests not actively managed.

Implementing Alternative B in combination with past, present, and foreseeable future actions would result in a long-term minor adverse cumulative impact. This is mainly due to the continuing trend of increasing fuel loads across the regional landscape.

Conclusion. Despite the proposed vegetation manipulation, the vegetation in the monument would remain natural in appearance. Alternative B would result in a minor long-term beneficial effect on vegetation and fuel loading in the monument.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with general vegetation and fuel loading.

Threatened or Endangered Species or Species of Concern — Plants

Of the 17 state listed plant species known to occur in Grand Portage National Monument, only 3 would have the potential to be affected by any proposed developments; the other 14 species are not near any proposed developments or road realignment. The three species that could be affected are state listed species and include mountain cliff fern (*Woodsia oregana)* — tracked, Rocky Mountain cliff fern (*Woodsia scopulina* D. C. Eat.) — threatened, and rock whitlow grass (*Draba arabisans* Michx.) — species of special concern. All of these are found near the existing Isle Royale parking lot, the site for the proposed road realignment and heritage center. These species occur on or near cliff faces and among slate (argillite) scree slopes on Mount Rose adjacent to the proposed road and heritage center sites. The primary concern for these plants would be changes in moisture regimes and activities that could cause the cliff faces or scree slopes to crumble and slide.

It is likely that the road realignment and construction of the proposed heritage center would adversely affect the ferns because blasting and excavation would be needed to remove a large rock lobe that crosses the proposed road location, and the ferns occur on this rock lobe. The road realignment near the rock lobe would destroy habitat and individual ferns. In addition, the new alignment would create a linear opening adjacent to fern habitat, which might change the site's shading and moisture retention, making it more sunny and dry. To minimize the impacts of vegetation removal, a buffer strip of trees would be planted and maintained before road construction to shade the ferns that would not be directly affected by removing part of the rock lobe. This mitigative measure would reduce changes in shading and moisture regimes, minimizing the impacts on the ferns. However, despite these mitigating measures, implementing Alternative B would result in a long-term

minor to moderate adverse impact on three state listed plant species.

Cumulative Impacts. Existing developments and operations would continue not to affect any listed plant species. Foreseeable future actions would not be likely to impact any state or federally listed plant species because they would not take place in the habitat of any listed plant species. The only cumulative impacts on listed plant species would be the direct and indirect impacts from implementing this alternative.

Conclusion. This alternative would have no potential to affect 14 of the 17 listed plant species, but there probably would be a long-term minor to moderate adverse impact on 3 listed species from the proposed road realignment. Despite the impacts on the state-listed plants, there would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with plants that are listed as threatened, endangered or species of concern.

IMPACTS OF ALTERNATIVE C: FUR TRADE AND OJIBWE HERITAGE

Cultural Landscape

The upper portions of the portage trail would continue to possess a high degree of integrity under Alternative C. Removing the housing area and maintenance buildings at the lower portion and rehabilitating the trail would enhance its historic setting. Additional trail construction from the Mount Rose trail to the small redeveloped Isle Royale parking area would likely require considerable design to minimize the impact on the natural landscape to the extent possible.

After the NPS ranger house was removed, the west entrance could be landscaped in keeping with the surrounding lands, making it more appropriate to the main national monument entrance.

Realigning the roads outside the national monument would remove cars and other traffic that visually intrude upon the rural, historic character of the stockade area.

The landscape of the lakeshore area immediately west of the stockade would be restored to the fur trade era; the landscape east of the stockade would be restored to the early 20th century.

Removing some existing vegetation to create more open views and replanting other areas — the former roads, the parking lot, and the NPS ranger station — to create an open space around the stockade would let visitors step back in time from adjacent contemporary development to the time of the fur trade. Limited landscape restoration west of the stockade to the North West Company period would provide an appropriate setting from the monument entrance to the stockade. East of the stockade, the landscape would have more of a 20th century appearance, in keeping with the current use and the plan to interpret the 20th century Ojibwe community. The landscape of Fort Charlotte would remain relatively unchanged.

In the primitive trail, resource trust, and interpretive historic zones, selectively using prescribed fire, hand-piling and burning woody fuel, and suppressing invasive exotic plants would help to restore historic forest cover, maintain safety, and prevent dangerous levels of fuel loading, as would removing hazard trees and other forms of vegetation manipulation.

Cumulative Impact. Placing the heritage center and the national monument headquarters along MN 61 would add more development to a general location that already has considerable development from the hotel and casino, parking, and the marina. The landscape of the heritage center site would change from a natural mix of open and wooded vegetation to a more manicured landscape. This could be even greater should a state of Minnesota Tourist Information Center be combined with or located in the same general area.

Additional development could be expected in the general area to provide concentrated support facilities for visitors, casino and hotel guests, and marina users. Such development would change the landscape from rural to urban.

Road realignment would change the Reservation landscape by replacing wooded land between County Road 17 and BIA 2 with a paved right-of-way approximately 60 feet wide. Housing and other development could occur along this new road.

Removing the Isle Royale ferry from the national monument would be a beneficial change to the landscape of the national monument and result in no significant impact on the landscape of the Reservation. Removing the steel passenger ship *Wenonah* from the NPS dock would change the cultural landscape by allowing the removal of an intrusive nonhistoric dock, making it possible to create a more historic wharf in keeping with the character of the site. (The ship Wenonah does not relate to the site historically.)

The Grand Portage Band has recently purchased the Voyageur Marina where the passenger ship *Voyageur* docks. This is the likely site for the *Wenonah* to dock as well, although the existing Grand Portage Marina also could handle such a ship. Adequate parking exists at both locations.

Locations for new employee housing and maintenance facilities outside the national monument boundary have not been selected, so the impact on the Reservation landscape is not known. However, additional development could occur in the area as a result of the new facilities. A possible result would be the loss of the natural landscape at these locations.

Controlled burning by the Grand Portage Band outside the national monument could dramatically change the appearance of the area along the portage by changing the species, size, and density of the forest landscape that serves as a backdrop. An environmental impact statement being prepared by the U.S. Forest Service dealing with the aftermath of a July 4, 1999, blowdown also could propose actions that would dramatically affect the landscape of Fort Charlotte.

Conclusion. Although many of the actions discussed are not fully developed yet, the cultural landscape of the national monument and the area outside, which could be affected by development, could significantly change, as could the landscape within the national monument. This alternative has the potential to result in moderate and long-term beneficial and adverse impacts on the cultural landscape both inside and outside the national monument.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with cultural landscapes. Likewise, there would be no impairment of cultural landscape resources outside the national monument.

Archeology and History

Reconstructing three structures and "ghosting" (outlining) all other known stockade structures possibly could damage the subsurface remains of the original structures. Archeological evaluation would be undertaken before construction to identify any such remains and to determine whether reconstruction should continue or a different structure should be rebuilt. Alternative C would cause less ground disturbance than Alternative B because less reconstruction is proposed.

The National Park Service would make every effort to avoid losing or damaging archeological or historic resources when the heritage center, national monument headquarters, the maintenance facility, and employee housing were moved to locations outside the national monument's boundaries to protect the historic feeling of the stockade area from modern intrusions. Should such resources be identified, their significance would be evaluated against National Register of Historic Places criteria, and if they were found eligible for listing on the register, the design would be modified or another site chosen for construction. This would minimize any adverse impacts on cultural resources at these locations.

At historic Fort Charlotte, more visitors could result in a greater possibility that archeological deposits would be disturbed, a potential negative impact. More visitors also would be expected at the 20th century village site, with corresponding wear and tear and potential damage to archeological resources.

Archeological data gathered through systematic inventory and testing and the judicious use of excavation before any construction would help to fill in the gaps in the site's context, both historic and prehistoric. Information gained would include building locations and construction methods, prehistoric and historic activity areas, the locations of poses, and the objects of everyday life. Such data would improve interpretation, so that visitors could gain a fuller and more accurate understanding of the site.

Each archeological site identified would be evaluated for inclusion on the National Register of Historic Places either as a part of the existing nomination for Grand Portage National Monument or as a distinct site in its own right. This would increase the protection of such resources from actions that might threaten their existence, and it would allow the national monument to make long-term planning decisions about areas without significant cultural resources.

Because the headquarters complex would include collections storage and management space large enough to include the collections now housed at the Minnesota Historical Society and the Midwest Archeological Center, the national monument would have more control of those collections. This would result in better use of the collections for research and interpretive exhibition, as well as reducing the chances of losing or damaging objects in transit between two facilities.

After the national monument was fully inventoried, all collections returned to Grand Portage National Monument, and collections storage space developed, the likelihood of irretrievable and irreversible loss of archeological resources would be minimized.

Cumulative Impacts. Alternative C would provide the optimum atmosphere for preserving archeological resources and collections. With the passage of time and a reduction in the number of remaining fur trade sites, the archeological resources and collections of Grand Portage National Monument would become more and more valuable for research purposes.

There has been no historical research or archeological survey that covers the area proposed for national monument facilities outside the monument boundary, and no properties are listed

on the National Register of Historic Places. Therefore, little is known about the historic and archeological resources at any of these sites. Those resources would be inventoried and evaluated for the national register before any construction.

Likewise, no systematic archeological inventory and evaluation of archeological resources in the national monument has been undertaken, although specific archeological work has been undertaken before any development activities. The plan calls for such an inventory in Appendix D. Until more is known about the archeological resources, nothing substantive can be said about cumulative impacts except that the National Park Service would work with the Minnesota Historical Society, the Grand Portage Band, and any other entity to ensure that significant historic or archeological resources would not be lost or destroyed as a result of NPS actions.

Conclusion. In all instances where identified sites would be disturbed and could not be avoided, the national monument would undertake data recovery in accordance with the programmatic agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. This would be done to retrieve important information, thereby reducing the intensity of adverse impacts. For some proposed project areas, information regarding the nature and importance of archeological resources is unknown; in these instances before any construction disturbance the national monument would first inventory project areas, test and evaluate the significance of identified sites, and carry out appropriate data recovery in accordance with the programmatic agreement.

The impact of Alternative C on resources of historic or archeological significance would be minor and of short duration, based on the mitigative measures to be implemented.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents; therefore, there would be no impairment of resources or values associated with archeology and history.

Sacred Sites

The exact location of the Midewiwin ceremonial site is not known. Alternative C would include building an interpretive shelter and trail in the general area with interpretive signs explaining the significance of the early 20th century town center. Because it would be designed after archeological evaluation and full consultation with the Grand Portage Band of Minnesota Chippewa to avoid construction near the site, there would be no effect on any archeological resources of the site. No other sacred or ceremonial sites would be affected by implementing Alternative C.

Cumulative Impacts. How much use of the Midewiwin ceremonial site is made by the Grand Portage Band is unknown. How many such sites exist outside the national monument is also unknown. However, because it is in an area away from visitor facilities, this site is believed to be relatively unaffected by visitor activities and programs. Adequate consultation with the Band members with knowledge of the Midewiwin ceremonial site and predesign archeological evaluation, if acceptable to its users, would allow the site to remain unaffected by trail construction or the presence of visitors. With the subsequent loss of sacred sites outside the Reservation, this site would become more significant to the Grand Portage Band.

Conclusion. There would be no effect on sacred sites under Alternative C.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with sacred sites.

Local and Regional Transportation

The proposed rerouting of County Road 17 around Mount Rose, leaving the current roadbed about 1,800 feet west of the boundary, roughly parallel to MN 61 to BIA Route 2, and the added bridge across Grand Portage Creek would allow local traffic to circumnavigate the national monument without having to drive on MN 61. County Road 17 would end at the current Isle Royale parking area and be totally removed from that point to the northeast boundary. These changes would enable the national monument to close County Road 17 in the historic area and restore the landscape to a more historic appearance. It also would enhance the safety of visitors crossing County Road 17 to reach national monument facilities, because it would alleviate the problems of drivers exceeding the 20 mph speed limit, endangering visitors who do not pay close enough attention to traffic. This realignment would be almost entirely on Grand Portage Band land, with the bridge over Portage Creek being on national monument land.

Rerouting the county road would afford new access to the Baptist cemetery and to several houses that otherwise can be reached only from the high-speed MN 61. For local traffic coming from the west, the distance to the community center and other facilities in the east part of the monument would be comparable to the existing route.

It is unlikely that any regional impacts would result from Alternative C. A change in local use patterns would be necessary. A church and several homes along County Road 17 west of the monument would be inconvenienced somewhat by the road being truncated just inside the national monument boundary, causing them to backtrack as much as a third of a mile to reach the newly rerouted section.

Cumulative Impact. Placing the heritage center and the national monument headquarters along MN 61 would concentrate development at the intersection of MN 61 and County Road 17. This could encourage the development of other related businesses or facilities in the immediate vicinity. Such facilities as a tourist information center, gas stations or a truck stop, and convenience stores could be developed. At the same time, the Band is making efforts to encourage business at the marina, hotel, and casino.

The Band is developing a housing area west of the casino that will depend on either MN 61 or County Road 17 for access to the rest of the community.

The state of Minnesota is working to get MN 61 designated a national scenic byway as a means of increasing tourism to this area of the state. This has the potential to bring more traffic to MN 61 within the Reservation.

Constructing a bypass road around Mount Rose and a bridge connecting County Road 17 with BIA 2 would have little impact on the local transportation network because the existing roads would remain open until the new bypass was in place. Once the bridge and the bypass road were completed, there

would be some minor inconvenience as local road use patterns changed to the new route.

Conclusion. There is a potential for development to occur at the intersection of MN 61 and County Road 17. This could affect the local transportation network, causing some inconvenience to local users. These actions would have the potential to result in a moderate, long-term impact on the local transportation system. Impacts on the regional transportation network would be negligible. During construction activities associated with a new heritage center and headquarters, there could be a minor impact on local traffic.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with local and regional transportation.

Population, Economy, and Land Use

Federal property such as Grand Portage National Monument is not generally subject to local land use plans. However, an effort is made to work with local governments to ensure that any actions are consistent with local land use plans to the extent possible.

This alternative calls for the development of most new visitor, administrative, and maintenance facilities, as well as employee housing, outside the national monument on Reservation lands. All actions would be developed in consultation with the Grand Portage Band to ensure that NPS actions would be consistent with the Band's land use plans.

Building the heritage center and national monument headquarters at the intersection of MN 61 and County Road 17 would provide the visibility necessary to allow year-round operation of the national monument. This would increase visitation numbers and possibly encourage the development of commercial enterprises that would serve the additional visitors to the monument and the hotel, casino, and marina.

During construction, there could be temporary economic benefit from workers staying in the local area and using commercial establishments. Construction companies also could employ local workers, temporarily augmenting the economy.

Following construction, national monument staff occupying the new housing would use some of the local commercial outlets for food and supplies, although most purchases probably would be made in Grand Marais.

Any new development could bring jobs that would allow the Band members to return to the Reservation. The local population also would increase as a result of national monument staff living in the community, possibly as many as 10–15 people.

Cumulative Impact. Constructing visitor facilities at MN 61 and County Road 17, along with the Band's efforts to upgrade the facilities at the Grand Portage Lodge and Casino and at the marina, could result in a moderate long-term beneficial effect on the local economy. Other Band efforts to increase tourism include the creation of a snowmobile trail from Canada to the Grand Portage Lodge, purchasing and developing the former Voyageurs Marina, and community infrastructure development. The state of Minnesota is working to designate MN 61 as a national scenic byway, develop a new tourist information

center in the area, and develop facilities at Grand Portage State Park. Any or all of these actions could improve the local economy and increase population as jobs increased.

Conclusion. Placing the heritage center and the national monument headquarters at MN 61 and County Road 17 could spur the development of the immediate area and result in change to the economy, land use, and population. This beneficial effect would be moderate and long-term.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with population, economy, or land use.

Visitor Experience and Interpretation

Alternative C would result in opportunities for visitors to receive orientation and in-depth interpretation of the fur trade story and Ojibwe culture and history at the Grand Portage heritage center before experiencing the monument's resources. Keeping the heritage center open year-round would enable more visitors, even winter visitors, to learn about the significance of Grand Portage National Monument.

Removing parking from in front of the stockade would create a more historically correct setting for the stockade. Having visitors approach the stockade from the lake side would give them a view that would more closely represent the late 18th century historic scene and focus their attention on the important role the lake played in both the daily life of the stockade and the business of the fur trade. The walk from the parking area to the stockade would enable visitors to experience a better transition from the modern exhibits in the heritage center to the historic fur trade era. With the reconstructed dock and some smaller period watercraft at the dock, visitors would be better able to understand the pivotal role of the portage between the fur trapping regions and Montreal. These watercraft, coupled with expanded canoe programming, would give visitors an opportunity to learn more about the overall story of the transportation that brought trade goods into the region in exchange for furs.

With some effort, visitors would be able to immerse themselves in the 18th century experience, and they would have some oppor-tunity to experience first-hand the capacity and complexity of the stockade and its structures. Inside the stockade, the Great Hall and the kitchen would be furnished as they were during the height of the fur trade. With interpreters dressed in period clothing and all the other structures that were originally a part of the stockade identified in their appropriate locations, visitors could receive an impression of the interior landscape of the stockade. Visitors would experience a landscape (inside the stockade) that would give them a truer sense of crowding and the scale and function of the landscape, the sense of the whole that was meant to impress voyageurs, Ojibwe, and rival companies.

Visitors' opportunities to understand the continuum of Ojibwe culture and history would be greatly enhanced under Alternative C through the interpretive exhibits in the Grand Portage heritage center and exhibits in the Ojibwe Cultural Demonstration Shelter, where interpretive exhibits and programs from the Grand Portage Band would be offered, as would demonstrations of Ojibwe crafts and cultural practices. The restoration of the area east of the stockade to the early 20th century Ojibwe village appearance would further emphasize the continuum of Ojibwe culture and history.

The added accessibility to part of the historic portage trail would enable all visitors to have a direct experience of the portage. Improving the campsites near Fort Charlotte would slightly enhance the visitor experience at that end of the portage.

Shifting the main visitor entrance of the stockade from the north to the more historically accurate lake gate and installing a more historically accurate footbridge over Grand Portage Creek would enhance the integrity of the stockade landscape. The addition of small maritime craft and a more historic appearing wharf would likewise enhance landscape integrity, introducing the clutter and sense of activity that was historically a part of the landscape.

Cumulative Impacts. Visitors would have a greater variety of activities and places to visit in the local area, with the possible result that people would stay longer in the area and receive a more in-depth understanding of the fur trade. The Grand Portage State Park and the national monument have complementary missions that tell different parts of the Grand Portage story. A snowmobile trail planned by the Grand Portage Band would complement the hiking and snowshoeing available on the portage trail. The casino and marina offer a different kind of visitor experience unrelated to the national monument mission, but one that would allow a visitor to spend more time in the community.

Throughout the year, there is a variety of activities in the Grand Portage community, some related to Grand Portage National Monument, some not. Examples would be a Fur Trade Rendezvous at the national monument, an Indian Pow Wow and rodeo, and a winter dog sled race.

Conclusion. Alternative C would provide a greater variety of activities and visitor experiences than now exist. A more in-depth understanding of the fur trade would be available at the national monument. The heritage center would be open year-round rather than seasonally. Overall, Alternative C would result in a major long-term beneficial effect.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with the visitor experience and interpretation.

Soils

The impacts on soils that would result from Alternative C would be the same as those described for Alternative B, except that the location of the soil impacts would differ. Like Alternative B, Alternative C would impact about 10 acres of the soil resource, resulting in long-term minor adverse impacts. These impacts would be localized and limited to 10 acres.

Cumulative Impacts. The existing developments and roads in the national monument affect about 13 acres of the soil resource, and there would be about 3 acres of new disturbance within the national monument. About 2.2 acres of soil would be rehabilitated by reclaiming the NPS ranger quarters site, the maintenance/housing area, the boneyard, and part of the boneyard road. Implementing Alternative C, combined with past, present, and foreseeable future actions within the national monument, would impact about 13.8 acres, or 2 percent of the monument.

Approximately 7 acres of impacts on soils outside the national monument would result from the proposed road realignment, housing, the maintenance facility, and the boneyard. Combined with past, present, and foreseeable future actions outside the monument, these effects on 7 acres would continue the trend of urban development and compaction and displacement of the soil resource from construction activities. Alternative C would result in a long-term cumulative minor adverse impact on the soil resource.

Conclusion. Implementing Alternative C would result in a long-term minor adverse impact on the soil resource. There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with soils.

Air Quality

Alternative C would involve the use of prescribed fire as part of the landscape restoration effort. This alternative would not use prescribed fire as much as Alternative B, which means there would be fewer days on which air quality and visibility would be locally impacted by prescribed fire operations. Any impacts on air quality from prescribed fire operations would be limited in extent and duration. To minimize the impacts of smoke from any prescribed fire, weather forecasts, smoke management forecasts, atmospheric stability, fuel loadings, fuel moisture, amount of fuel consumed, and local and upper level winds would all be evaluated. The use of prescribed fire would result in a short-term minor adverse impact on air quality.

Impacts on air quality from construction projects would be about the same as those described for Alternative B. Dust from soil exposure and disturbance at construction sites would be limited in extent and duration. To minimize dust from construction activities, the National Park Service would employ mitigative measures such as applying water or dust control agents. As in Alternative B, construction activities would result in a short-term minor adverse impact on air quality.

The heritage center on MN 61 would have the potential to increase visitation. However, the increase in visitation probably would result from better visibility of the monument and improved access from the highway, which might cause highway travelers to stop for rest or on the spur of the moment. Therefore, the increase in visitation would not increase the number of vehicles in the area; thus, vehicle emissions from visitors would not increase. In addition, relocating the headquarters from Grand Marais would reduce the distance traveled between the headquarters and the national monument, thus reducing vehicle emissions from administrative trips. However, this reduction in emissions would be small and would not measurably change the air quality. Any change in air quality from vehicle emissions would be a long-term negligible adverse impact.

Cumulative Impacts. Impacts from vehicle emissions, wood burning for home heating, and industries in nearby population centers would continue at about the current levels. Smoke from prescribed burning would increase, but the impacts would be local because burning would be done during conditions with good smoke dispersion. Overall, the levels of emissions from all sources would increase slightly, but any change would be negligible, and the air quality would not change measurably in the long term.

Conclusion. The air quality at Grand Portage National Monument would deteriorate at a local level but remain good. The

only noticeable impacts on air quality and visibility from Alternative C would result from prescribed fire or construction projects on more days than at present, but this would occur on fewer days than in Alternative B. Alternative C would result in a short-term minor adverse impact and a negligible long-term adverse impact on air quality.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with air quality.

Water Quality and Aquatic Species

Proposed developments, road realignment, and bridge construction over Grand Portage Creek would have the potential to impact water quality and aquatic habitat through ground disturbance, which would result in increased surface runoff and soil erosion. However, due to the limited extent of the proposed developments (10 acres) and implementation of best management practices to control soil erosion, increased sedimentation and turbidity would be minimal and limited to the period of construction and vegetation recovery.

A key difference between Alternatives B and C is the bridge construction over Grand Portage Creek in Alternative C. This difference would result in greater sedimentation and turbidity in Grand Portage Creek in Alternative C for the period of construction and vegetation recovery. Despite this difference, there would be only a short-term negligible difference in water quality and aquatic habitat in Grand Portage Creek.

The biggest difference between Alternatives B and C is that no proposed dredging near the historical wharf would be carried out in Alternative C. Water quality and aquatic habitat would still be impacted from removing the existing dock and constructing a historical wharf, which would increase turbidity during the period of demolition/construction activities and shortly thereafter. However, eliminating the need for dredging at the dock site would do away with the biggest impact on water quality and aquatic habitat. Implementing Alternative C would result in a short-term negligible adverse impact on water quality and aquatic habitat.

Cumulative Impacts. Selection of either the Voyageurs Marina or the Grand Portage Marina for docking the *Wenonah* could affect water quality if dredging was required at either site. The cumulative impacts would be similar to those of Alternative B, but there would be the potential for only one dredging operation, which would make the impacts on water quality in the bay from Alternative C about half those of Alternative B. Implementing Alternative C, in combination with past, present, and foreseeable future actions, would result in a long-term minor to moderate adverse impact mainly from the dredging activities for the Isle Royale ferry service.

Conclusion. Water quality would be expected to remain good, and any adverse effects on aquatic habitat from proposed developments and national monument operations would be short term and negligible. The cumulative impact of potential dredging operations from the Isle Royale ferry service might cause some degradation of water quality and aquatic habitat in Grand Portage Bay. The primary cumulative impact probably would be more turbidity and resuspension of sediments, which would be limited to the period of dredging and shortly thereafter. The cumulative impacts from resuspending pollutants would not be likely to be of concern because Grand Portage Bay probably has relatively low levels of critical pollutants.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with water quality and aquatic species.

General Vegetation and Fuel Loading

Removing vegetation from about 10 acres at proposed development and road realignment sites would disturb adjacent habitat, remove biomass, reduce nutrient capital, and increase the risk of noxious weed spread. Although the acreage of vegetation removal would be the same as Alternative B, this alternative would impact more habitat and create more edge habitat because there would be more road construction. This would constitute a long-term, minor, adverse impact.

The impacts on vegetation and fuel loading along the trail corridor and in the Fort Charlotte area would be the same as in those described for Alternative B. The increased fuel reduction efforts would eliminate the existing pockets of high fuel loads. This would decrease the difficulty of wildfire control and constitute a long-term, minor, beneficial impact.

Vegetation manipulation is proposed in the eastern part of the national monument to return the area to a historical landscape. Limited restoration of the landscape west of Grand Portage Creek would bring the area to its historical appearance in the North West Company era; the area east of the creek would have a more 20th century appearance. This would primarily entail reducing fuel loading and maintaining existing natural openings. This would constitute a long-term minor beneficial effect.

The red pine stand near the stockade, which would be retained as part of the landscape, would be maintained through manual cutting, prescribed fire, or a combination of both. Retaining this stand would provide species diversity to the landscape of an element that is present below historic levels at a regional scale. This would constitute a long-term minor beneficial effect.

Overall, the vegetation manipulation and fuel loading reduction would result in a long-term minor beneficial effect. This would be due mainly to the reduction in fuel loading and the corresponding reduction in risk of stand replacement fire.

Cumulative Impacts. The combined impacts of Alternative C with past, present, and foreseeable future actions would be the same as those described for Alternative B; that is, early successional forests and young age classes would continue to be represented, and older age class stands would remain underrepresented. Regeneration efforts in managed forests would lead to continued regional increases in white and red pine stands, but they would remain below historic levels. Active and successful fire suppression efforts would continue the trend of increasing fuel loads across the landscape, particularly in forests not actively managed.

Conclusion. Despite the proposed vegetation manipulation, the vegetation in Grand Portage National Monument would remain natural in appearance. Alternative C would result in a long-term, minor, beneficial impact on vegetation and fuel loading.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing

legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with general vegetation or fuel loading.

Threatened or Endangered Species or Species of Concern — Plants

Alternative C would not have any direct or indirect impacts on any listed plant species. All development and the road realignment would be in areas away from known sites of listed plants.

Cumulative Impacts. Existing developments and national monument operations would continue to have no impact on any listed plant species, and Alternative C would not involve any actions at or near any of the known listed plant species sites; therefore, no cumulative impacts on listed plant species would be expected.

Conclusion. There would be no effects on any listed plant species under this alternative. There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Therefore, there would be no impairment of resources or values associated with plants listed as threatened, endangered, or species of concern.

IMPACTS OF ALTERNATIVE D: HERITAGE CENTER FOCUS

Cultural Landscape

The upper portions of the portage trail would continue to possess a high degree of integrity under Alternative D. Removing the housing area and maintenance buildings at the lower portion and rehabilitating the trail would enhance its historic setting. Connecting the portage trail to an overall interpretive trail would give more visitors access to the portage and the Grand Portage community.

With visitor facilities located offsite, the existing Isle Royale parking area could not be removed because it would be needed to serve visitors driving to the stockade.

The most dangerous segment of County Road 17 would be eliminated by removing the segment of County Road 17 from the stockade east and north to near the national monument boundary and constructing a bridge across Grand Portage Creek and the portage trail that connects County Road 17 just inside the north boundary with BIA 2 on the west side. This would make it possible to obliterate the existing roadway and replant it with native species. It would not enhance the cultural landscape around the stockade because the modern roadway and traffic would continue to exist as modern intrusions.

The landscape of the lakeshore area would be managed to reflect the continuum of use throughout the site's history. This would allow the national monument to maintain different areas in different ways but would not necessarily provide a landscape reminiscent of the period of the site's heyday. Removing the dock would eliminate a large modern intrusion from the stockade area.

The Grand Portage 20th century village site would be maintained much as it is today, with the protection of its wetlands features and archeological resources foremost. Because the village site would be interpreted at the Grand Portage heritage center, there would be little reason for visitors to go to the village. The landscape would therefore be managed for its wetlands and other natural values.

In the primitive trail, resource trust, and interpretive historic zones, selectively using prescribed fire, hand-piling and burning woody fuel, and suppressing invasive exotic plants would help to restore historic forest cover, maintain safety, and prevent dangerous levels of fuel loading, as would removing hazard trees and other forms of vegetation manipulation.

Cumulative Impact. Placing the heritage center and the national monument headquarters along MN 61 would add more development to a general location that already has considerable development from the hotel and casino, parking, and the marina. The landscape of the heritage center site would change from a natural mix of open and wooded vegetation to a more manicured landscape. This could be even greater should a state of Minnesota Tourist Information Center be combined with or located in the same general area.

Additional development could be expected in the general area to provide concentrated support facilities for visitors, casino/hotel guests, and marina users. Such development would change the landscape from rural to urban.

Locations for new employee housing and maintenance facilities outside the national monument boundary have not been selected, so the impact on the Reservation landscape is not known. However, additional development could occur in the area as a result of the new facilities. A possible result would be the loss of the natural landscape at these locations.

Removing the Isle Royale ferry from the national monument would be a beneficial change to the landscape of the national monument and result in no significant impact on the landscape of the Reservation. Removing the steel passenger ship *Wenonah* from the NPS dock would change the cultural landscape by allowing the removal of an intrusive nonhistoric dock, making it possible to create a more historic wharf in keeping with the character of the site. (The ship *Wenonah* does not relate to the site historically.)

The Grand Portage Band has recently purchased the Voyageur Marina where the passenger ship *Voyageur* docks. This is the likely site for the *Wenonah* to dock as well, although the existing Grand Portage Marina also could handle such a ship. Adequate parking exists at both locations.

Controlled burning by the Grand Portage Band outside the national monument could dramatically change the appearance of the area along the portage by changing the species, size, and density of the forest landscape that serves as a backdrop and a buffer from development. An environmental impact statement being prepared by the U.S. Forest Service dealing with the aftermath of a July 4, 1999, blowdown could also propose actions that dramatically affect the landscape of Fort Charlotte.

Conclusion. Although many of the actions discussed are not fully developed yet, the cultural landscape of the national monument and the area outside that could be affected by development could significantly change, as could the landscape in the national monument. The cumulative impact on the cultural landscape both inside and outside the national monument from this alternative has the potential to be moderate and long term with both beneficial and adverse impacts.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing

legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with cultural landscapes.

Archeology and History

Outlining ("ghosting") all known structures with slate rock or some other material in the stockade would not damage any subsurface remains of the original structures.

The National Park Service would try to ensure that there would be no loss or damage to archeological or historic resources when the heritage center, national monument headquarters, the maintenance facility, and employee housing were moved to locations outside the national monument's boundaries to protect the historic feeling of the stockade area from modern intrusions. Should such resources be identified, their significance would be evaluated against National Register of Historic Places criteria, and if they were found eligible for listing on the register, the design would be modified or another site chosen for construction. This would minimize any adverse impacts on cultural resources at these locations.

Archeological data gathered through systematic inventory and testing and the judicious use of excavation before any construction would help to fill in the gaps in the site's context, both historic and prehistoric. Information gained would include building locations and construction methods, prehistoric and historic activity areas, the locations of poses, and the objects of everyday life. Such data would improve interpretation, so that visitors could gain a fuller and more accurate understanding of the site.

Each archeological site identified would be evaluated for inclusion on the National Register of Historic Places, either as a part of the existing nomination for Grand Portage National Monument or as a distinct site in its own right. This would increase the protection of such resources from actions that might threaten their existence and allow the national monument to make long-term planning decisions about areas without significant cultural resources.

At historic Fort Charlotte, the presence of more visitors could result in a greater possibility of inadvertent or deliberate archeological vandalism, a potential negative impact.

Because the headquarters complex would include collections storage and management space large enough to include the collections now housed at the Minnesota Historical Society and the Midwest Archeological Center, Grand Portage National Monument would have more immediate control of those collections. This would result in better use of the collections for staff research and interpretive exhibition, as well as reducing the chances of losing or damaging objects in transit between two facilities.

Cumulative Impacts. As with Alternatives B and C, Alternative D would result in an optimum atmosphere for preserving archeological resources and monument collections. With the passage of time and the reduction in the number of remaining fur trade sites, the archeological resources and collections of Grand Portage National Monument would become more and more valuable for research purposes.

There has been no historical research or archeological survey that covers the area proposed for national monument facilities outside the boundary, and no properties are listed on the National Register of Historic Places. Therefore, little is known about the historic and archeological resources at any of these

locations. Those resources would be inventoried and evaluated for the national register before any construction.

Likewise, no systematic archeological inventory and evaluation of archeological resources has been undertaken in the national monument, although specific archeological work has been undertaken before any development activities. The plan calls for such an inventory in Appendix D. Until more is known about the archeological resources, nothing substantive can be said about cumulative impacts except that the National Park Service would work with the Minnesota Historical Society, the Grand Portage Band, and any other entity to ensure that significant historic or archeological resources were not lost or destroyed as a result of NPS actions.

Conclusion. In all instances where identified sites would be disturbed and could not be avoided, the national monument would undertake data recovery in accordance with the programmatic agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. This would be done to retrieve important information, thereby reducing the intensity of adverse impacts. For some proposed project areas, information regarding the nature and importance of archeological resources is unknown; in these instances before any construction disturbance the national monument would first inventory project areas, test and evaluate the significance of identified sites, and carry out appropriate data recovery in accordance with the programmatic agreement.

The impact of Alternative D on resources of historic or archeological significance would be minor and of short duration, based on the mitigative measures to be implemented.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with archeology and history.

Sacred Sites

The exact location of the Midewiwin ceremonial site is unknown. Alternative D proposes no development in the general area; therefore, there would be no impact on any of the site's resources. No other sacred or ceremonial sites would be affected by implementing Alternative D.

Cumulative Impact. There would be no cumulative impact on sacred sites because there would be no development in the area possibly containing the Midewiwin site.

Conclusion. Alternative D would result in no effects on sacred sites, and there would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with sacred sites.

Local and Regional Transportation

With BIA route 2 north of Mount Rose connected to County Road 17 on the northeast side of the national monument by a bridge over the portage and Portage Creek, the portion of County Road 17 from the CCC bridge to Holy Rosary church could be vacated, its roadbed could be removed, and the align-

ment could be revegetated. This would enable local traffic to avoid a dangerous curve at the CCC bridge. County Road 17 would not be closed from the CCC bridge to the monument's western boundary. For local traffic coming from the west, the route to the community center and other facilities on the national monument's east side would be comparable in distance to the existing route. It is unlikely that any regional impacts would result from these changes. A minor change in use patterns would be necessary for people in the surrounding community.

Cumulative Impact. Developing a heritage center and headquarters would concentrate development at the intersection of MN 61 and County Road 17. This could encourage the development of other related businesses or facilities in the immediate vicinity. Such facilities as a tourist information center, gas stations or a truck stop, and convenience stores could be developed. At the same time, the Band is making efforts to encourage business at the marina, hotel, and casino. The Band also is developing a housing area west of the casino that will depend on either MN 61 or County Road 17 for access to the rest of the community.

The state of Minnesota is working to get MN 61 designated a national scenic byway as a means of encouraging tourism to this area of the state. This has the potential to bring more traffic to MN 61 within the Reservation.

Constructing a bridge connecting BIA 2 to County Road 17 would have little impact on the local transportation network because the existing roads would remain open until the new bypass was in place. Once completed, there would be some minor short-term inconvenience as local road use patterns changed and people switched to the new route.

Conclusion. There is a potential that there would be development at the intersection of MN 61 and County Road 17. This new development could affect the local transportation network, causing some inconvenience to local users.

These actions have the potential to become a moderate long-term impact on the local transportation system. Impacts on the regional transportation network would be negligible. During construction activities associated with a new heritage center and headquarters, there could be a minor impact on local traffic.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with local and regional transportation.

Population, Economy, and Land Use

Federal property such as Grand Portage National Monument is not generally subject to local land use plans. However, an effort is made to work with local governments to ensure that any actions are consistent with local land use plans to the extent possible.

This alternative calls for most new housing and visitor, administrative, and maintenance facilities to be built outside the national monument on Reservation lands. All actions would be developed in consultation with the Grand Portage Band to ensure that actions would be consistent with their land use plans.

A heritage center and national monument headquarters built at the intersection of MN 61 and County Road 17 would provide

the visibility necessary to allow year round operation of the national monument. This would increase visitation numbers and possibly encourage the development of commercial enterprises that would serve the additional visitation and that of the hotel, casino, and marina.

During construction, there could be temporary economic benefit from workers staying in the local area and using commercial establishments. Construction companies also could hire local workers, temporarily augmenting the economy.

Following construction, national monument staff occupying the new housing would use some of the local commercial outlets for food and supplies, although most purchases probably would be made in Grand Marais.

Any new development could bring jobs that would allow the Band members to return to the Reservation. There would also be an increase in local population resulting from national monument staff living in the community, possibly as many as 10–15 people.

Cumulative Impact. Constructing visitor facilities at MN 61 and County Road 17, along with the Band's efforts to upgrade facilities at the Grand Portage Lodge and Casino and at the marina, could result in a moderate long-term beneficial effect on the local economy. Other efforts to increase tourism by the Band include the creation of a snowmobile trail from Canada to the Grand Portage Lodge, purchasing and developing the former Voyageurs Marina, and community infrastructure development.

The state of Minnesota is working to designate MN 61 as a national scenic byway, develop a new tourist information center in the area, and develop facilities at Grand Portage State Park. Any or all of these actions could improve the local economy and increase population as jobs increased.

Conclusion. A heritage center and national monument headquarters at MN 61 and County Road 17 could spur the development of the immediate area and result in changes to the economy, land use, and population. The beneficial effect would be minor in the short-term and moderate in the long term.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the national monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with population, economy, and land use.

Visitor Experience and Interpretation

Under Alternative D, visitors who came only to the heritage center and not the rest of Grand Portage National Monument would be able to have a satisfying visit and appreciate the significance of the diverse resources. The heritage center, open year-round, would be central to the visitor experience, with orientation and in-depth interpretation of the fur trade story and the Ojibwe culture and history. It would be a venue for Ojibwe cultural demonstrations. In addition, visitors would have a number of opportunities to understand the monument's significance. Interpretive media would present a complete overview of the fur trade story, with emphasis on the role of the portage.

Removing parking from in front of the stockade would create a more historically correct setting for the stockade. Having visitors approach the stockade from the lake side would present a view that would more closely represent the late 18th century historic scene and focus their attention on the important role

the lake played in both the daily life of the stockade and the business of the fur trade. Visitors would be better able to experience a transition from the modern exhibits in the heritage center to the historic fur trade era. With all modern intrusions removed from inside the stockade and orientation offered at the heritage center, visitors would have a more authentic 18th century experience in the Great Hall. Since all the structures original to the stockade would be identified in their proper location, visitors would be able to experience the complexity and scope of the stockade landscape.

Cumulative Impact. Visitors would have a greater variety of activities and places to visit in the local area with the possible result that they would stay in the area longer and receive a more in-depth understanding of the fur trade and Ojibwe culture. The Grand Portage State Park and the national monument have complementary missions that tell different parts of the Grand Portage story. A snowmobile trail planned by the Grand Portage Band would complement the hiking and snowshoeing available on the portage trail. The casino and marina provide a different kind of visitor experience unrelated to the national monument mission but one that would allow a visitor to spend more time in the community.

Throughout the year, there is a variety of activities in the Grand Portage community. Some are related to Grand Portage National Monument, some not. Examples include a Fur Trade Rendezvous at the national monument, an Indian Pow Wow and rodeo, and a winter dog sled race.

Conclusion. Alternative D would provide a greater variety of activities and visitor experiences than now exist. A more in-depth understanding of the fur trade would be available at the national monument. The heritage center would be open year round rather than seasonally.

Overall, Alternative D would have a major long-term beneficial effect on the variety and quality of visitor use and experience.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with the visitor experience and interpretation.

Soils

The types of effects on soils that would result from Alternative D would be the same as those described for Alternative B, except that the extent of impacts from Alternative D would differ; the total land affected would be about 7 acres. This would be the smallest area of soil disturbance of all the action alternatives, and it would result in a long-term minor adverse impact on the soil resource.

Cumulative Impacts. The existing developments and roads in the national monument impact about 13 acres of the soil resource, and there would be about 3 acres of new disturbance. About 2.7 acres of soil would be rehabilitated by reclaiming the NPS ranger quarters site, the maintenance/housing area, the boneyard, and the boneyard road. Implementing Alternative D, combined with past, present, and foreseeable future actions within the monument, would result in impacts on about 13.3 acres of the soil resource, or 2 percent of the monument.

Most impacts on the soil resource — about 4 acres — would occur outside the national monument; they would result from the proposed road realignment, housing, maintenance facility,

and boneyard. These 4 acres, combined with past, present, and foreseeable future actions outside the national monument, would continue the trend of urban development and adverse impacts on the soil resource. The cumulative impact on the soil resource from implementing this alternative would be long term, minor, and adverse.

Conclusion. Alternative D would have the least impact on soils of all the action alternatives; the impact on the soil resource would be long term, minor, and adverse. There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the natrional monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with soils.

Air Quality

The direct and indirect impacts on air quality from Alternative D would be the same as those described for Alternative B, except that Alternative D would involve slightly less use of prescribed fire than Alternative B or C. This would result in fewer days of localized degraded air quality and visibility from prescribed fire than in Alternatives B and C. Implementing Alternative D would result in a short-term minor adverse impact on air quality from prescribed fire and construction activities. In addition, implementing this alternative would result in a negligible long-term adverse impact from changes in vehicle emissions.

Cumulative Impacts. Impacts from vehicle emissions, wood burning for home heating, and industries in nearby population centers would continue at about the current levels. Smoke from prescribed burning would be less than in Alternatives B and C. Overall, the levels of emissions from all sources would increase slightly in the long term, but any change would be negligible and would not measurably change the air quality.

Conclusion. The air quality at Grand Portage National Monument would deteriorate at a local level but remain good. The only noticeable impact on air quality from Alternative D would be that the air quality and visibility would be locally impacted by prescribed fire or construction projects. Alternative D would result in a short-term minor adverse impact and a long-term negligible adverse impact on air quality.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with air quality.

Water Quality and Aquatic Species

The impacts on water quality and aquatic species from Alternative D would be similar to those of Alternative C except that a historical wharf would not be constructed in Alternative D. This would mean that Alternative D would result in fewer impacts on water quality and aquatic species in Grand Portage Bay. Impacts on water quality and aquatic species in the streams would be the same as those described for Alternative C. Overall, implementing Alternative D would result in a short-term negligible adverse impact on water quality and aquatic habitat.

Cumulative Impacts. The cumulative impacts on water quality from Alternative D would be similar to those of Alternative C. As in Alternative C, implementing Alternative D in combination with past, present, and foreseeable future actions would result in a long-term minor to moderate adverse impact.

Conclusion. Alternative D would have fewer impacts on water quality than the other action alternatives because it would entail fewer activities that could affect water quality. Water quality would be expected to remain good, and any effects on aquatic habitat from proposed developments and park operations would be minimal except in Grand Portage Bay. Potential dredging operations from the Isle Royale ferry service might cause some degradation of water quality and aquatic habitat in Grand Portage Bay. The primary impact would be more turbidity and resuspension of sediments, which would be limited to the period of dredging and shortly thereafter. The impacts from resuspending pollutants would not be likely to be of concern because Grand Portage Bay has relatively low levels of critical pollutants.

Alternative D would result in a short-term negligible adverse impact on water quality and aquatic habitat. There would be a long-term minor to moderate adverse cumulative impact on water quality and aquatic habitat in Grand Portage Bay. There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with water quality or aquatic species.

General Vegetation and Fuel Loading

Removing vegetation from about 7 acres at proposed development and road realignment sites would disturb adjacent habitat, remove biomass, reduce nutrient capital, and increase the risk of noxious weed spread. Of all the action alternatives, Alternative D would involve the smallest acreage of vegetation removal for proposed developments and road realignment.

The impacts on vegetation and fuel loading along the trail corridor and in the Fort Charlotte area would be the same as those described for Alternative C. The increased fuel reduction efforts would eliminate the existing pockets of high fuel loads. This would decrease the difficulty of wildfire control.

Alternative D would include the manipulation of vegetation along the lakeshore area to reflect the continuum of use through the site's history. This alternative would entail the least vegetation manipulation of all the action alternatives.

The red pine stand near the stockade, which would be retained as part of the landscape, would be maintained through manual cutting, prescribed fire, or a combination of both. Retaining this stand would provide species diversity to the landscape of an element that is probably present below historic levels at a regional scale. Overall, the vegetation manipulation and fuel loading reduction would result in a long-term minor beneficial effect.

Cumulative Impacts. The combined impacts of Alternative D with past, present, and foreseeable future actions would be the same as those described for Alternatives B and C; that is, early successional forests and young age classes would continue to be represented, and older age class stands would remain underrepresented. Regeneration efforts in managed forests would lead to continued regional increases in white and red pine stands, but they would remain below historic levels. Active and

successful fire suppression efforts would continue the trend of increasing fuel loads across the landscape, particularly in forests not actively managed.

Conclusion. Despite the proposed vegetation manipulation, the vegetation in Grand Portage National Monument would remain natural in appearance. Alternative D would result in a long-term minor, beneficial effect on vegetation and fuel loading. There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with general vegetation or fuel loading.

Threatened or Endangered Species or Species of Concern — Plants

Alternative D would not have any direct or indirect impacts on any listed plant species. All development and the road realignment would be in areas away from known sites of listed plants.

Cumulative Impacts. Existing developments and park operations would continue to have no impact on any listed plant species, and Alternative D would not involve any actions at or near any of the known listed plant species sites; therefore, no cumulative impacts on listed plant species would be expected.

Conclusion. There would be no effects on any listed plant species under this alternative. There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with plants listed as threatened, endangered, or species of concern.

IMPACTS OF ALTERNATIVE E: THE PREFERRED ALTERNATIVE

Cultural Landscape

The upper portions of the portage trail would continue to possess a high degree of integrity under Alternative E. Removing the housing area and maintenance buildings at the lower portion and rehabilitating the trail would enhance its historic setting. Connecting the portage trail to an overall interpretive trail would give more visitors access to the portage and the Grand Portage community.

Realigning County Road 17 outside of the national monument and constructing a bridge in the national monument to connect County Road 17 with BIA 2 would eliminate a visual intrusion of cars and other traffic that detracts from the rural, historic character of the historic areas of the national monument. These actions also would allow the roadway to be removed and relandscaped. The cultural landscape around the stockade would be enhanced by removing traffic and obliterating the roadway.

The landscape of the lakeshore area would be managed to reflect the continuum of use throughout the site's history. This would allow the national monument to maintain different areas in different ways but would not necessarily provide a landscape reminiscent of the period of the site's heyday. For example,

removing the boneyard and replacing it with an Ojibwe Cultural Demonstration Shelter and appropriate landscaping would replace an unsightly maintenance facility with a more attractive structure, but this would not restore the landscape to a historic period.

Removing the NPS ranger station, parking at the stockade, and the dock would remove modern visual intrusions from the immediate stockade area.

Constructing an extension to the Mount Rose trail that would connect with the heritage center would be designed to have the least possible impact on the natural landscape and to be as unobtrusive visually as possible. However, it is possible that segments of the trail might be seen from the historic stockade area.

In the primitive trail, resource trust, and interpretive historic zones, selectively using prescribed fire, hand-piling and burning woody fuel, and suppressing invasive exotic plants would help to restore historic forest cover, maintain safety, and prevent dangerous levels of fuel loading, as would removing hazard trees and other forms of vegetation manipulation.

Cumulative Impact. This alternative calls for a joint effort by the national monument and the Grand Portage Band to create a gateway or formal entrance to the community of Grand Portage and Grand Portage National Monument. This would require a comprehensive redesign of the landscape south of the intersection of County Road 17 and MN 61, which would create an attractive entrance to both the community and the national monument while improving the traffic flow of the area for community members and visitors alike. This action would result in considerable change to the existing landscape and could encourage the development of commercial and governmental enterprises in the immediate area.

Locations for new employee housing and maintenance facilities outside the national monument boundary have not been selected, so the impact on the Reservation landscape is not known. However, additional development could occur in the area as a result of the new facilities. A possible result would be the loss of the natural landscape at these locations.

Removing the Isle Royale ferry from the national monument probably would be a beneficial change to the landscape of the national monument and would result in no significant impact on the landscape of the reservation. Removing the steel passenger ship, *Wenonah,* from the NPS dock would change the cultural landscape by allowing removal of an intrusive nonhistoric dock and allowing a more historic wharf to be created in keeping with the character of the site. The ship *Wenonah* does not relate to the site historically.

The Grand Portage Band has recently purchased the Voyageur Marina where the passenger ship *Voyageur* docks. This is the likely site for the *Wenonah* to dock, as well, although the existing Grand Portage Marina could also handle such a ship. Adequate parking exists at both locations.

Controlled burning by the Grand Portage Band outside the national monument could dramatically change the appearance of the area along the portage trail by changing the species, size, and density of the forest landscape that serves as a backdrop and a buffer from development. An environmental impact statement being prepared by the U.S. Forest Service dealing with the aftermath of a July 4, 1999, blowdown could also propose actions that would dramatically affect the landscape of Fort Charlotte.

Conclusion. Although many of the actions discussed are not fully developed yet, the cultural landscape of the national monument and the area outside that could be affected by development could significantly change, as could the landscape

within the national monument. This alternative has the potential to result in both beneficial and adverse effects on the cultural landscape both inside and outside the national monument. The effects would be moderate and long term.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with cultural landscapes.

Archeology and History

Any new construction or ground disturbance resulting from this plan would be sited and designed to avoid damaging or losing scenic, historic, or archeological resources. Any historic or archeological resources found would be evaluated against National Register of Historic Places criteria, and if they were found eligible for listing on the register, the design would be modified or another site chosen for construction. This would minimize any adverse impacts on cultural resources at these locations.

Archeological data gathered through systematic inventory and testing and the judicious use of excavation before any construction would help to fill in the gaps in available prehistoric and historic information. Information gained would improve interpretation because monument interpreters could offer broader, more accurate understanding of the monument's significance, history, and resources, including building locations and construction methods, prehistoric and historic activity areas, location of poses, and patterns and objects of everyday life.

Because collections would be stored and managed at the headquarters complex, the national monument would have more immediate control of those collections. This would result in better use of the collections for staff research and display and would reduce the chances of losing or damaging objects.

Cumulative Impact. Alternative E would result in an optimum atmosphere for preserving archeological resources and monument collections. With the passage of time and the reduction in the number of remaining fur trade sites, the archeological resources and collections of Grand Portage National Monument would become more and more valuable for research purposes.

There has been no historic research or archeological survey that covers the area proposed for national monument facilities outside the boundary, and no properties are listed on the National Register of Historic Places. Therefore, little is known about the historic and archeological resources at any of these locations. Those resources would be inventoried and evaluated for the national register before any construction could begin.

Likewise, no systematic archeological inventory and evaluation of archeological resources has been undertaken in the national monument, although specific archeological work has been undertaken before any development activities. The plan calls for such an inventory in Appendix D. Until more is known about the archeological resources, nothing substantive can be said about cumulative impacts except that the National Park Service would work with the Minnesota Historical Society, the Grand Portage Band, and any other entity to ensure that significant historic or archeological resources would not be not lost or destroyed as a result of NPS actions.

Conclusion. In all instances where identified sites could not be avoided and would be disturbed, the national monument would undertake data recovery in accordance with the programmatic agreement among the National Park Service, the Advisory

Council on Historic Preservation, and the National Conference of State Historic Preservation Officers to retrieve important information, thereby reducing the intensity of adverse impacts.

For some proposed project areas, information regarding the nature and importance of archeological resources is unknown; in these instances the national monument would first inventory project areas, test and evaluate the significance of identified sites, and carry out appropriate data recovery in accordance with the programmatic agreement before any construction disturbance.

The impact of Alternative E on resources of historic or archeological significance would be likely to be minor and of short duration based on the mitigative measures to be implemented.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with archeology and history.

Sacred Sites

The exact location of the Midewiwin ceremonial site is unknown. Alternative E would include building an interpretive shelter and trail in the general area with interpretive signs explaining the significance of he early 20th century town center. Because it would be designed after archeological evaluation and full consultation with the Grand Portage Band of Minnesota Chippewa to avoid construction near the site there would be no effect on any archeological resources of the site. No other sacred or ceremonial sites would be affected by implementing Alternative E.

Cumulative Impact. How much use of the Midewiwin ceremonial site is made by the Grand Portage Band is unknown. How many such sites exist outside the national monument is also unknown. However, because it is in an area away from visitor facilities, this site is believed to be relatively unaffected by visitor activities and programs. Adequate consultation with the Band members with knowledge of the Midewiwin ceremonial site and predesign archeological evaluation, if acceptable to its users, would allow the site to remain unaffected by trail construction or the presence of visitors. With the subsequent loss of sacred sites outside the Reservation, this site would become more significant to the Grand Portage Band.

Conclusion. Alternative E would result in no impact on sacred sites.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with sacred sites.

Local and Regional Transportation

By jointly creating a gateway at the intersection of MN 61 and County Road 17 on land owned by the Grand Portage Band of Minnesota Chippewa, the National Park Service and the Grand Portage Band would improve safety for visitors and Band members. The gateway would present an aesthetically pleasing entry

to the community of Grand Portage, Grand Portage National Monument, and the Grand Portage Casino. Traffic would be temporarily disrupted during construction. Safety would be improved by the creation of better sight lines at the intersection and better directional signs.

The proposed rerouting of County Road 17 around Mount Rose, would leave the current roadbed about 1,800 feet west of the boundary, roughly parallel to MN 61 and BIA Route 2. The rerouting and the added bridge across Grand Portage Creek would allow local traffic to circumnavigate the national monument without having to drive on MN 61. County Road 17 would end at the current Isle Royale parking area and be totally removed from that point to the northeast boundary. These changes would allow the national monument to close County Road 17 in the historic area and restore the landscape to a more historic appearance.

The changes also would enhance visitor safety. At present, pedestrians cross County Road 17 from the parking area and the heritage center to reach other national monument facilities. Rerouting the county road would eliminate the hazard caused by drivers exceeding the 20 mph speed limit. Such drivers endanger visitors who fail to pay close enough attention to traffic. This realignment would be almost entirely on Grand Portage Band land, with the bridge over Portage Creek being on national monument land.

Rerouting the county road would afford new access to the Baptist cemetery and to several houses that otherwise can be reached only from the high-speed MN 61. For local traffic coming from the west, the distance to the community center and other facilities in the east part of the monument would be comparable to the existing route.

It is unlikely that any regional impacts would result from Alternative E. A change in local use patterns would be necessary. A church and several homes along County Road 17 west of the monument would be inconvenienced somewhat by the road being truncated just inside the national monument boundary, causing them to backtrack as much as a third of a mile to reach the newly rerouted section.

Cumulative Impacts. Joint efforts by the Grand Portage Band and the National Park Service to develop a gateway could encourage further development at the intersection of MN 61 and County Road 17. Such facilities as a tourist information center, gas stations or a truck stop, and convenience stores could be developed. At the same time the Band is making efforts to encourage business at the marina, hotel, and casino that would also use this gateway.

The Band is developing a housing area west of the casino that will depend on either MN 61 or County Road 17 for access to the rest of the community.

The state of Minnesota is working to get MN 61 designated a national scenic byway as a means of encouraging tourism to this area of the state. This has the potential to bring more traffic to MN 61 within the Reservation.

Constructing a bypass road around Mount Rose and a bridge to connect County Road 17 with BIA 2 would result in little impact upon the local transportation network because the existing roads would remain open until the new bypass was in place. Once the projects were completed, there would be some minor inconvenience as local road use patterns changed to the new route.

Conclusion. There is a potential for development to occur at the intersection of MN 61 and County Road 17 in association with new development. This could affect the local transportation network, causing some inconvenience to local users.

These actions would have the potential to result in a moderate long-term impact on the local transportation system. The impacts on the regional transportation network would be negligible. During construction activities associated with a new heritage center and headquarters, there could be a minor impact on local traffic.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with local and regional transportation.

Population, Economy, and Land Use

Federal property such as Grand Portage National Monument is not generally subject to local land use plans. However, an effort is made to work with local governments to ensure that any actions are consistent with local land use plans to the extent possible.

Except for the heritage center, most new facilities in Alternative E would be built outside the Reservation to the west. A new maintenance facility that would be constructed on the Reservation would conform to any local land use plans.

A year-round heritage center and a developed gateway to Grand Portage and the Grand Portage National Monument, when added to the existing hotel, casino, and marina facilities, could make more feasible commercial developments such as gas stations, convenience stores, or restaurants at the intersection of MN 61 and County Road 17.

During construction, there could be a temporary economic benefit from workers staying in the local area and using commercial establishments. Construction companies also could hire local workers, temporarily augmenting the economy.

Following construction, national monument employees occupying the new housing would use some of the local commercial outlets for food and supplies although most purchases probably would be made in Grand Marais.

Cumulative Impact. Constructing visitor facilities at MN 61 and County Road 17, along with the Band's efforts to upgrade facilities at the Grand Portage Lodge and Casino and at the marina, could result in a moderate long-term beneficial effect on the local economy. Other efforts to increase tourism by the Band include the creation of a snowmobile trail from Canada to the Grand Portage Lodge, purchasing and developing the former Voyageurs Marina, and community infrastructure development.

The state of Minnesota is working to designate MN 61 as a national scenic byway, develop a new tourist information center in the area, and develop facilities at Grand Portage State Park. Any or all of these actions could improve the local economy and increase population as jobs increased.

Conclusion. Alternative E could result in some increase in the local population both because national monument staff would be expected to live in NPS housing and from possible ancillary development associated with the proposed gateway. The economy could be affected by increased visitation to the national monument, by increased use of the hotel, casino, and marina, and by any development that might be attracted to the intersection of MN 61 and County Road 17.

Development near the gateway would change the land use in the area from rural, wooded, and open to a more urban or commercial experience.

There would be a minor short-term impact during construction and a moderate long-term impact following construction should development at MN 61 and County Road 17 result in the creation of new jobs.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with population, economy, and land use.

Visitor Experience and Interpretation

Alternative E would result in opportunities for visitors to receive orientation and in-depth interpretation of the fur trade story and Ojibwe culture and history at the Grand Portage heritage center before experiencing the monument's resources. Keeping the heritage center open year-round would enable more visitors, even winter visitors, to learn about the significance of Grand Portage National Monument.

Removing parking from in front of the stockade would create a more historically engaging setting for the stockade. Having visitors approach the stockade from the lake side would give them a view that would more closely represent the late 18th century historic scene and focus their attention on the important role the lake played in both the daily life of the stockade and the business of the fur trade. The walk from the parking area to the stockade would enable visitors to experience a better transition from the modern exhibits in the heritage center to the historic fur trade era. With small period watercraft near the stockade, visitors would be better able to understand the pivotal role of the portage between the fur trapping regions and Montreal. These watercraft, coupled with expanded canoe programming, would give visitors an opportunity to learn more about the overall story of the transportation that brought trade goods into the region in exchange for furs.

Visitors would be better able to immerse themselves in the 18th century experience with all the structures furnished as they were during the height of the fur trade and interpreters dressed in period clothing. The addition of three more reconstructed and historically furnished structures (the interpreter's and guide's quarters, the fur trading store, and the carpenter/cooper's shop), with the remaining missing stockade structures "ghosted" or outlined, would reflect the stockade's original crowded appearance. This would provide important new dimensions of the fur trade story (cross-cultural interaction, exploration, international commerce, assimilation) for visitors and would re-people the grassy expanse of the depot with ideas, characters and cultural meanings.

New structural exhibits would make it possible to offer visitors more diversified, less elitist stories, and a richer complement of interpretive themes. Visitors could experience an inside-the-stockade landscape that would give them a truer sense of crowding and scale, the function of the landscape, the sense of the whole that was meant to impress voyageurs, Ojibwe, and rival companies.

Visitors' opportunities to understand the continuum of Ojibwe culture and history would be greatly enhanced under Alternative E through the interpretive exhibits in the Grand Portage heritage center and exhibits in the Ojibwe Cultural Demonstration Shelter, where interpretive exhibits and programs from the

Grand Portage Band would be offered, as would demonstrations of Ojibwe crafts and cultural practices. The landscape of the area east of the stockade would further emphasize the continuum of Ojibwe culture and history from the days of the fur trade to the present.

The added accessibility to a short loop of the historic portage trail would enable all visitors to have a direct experience of the portage. Improving the campsites near Fort Charlotte would slightly enhance the visitor experience at that end of the portage.

Cumulative Impact. Visitors would have a greater variety of activities and places to visit in the local area, with the possible result that people would stay longer in the area and receive a more in-depth understanding of the fur trade and Ojibwe culture. Grand Portage State Park and the national monument have complementary missions that tell different parts of the Grand Portage story. A snowmobile trail planned by the Grand Portage Band would complement the hiking and snowshoeing available on the portage trail. The casino and marina provide a different kind of visitor experience unrelated to the national monument mission, but one that would allow a visitor to spend more time in the community.

Throughout the year, there are a variety of activities in the Grand Portage community. Some are related to Grand Portage National Monument, some not. Examples include a Fur Trade Rendezvous at the national monument, an Indian Pow Wow and rodeo, and a winter dog sled race.

Conclusion. Alternative E would provide a greater variety of activities and visitor experiences than now exist. A more in-depth understanding of the fur trade would be available at the national monument. The heritage center would be open year-round rather than seasonally.

Overall, Alternative E would result in a major long-term beneficial effect on the variety and quality of visitor experience and interpretation.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with the visitor experience and interpretation.

Soils

The impacts on soils from Alternative E would be the same as those described for Alternative B, but the extent of impacts from Alternative E would differ; about 13 acres would be affected. This would be the most disturbance of the soil resource of all the action alternatives. However, despite this alternative having the greatest impact on the soil resource, implementing this alternative would have a long-term minor adverse impact because the impacts would be localized and limited in extent to 13 acres.

Cumulative Impacts. The existing developments and roads within the monument impact about 13 acres of the soil resource, and there would be about 3 acres of new disturbance in the national monument. About 2.2 acres of soil would be rehabilitated by reclaiming the NPS ranger quarters site and part of the boneyard road. Implementing Alternative E, combined with past, present, and foreseeable future actions within the monument, would impact about 13.8 acres of the soil resource, or about 2 percent of the national monument's soils.

Most impacts on soils would occur outside the national monument from the proposed road realignment, gateway, housing, maintenance facility, and boneyard. These actions would affect about 10 acres of soils outside the national monument. These 10 acres, combined with past, present, and foreseeable future actions outside the monument, would continue the trend of urban development and adverse impacts to the soil resource. The cumulative impact on the soil resource from implementing Alternative E would be long term, minor, and adverse.

Conclusion. Alternative E would result in the most impacts on the soil resource of all the action alternatives, but the effect still would be a long-term minor adverse impact. There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with soils.

Air Quality

The direct and indirect impacts of Alternative E on air quality would be the same as those described for Alternative D. Alternative E would result in a long-term minor adverse impact on air quality.

Cumulative Impacts. The cumulative impacts on air quality from Alternative E would be the same as those described for Alternative D; that is, vehicle emissions, wood burning, and industries in nearby population centers would continue at current levels, and smoke from prescribed burning would be less than in Alternatives B and C. Overall, emissions from all sources would increase slightly in the long term, but any change would be negligible and would not measurably change air quality.

Conclusion. The air quality at Grand Portage National Monument would deteriorate at a local level but remain good. Alternative E would result in a short-term minor adverse impact and a negligible long-term adverse impact on air quality. There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with air quality.

Water Quality and Aquatic Species

The effects on water quality and aquatic species from Alternative E would be the similar to those of Alternative C, except that the extent of proposed developments would be slightly greater in Alternative E. Alternative E proposes about 13 acres of new development versus 10 acres in Alternative C. Despite this difference, implementing Alternative E would result in a negligible short-term adverse impact on water quality and aquatic species, as would Alternative C. There would be no noticeable difference in the effects on water quality and aquatic species in Alternative E and Alternative C because both alternatives would entail a limited extent of proposed developments, and the other actions with potential for impacting water quality and aquatic species (dredging and bridge construction) would be similar.

Cumulative Impacts. The selection of either the Voyageurs Marina or the Grand Portage Marina for docking the *Wenonah* could affect water quality if dredging was required at either

site. The cumulative impacts would be similar to those of Alternative B, but there would be the potential for only one dredging operation, which would make the impacts on water quality in the bay about half those of Alternative B. Implementing Alternative E in combination with past, present, and foreseeable future actions would result in a long-term minor to moderate adverse impact mainly from the dredging activities for the Isle Royale ferry service.

Conclusion. Water quality would be expected to remain good, and any effects on aquatic habitat from proposed developments and park operations would be minimal except in Grand Portage Bay. Potential dredging operations for the Isle Royale ferry service might cause some degradation of water quality and aquatic habitat in Grand Portage Bay. The primary impact probably would be more turbidity and resuspension of sediments, which would be limited to the period of dredging and shortly thereafter. The impacts from resuspending pollutants would not be likely to be of concern because Grand Portage Bay probably has relatively low levels of critical pollutants.

Alternative E would result in a short-term negligible adverse impact and a long-term minor to moderate adverse cumulative impact on water quality and aquatic habitat. There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with water quality or aquatic species.

General Vegetation and Fuel Loading

Removing vegetation from about 13 acres at proposed development and road realignment sites would disturb adjacent habitat, remove biomass, reduce nutrient capital, and increase the risk of noxious weed spread. Alternative E would result in the removal of the most vegetation from proposed developments and road realignment of all the action alternatives. All other direct and indirect impacts on vegetation and fuel loading would be the same as those described for Alternative D. The vegetation manipulation and fuel loading reduction would result in a minor long-term beneficial effect.

Cumulative Impacts. The cumulative impacts of Alternative E on vegetation would be the same as those described for Alternative B; that is, early successional forests and young age classes would continue to be represented, and older age class stands would remain underrepresented. Regeneration efforts in managed forests would lead to continued regional increases in white and red pine stands, but they would remain below historic levels. Active and successful fire suppression efforts would continue the trend of increasing fuel loads across the landscape, particularly in forests not actively managed. Implementing Alternative E in combination with past, present, and foreseeable future actions would result in a minor long-term adverse cumulative impact due to the continuing trend of increasing fuel loads across the regional landscape.

Conclusion. Despite the proposed vegetation manipulation, the vegetation in Grand Portage National Monument would remain natural in appearance. Alternative E would result in a long-term minor beneficial effect on vegetation and fuel loading due to reduced fuel loading within the monument. There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for enjoyment of the monument, or (3) identified as a goal in this *General Manage-*

ment Plan or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with general vegetation or fuel loading.

Threatened or Endangered Species or Species of Concern — Plants

Of the 17 state-listed plant species known to occur in Grand Portage National Monument, only 3 would have the potential to be affected by any proposed developments in Alternative E. The other 14 species are not near any proposed developments or road realignment. The three species that could be affected are mountain cliff fern (*Woodsia oregana*), Rocky Mountain cliff fern (*Woodsia scopulina* D. C. Eat.), and rock whitlow grass (*Draba arabisans* Michx.), all of which are found near the existing Isle Royale parking lot, the site for the proposed heritage center and monument headquarters. These species occur on or near cliff faces and among slate (argilliste) scree slopes on Mount Rose adjacent to the proposed heritage center and headquarters sites. The primary concern for these plants would be changes in moisture regimes and activities that could cause the cliff faces or scree slopes to crumble and slide.

Large amounts of blasting and excavation (about 1,700 cubic yards) might be necessary in the areas of the proposed heritage center and headquarters. Blasting could cause the cliff faces to crumble or the scree slopes to slide through ground vibration, air blast, and fly rock. To minimize the potential of this occurring, controlled/sequential blasting would be practiced to minimize the intensity of ground vibration, and blasting mats would be used to minimize air blast and fly rock. These mitigative measures, worked out in consultation with the Minnesota Department of Natural Resources, would substantially reduce the chances of rock slides or fly rock impacting a listed plant (see the "Consultation and Coordination" chapter). In addition, post-construction protective measures such as shading and new plantings would be undertaken to reduce the construction impacts on state-listed plants.

The proposed parking lot associated with the heritage center and headquarters south of the building could change the shading and moisture retention of sites with listed plants adjacent to the parking lot. To minimize these impacts, a buffer strip of trees would be planted and maintained before construction to shade the listed ferns. This mitigative measure would reduce changes in shading and moisture regimes to minimize impacts on the listed plants. Implementing Alternative E would have a long-term minor adverse impact on the three state listed plant species.

Cumulative Impacts. Existing developments and park operations would continue to have no effect on any listed plant species. No actions proposed for Alternative E would take place at or near any of the known listed plant species sites. No cumulative impacts on listed plant species would be expected from this alternative.

Conclusion. There would be no potential to affect 14 of the listed plant species under this alternative, but three of them could be adversely impacted by the proposed heritage center and monument headquarters. However, through mitigative measures, the likelihood of a listed plant being affected would be minor, less than in Alternative B. In addition, there would not be a significant "taking" (destruction) of any state-listed plants if this alternative was implemented, and it would be very unlikely that any listed plants would be taken. Implementing Alternative E would have a long-term minor adverse impact on the three state-listed plants.

There would be no major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the national monument's establishing legislation, (2) key to the cultural integrity or opportunities for

enjoyment of the monument, or (3) identified as a goal in this *General Management Plan* or other relevant NPS planning documents. Consequently, there would be no impairment of resources or values associated with plants listed as threatened, endangered or values associated with plants listed as threatened, endangered, or species of concern.

GRAND PORTAGE
CONJECTURAL SKETCH
BY FRANK S GERNER
OCTOBER 1971

OFFICE OF
~~HISTORY &~~ HISTORIC ARCHITECTURE
WESTERN SERVICE CENTER
SAN FRANCISCO CALIFORNIA

CONSULTATION AND COORDINATION

A notice of intent to prepare a general management plan and environmental impact statement was published on Monday, May 3, 1999, in the *Federal Register* (volume 64, number 84, pages 23666-23667). On May 25, 1999, the National Park Service mailed a press release to local and regional media to announce the beginning of planning for the *General Management Plan / Environmental Impact Statement* and giving the dates, times, and locations of public scoping meetings. In addition, in late May a newsletter was mailed to everyone on the national monument's mailing list. The newsletter described the planning process, announced the scoping meetings, and gave a tentative schedule for the plan.

The planning team conducted three scoping meetings in 1999 to seek public interest, concerns, and ideas: June 8 at the Grand Marais Community Center, June 9 at the Grand Portage Lodge, and June 10 at the Minnesota Historical Society in Saint Paul. A total of 27 people attended the three meetings.

Letters, telephone calls, and e-mail messages have been received commenting about the national monument and responding to the newsletter. Many of the ideas and concepts received have been incorporated into this document.

On May 27, 1999, the National Park Service sent a letter to the U.S. Fish and Wildlife Service to initiate consultation and request information concerning any federally listed threatened or endangered species near Grand Portage National Monument. A letter received from the U.S. Fish and Wildlife Service on June 4, 1999, notified the National Park Service that three listed species, one proposed species, and designated critical habitat for one species exist at or near Grand Portage National Monument. On January 7, 2000, The National Park Service contacted Lee Newman of the U.S. Fish and Wildlife Service to gather information on the effort to reintroduce the coaster brook trout in Grand Portage Creek. The National Park Service will submit a copy of this document to the U.S. Fish and Wildlife Service and ask for concurrence on the determination of "may affect" or "not likely to adversely affect" for the gray wolf and the Canada lynx.

Letters initiating consultation with the Minnesota state historic preservation officer and the Advisory Council on Historic Preservation were sent out during late spring in 1999. Additional information was provided to the Minnesota state historic preservation officer during a scoping session at the Minnesota Historical Society on June 10, 1999.

The National Park Service initiated consultation with the Minnesota Department of Natural Resources on December 21, 1999, and requested information concerning any state-listed threatened or endangered species or species of concern near

Grand Portage National Monument. Information about state-listed species was obtained from the following Internet site:

http://www.dnr.state.mn.us/ecological_services/nhnrp/endlist.pdf.

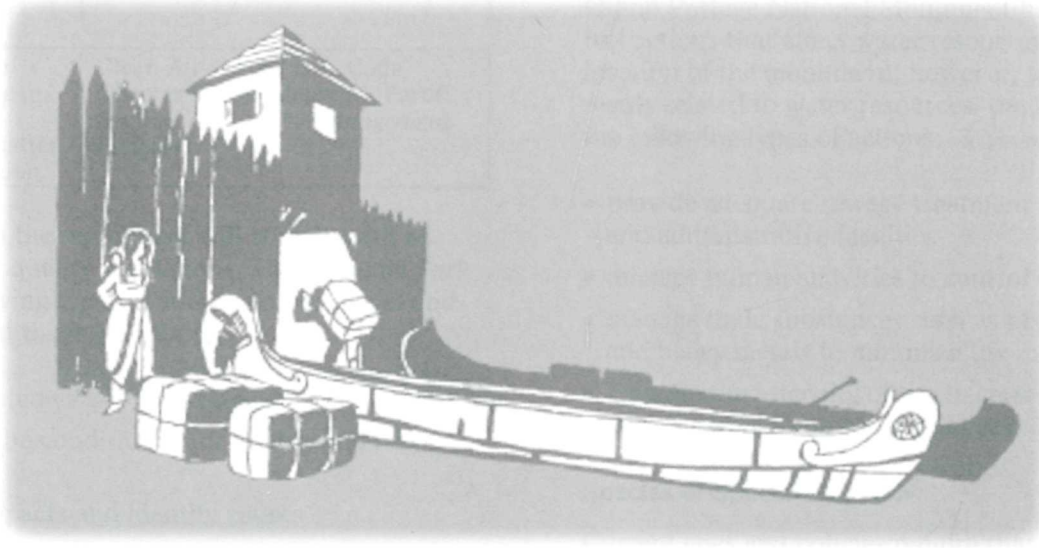
In August 2000 the National Park Service consulted with the Minnesota Department of Natural Resources about the potential impacts of the proposed heritage center on state-listed plants near the site. On September 7, 2000, the National Park Service met onsite with the Minnesota Department of Natural Resources and developed mitigating measures to be incorporated into the project level analysis for the proposed heritage center. On October 3, 2000, the Minnesota Department of Natural Resources concurred with the National Park Service that a taking of any state-listed plant was very unlikely, and that a taking permit would not be necessary.

The National Park Service in December 1999 contacted the Minnesota Geological Survey to gather information on the geomorphology of Grand Portage National Monument. Terry Boerboom, a geologist for the Minnesota Geological Survey, provided information and reviewed the "Affected Environment" chapter relating to the geologic processes.

Also in December 1999, the National Park Service initiated consultation with the Minnesota Lake Superior Coastal Program to request information for compliance with the Coastal Zone Management Act. Through telephone and e-mail communications on January 3, 2000, Tricia Ryan, Coastal Program Coordinator, informed the National Park Service that a federal consistency determination would not be needed.

On February 9, 2000, the National Park Service requested information from the Minnesota Department of Agriculture for compliance with Minnesota noxious weed rules. Collie Graddick, noxious weed advisor, informed the National Park Service that no secondary noxious weeds have been designated in Cook County; thus, only primary noxious weeds need to be addressed.

APPENDIXES



APPENDIX A: SERVICEWIDE MANDATES AND POLICIES

NATURAL RESOURCE MANAGEMENT REQUIREMENTS

Air Quality

Grand Portage National Monument is designated as a class II area under the Clean Air Act. Current laws and policies require that the following conditions be achieved in the national monument:

CONDITION	SOURCE
Air quality in the monument meets national ambient air quality standards for specified pollutants	Clean Air Act; 40 CFR, Part 50; NPS *Management Policies*
Emissions do not exceed the maximum allowable increase in concentrations of specified pollutants and particulate matter over the baseline concentration	Clean Air Act; 42 U.S. Code, Chapter 85, Subchapter I, Part C, Section 7473; NPS *Management Policies*

All air pollution sources in the monument will comply with all federal, state, and local air quality regulations. The National Park Service will take the following types of actions to meet legal and policy requirements related to air quality:

- inventory air quality related values associated with the Monument
- monitor and document the condition of air quality and related values
- evaluate air pollution impacts and identify causes
- ensure healthful indoor air quality in NPS facilities

Water Resources

Current laws and policies require that the following conditions be achieved in the national monument:

CONDITION	SOURCE
Surface water and groundwater are protected and maintained so that water quality meets all applicable Minnesota state water quality standards	Clean Water Act; Minnesota Rules 7050, 7052, and 7060; NPS *Management Policies*
Natural floodplains values are preserved or restored	Clean Water Act; Executive Order 11988; NPS *Management Policies*
The natural and beneficial values of wetlands are preserved and enhanced	Clean Water Act; Executive Order 11990; NPS *Management Policies*

Grand Portage National Monument has limited opportunities to control actions that affect water resources due to the size, shape, and location of the monument; however, to meet legal and policy requirements related to water resources, the National Park Service will take the following types of actions:

- provide adequate sewage treatment and disposal for all public use and administrative facilities
- manage human activities to control erosion
- manage toxic substances such as pesticides, petroleum products, and heavy metals to minimize the risk of water contamination
- regulate the intensity of use in certain areas and at certain times as necessary based on water quality monitoring

Species of Special Concern

Current laws and policies require that the following conditions be achieved in the national monument:

CONDITION	SOURCE
Federally listed and state-listed threatened, endangered, and special concern species and their habitats are protected and sustained	Endangered Species Act; Minnesota Rules 6134; NPS *Management Policies*
Noxious weeds will be controlled or eradicated	Federal Noxious Weed Act; Minnesota Statutes 18.78; NPS *Management Policies*

The National Park Service will take the following actions to meet legal and policy requirements:

- inventory and monitor federally listed and state-listed species
- ensure that monument operations and activities are consistent with the Endangered Species Act, recovery plans, and other applicable documents for endangered, threatened, candidate, or special concern species and their critical habitats within the national monument
- to the fullest extent possible, integrate management actions with other federal, state, and private recovery efforts
- take steps to control or eradicate listed noxious weeds

CULTURAL RESOURCE MANAGEMENT REQUIREMENTS

Archeological Resources

Current laws and policies require that the following conditions be achieved in the national monument:

CONDITION	SOURCE
Archeological sites are identified and inventoried, and their significance is determined and documented Archeological sites are protected in an undisturbed condition unless it is determined through formal processes that disturbance or natural deterioration is unavoidable In cases where disturbance or deterioration is unavoidable, the site is professionally documented and salvaged.	National Historic Preservation Act of 1966, as amended; Executive Order 11593; Archeological and Historic Preservation Act; Archeological Resources Protection Act; The *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation;* Programmatic Memorandum of Agreement Among the NPS, Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (1995); NPS *Management Policies*

No full systematic survey or inventory has been done for the archeological sites in Grand Portage National Monument. Precise information about the location, characteristics, significance, and condition of most of the archeological resources in the national monument is lacking, and impacts are difficult to measure.

The National Park Service will take the following kinds of actions to meet legal and policy requirements related to archeological sites:

- fully survey and inventory archeological resources and document their significance
- treat all archeological resources as eligible for listing on the National Register of Historic Places pending the opinion of the Minnesota state historic preservation officer as to their significance and a formal determination by the Keeper of the National Register of Historic Places
- protect all archeological resources determined eligible for listing or listed on the national register; if disturbance to such resources is unavoidable, conduct formal consultation with the Advisory Council on Historic Preservation and the Minnesota state historic preservation officer in accordance with the National Historic Preservation Act

Historic Properties

Current laws and policies require that the following conditions for historic properties (e.g. buildings, structures, roads, trails, cultural landscapes) be achieved in the national monument:

CONDITION	SOURCE
Historic properties are inventoried and their significance and integrity are evaluated under National Register criteria. The qualities that contribute to the listing or eligibility for listing of historic properties on the National Register of Historic Places are protected in accordance with the Secretary of the Interior's standards (unless it is determined through a formal process that disturbance or natural deterioration is unavoidable).	National Historic Preservation Act of 1966, as amended; Executive Order 11593; Archeological and Historic Preservation Act; the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation;* Programmatic Memorandum of Agreement Among the NPS, Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (1995); NPS *Management Policies*; Director's Order (DO) 28: Cultural Resources Management Guideline

The National Park Service will take the following kinds of actions to meet legal and policy requirements related to historic properties:

- Complete a survey, inventory, and evaluation of historic properties and cultural landscapes under National Register of Historic Places criteria
- Submit inventory/evaluation results to the Minnesota state historic preservation officer and the Keeper of the National Register of Historic Places with recommendations for eligibility to the national register
- Determine the appropriate level of preservation for each historic property formally determined to be eligible for listing or listed on the national register (subject to the *Secretary of the Interior's Standards*)
- Implement and maintain the appropriate level of preservation for such properties
- Analyze the design elements (e.g., materials, colors, shape, massing, scale, architectural details, site details) of historic structures and cultural landscapes in the monument (e.g., bridges, trails, roads and intersections) to guide rehabilitation and maintenance of sites and structures and to ensure that future park structures are compatible with the historic character in design and materials

Collections

Current laws and policies require that the following conditions be achieved:

CONDITION	SOURCE
All museum objects and manuscripts are identified and inventoried, and their significance is determined and documented.	National Historic Preservation Act of 1966, as amended; American Indian Religious Freedom Act; Archeological and Historic Preservation Act; Archeological Resources Protection Act; Native American Graves Protection and Repatriation Act; NPS *Management Policies*
The qualities that contribute to the significance of collections are protected in accordance with established standards.	
Human remains, funerary or sacred objects, or those with cultural patrimony are identified and repatriated in accordance with the Native American Graves Protection and Repatriation Act.	

The Grand Portage National Monument museum collections are not at risk. A large portion of the collection is housed at the Minnesota Historical Society under a formal agreement. Items not on display at the national monument or housed at the Midwest Archeological Center or at the Minnesota Historical Society are housed in Grand Marais at the monument headquarters in climate-controlled conditions with appropriate fire and security systems. All items in the collection have been catalogued; however, items at the Minnesota Historical Society have been catalogued into both the state and National Park Service systems.

The national monument's museum collection includes artifacts that are subject to provisions of the Native American Graves Protection and Repatriation Act (NAGPRA). Grand Portage National Monument has completed the inventory and summary of these artifacts (as stipulated by NAGPRA) and determined that these artifacts are culturally affiliated with the Grand Portage Band of Minnesota Chippewa. Monument staff continues to consult with the Grand Portage Band of Minnesota Chippewa about these artifacts.

The National Park Service will take the following kinds of actions to meet legal and policy requirements related to collections:

- inventory and catalogue all of the monument's museum collection in accordance with standards outlined in the NPS *Museum Handbook*
- develop a collection management program according to NPS standards to guide the protection, conservation, and use of museum objects
- implement the collection management program
- following provisions of NAGPRA, repatriate artifacts to the federally recognized and culturally affiliated tribe; namely, the Grand Portage Band of Minnesota Chippewa

Visitor Experience and Monument Use Requirements

Current laws and policies require that the following conditions be achieved in Grand Portage National Monument:

CONDITION	SOURCE
Visitor and employee safety and health are protected	NPS *Management Policies*
Visitors understand and appreciate monument values and resources and have the information necessary to adapt to monument environments; visitors have opportunities to enjoy the national monument in ways that leave its resources unimpaired for future generations	NPS Organic Act; Grand Portage enabling legislation; NPS *Management Policies*
Recreational uses in the national monument are promoted and regulated, and basic visitor needs are met in keeping with the national monument's purposes.	NPS Organic Act; Grand Portage enabling legislation; 36 CFR; NPS *Management Policies*

The policy of the National Park Service is to maximize accessibility for people (visitors and staff) with disabilities. Codes set minimum legal requirements. Universal design of new facilities better supports NPS policy.

CONDITION	SOURCE
All reasonable efforts will be made to make buildings and facilities of the NPS accessible to and usable by all people, including those with disabilities.	Architectural Barriers Act of 1968; Americans with Disabilities Act of 1990; 28CFR36, "Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities" (ADAAG-ADA *Accessibility Guidelines for Buildings* and Facilities); Uniform Federal Accessibility Standards of 1984 (UFAS); U.S. Access Board Draft Accessibility Guidelines for Outdoor Developed Areas of 1999; NPS *Management Policies;* DO 42, Accessibility for Visitors with Disabilities in NPS Programs, Facilities, and Services
All reasonable efforts will be made to make programs and services of the NPS accessible to and usable by all people, including those with disabilities.	Rehabilitation Act of 1973; Secretary of the Interior's regulation 43CFR17, "Enforcement on the Basis of Disability in Interior Programs"; NPS *Management Policies;* DO 42, "Accessibility for Visitors with Disabilities in NPS Programs, Facilities, and Services."

The National Park Service will take the following kinds of actions to meet legal and policy requirements related to accessibility.

Architectural and Site Access. The National Park Service will develop strategies to ensure that all new and renovated buildings and facilities, including those provided by concessioners, are designed and constructed in conformance with applicable rules, regulations, and standards. Existing buildings and facilities will be evaluated to determine the degree to which they are currently accessible to and usable by people with disabilities and to identify barriers that limit access. Action plans will be developed identifying how barriers will be removed. Action plan elements and funding strategies will be included within annual and strategic (five-year) plans.

Programmatic Access. The National Park Service will develop strategies to ensure that all services and programs, including those offered by concessioners, volunteers, cooperating associations, and interpreters, are designed and implemented in conformance with applicable rules, regulations and standards. Existing programs, activities, and services (including interpretation, telecommunications, media, and web pages) will be evaluated to determine the degree to which they are currently accessible to and usable by people with disabilities, and to identify barriers to access. Action plans will be developed identifying how barriers will be removed. Action plan elements and funding strategies will be included within annual and strategic (five-year) plans.

Regulations governing visitor use and behavior in units of the national park system are contained in title 36 of the Code of Federal Regulations. These regulations have force of law and address a number of use limitations, such as limits on commercial activities.

CONDITION	SOURCE
Pets must be crated, caged, restrained on a leash six feet long or less, or otherwise physically confined at all times. Pets are not allowed in specifically restricted areas	36 CFR 2.15
Bicycles are prohibited in the national monument except on established public roads and parking areas and on routes designated for their use by the posting of signs or by marking on a map available at the superintendent's office	36 CFR 4.3
The use of off-road vehicles is prohibited except on routes designated for that use by the superintendent or where specifically allowed in the enabling legislation	36 CFR 4.19, Grand Portage National Monument enabling legislation

The National Park Service will take the following kinds of actions to meet legal and policy requirements related to visitor experience and use in Grand Portage National Monument:

- Provide opportunities for visitors to understand, appreciate, and enjoy the national monument
- Ensure that all Grand Portage National Monument programs and facilities are accessible to the extent feasible
- Continue to enforce the regulations in 36 CFR

These laws, regulations, and policies leave considerable room for judgment over the best mix of types and levels of visitor use activities, programs, and facilities. The alternatives presented and evaluated in this *Draft General Management Plan / Environmental Impact Statement* represent different approaches to visitor experience and the use of the national monument.

Special Use Management Requirements

"Special use" refers to the use of national monument lands for purposes other than those of the monument. Current laws and policies require that the following conditions be achieved in the national monument with regard to the management of special uses.

DESIRED CONDITION	SOURCE
No new nonconforming uses or rights-of-way will be permitted in the national monument without specific statutory authority and approval by the director of the National Park Service or his representative, and only if there is no practicable alternative to such use of NPS lands.	36 CFR 14; NPS *Management Policies*

Housing

Housing is a critical condition at the national monument. There is one house that is occupied by a ranger and there are two 1960s-era trailers. The ranger is required to occupy the the house year-round. The trailers, used seasonally, are occupied by four seasonal employees. The trailers are obsolete and pose very difficult maintenance and safety concerns. They also sit on top of the most significant cultural feature in the national monument, the portage. In addition, the trailers do not meet ADA standards and restrict the hiring of people with disabilities. To some extent, they also restrict the gender of employees hired.

Housing in the Grand Portage Reservation community is unavailable for either purchase or rental. Outside the Reservation, housing is at a premium because the second home / summer home market in Cook County is tight in summer, when seasonal staff is needed, so that it is likely that seasonal employees would be unable to afford the rent.

APPENDIX B: LEGISLATION

National Parks and Recreation Act of 1978 (PL 95-625). Section 604(b) of this act requires that general management plans be prepared and revised in a timely manner for each unit in the national park system. The act further specifies that general management plans shall include measures for the preservation of the area's resources, indications of the types and intensities of development associated with public use of the unit, visitor carrying capacities for all areas of the unit, and indications of potential modifications of the unit's external boundaries if needed.

National Environmental Policy Act of 1969 (NEPA) (Title 42 U.S. Code sections 4321 to 4370 [42 USC 4321–4370]). The purposes of NEPA include encouraging "harmony between [humans] and their environment and promote efforts which will prevent or eliminate damage to the environment . . . and stimulate the health and welfare of [humanity]". The purposes of NEPA are accomplished by evaluating the effects of federal actions. The results of these evaluations are presented to the public, federal agencies, and public officials in document format (e.g., environmental assessments and environmental impact statements) for consideration before official action is taken or official decisions are made. Implementing regulations for the NEPA are contained in Parts 1500 to 1515 of title 40 of the U.S. Code of Federal Regulations (40 CFR 1500–1515).

Clean Water Act of 1972, as amended (CWA) (33 USC 1251–1387). The purposes of the Clean Water Act are to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters". To enact this goal, the U.S. Army Corps of Engineers (Corps) has been charged with evaluating federal actions that result in potential degradation of waters of the U.S. and issuing permits for actions consistent with the act. The U.S. Environmental Protection Agency also has responsibility for the oversight and review of permits and actions that affect waters of the U.S. Implementing regulations describing the Corps' CWA program are contained in 33 CFR 320–330.

Clean Air Act (PL 360, 69 Stat 322, 42 USC 7401 et seq.). The main purpose of this act is to protect and enhance the nation's air quality to promote the public health and welfare. The act establishes specific programs that provide special protection for air resources and air quality related values associated with NPS units. The U.S. Environmental Protection Agency has been charged with implementing this act.

Endangered Species Act of 1973, as amended (ESA) (16 USC 1531-1544). The purposes of the ESA include providing "a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved". According to the ESA, "all Federal departments and agencies shall seek to conserve endangered species and threatened species" and "[e]ach Federal agency shall . . . insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species". The U.S. Fish and Wildlife Service (non-marine species) and the National Marine Fisheries Service (marine species, including anadromous fish and marine mammals) administer the ESA. The effects of any agency action that may affect endangered, threatened, or proposed species must be evaluated in consultation with either the USFWS or NMFS, as appropriate. Implementing regulations that describe procedures for interagency cooperation to determine the effects of actions on endangered, threatened, or proposed species are contained in 50 CFR 402.

Coastal Zone Management Act of 1972, as amended (PL 92-583, 86 Stat. 1280, 16 USC 1451 et seq.). This act states national policy to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zones," including those bordering the Great Lakes. Requires federal actions to conform to approved state coastal zone management plans to the maximum extent possible. Stipulates that applicants for federal licenses and permits certify that their activities are consistent with management programs of directly affected states.

National Historic Preservation Act of 1966, as amended. This act declared a national policy of historic preservation, including the encouragement of preservation on the state and private levels;

authorized the secretary of the interior to expand and maintain a National Register of Historic Places, including properties of state and local as well as national significance; authorized matching federal grants to the states and the National Trust for Historic Preservation for surveys and planning and for acquiring and developing national register properties; established the Advisory Council on Historic Preservation; required federal agencies to consider the effects of their undertakings on national register properties and gave the Advisory Council opportunities to comment (section 106). Amended in 1976 to expand section 106 to properties eligible for as well as listed on the national register. Amended in 1980 to incorporate EO 11593 requirements, to give national historic landmarks extra protection in federal project planning, and to permit federal agencies to lease historic properties and apply the proceeds to any national register properties under their administration. Amended in 1992 to, among other things, redefine federal undertakings, address "anticipatory demolition," and emphasize the interests and involvement of American Indians and Native Hawaiians.

Section 106 of the National Historic Preservation Act of 1966, as amended. Section 106 mandates that federal agencies take into account the effects of their actions on properties listed on or eligible for listing on the National Register of Historic Places and give the Advisory Council on Historic Preservation a reasonable opportunity to comment. While it does not require the preservation of such properties, it does require that their historic or prehistoric values be considered in weighing the benefits and costs of federal undertakings to determine what is in the public interest.

Section 110 of the National Historic Preservation Act of 1966, as amended. Section 110 gives federal agencies positive responsibility for preserving historic properties in their ownership or control. It calls for them to use such properties, where feasible and compatible with their preservation, in preference to acquiring, constructing, or leasing others. Agencies are also directed to establish preservation programs to identify, evaluate, protect, and nominate to the national register historic properties under their ownership or control, whether they are of significance at the local, state, or national level. The law emphasizes cooperation with state historic preservation officers in establishing such programs.

Executive Order 11593, "Protection and Enhancement of the Cultural Environment," May 13, 1971. This EO instructed all federal agencies to support the preservation of cultural properties; directed them to identify and nominate to the national register cultural properties under their jurisdiction and to "exercise caution . . . to assure that any federally owned property that might qualify for nomination is not inadvertently transferred, sold, demolished, or substantially altered."

American Indian Religious Freedom Act of 1978. This act declared "the policy of the United States is to protect and preserve for American Indians their inherent right of freedom to believe, express and exercise the traditional religions of the American Indian, Eskimo, Aleut, and Native Hawaiians, including, but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites.

Archeological Resources Protection Act of 1979. This act defined archeological resources as any material remains of past human life or activities that are of archeological interest and at least 100 years old; required federal permits for their excavation or removal and set penalties for violators; provided for preservation and custody of excavated materials, records, and data; provided for confidentiality of archeological site locations; encouraged cooperation with other parties to improve protection of archeological resources. Amended in 1988 to require development of plans for surveying public lands for archeological resources and systems for reporting incidents of suspected violations.

Native American Graves Protection and Repatriation Act of 1990. This act assigns ownership or control of Native American human remains, funerary objects, sacred objects and objects of cultural patrimony that are excavated or discovered on federal lands or tribal lands after passage of the act to lineal descendants or culturally affiliated Native American groups; establishes criminal penalties for trafficking in remains or objects obtained in violation of the act; provides that federal agencies and museums that receive federal funding shall inventory Native American human remains and associated funerary objects in their possession or control and identify their cultural and geographical affiliations within five years and prepare summaries of

information about Native American unassociated funerary objects, sacred objects, or objects of cultural patrimony. This is to provide for repatriation of such items when lineal descendants or Native American groups request it.

Indian Self-Determination and Education Assistance Act of 1975 (PL 93-638) and Indian Self-Determination Act Amendments of 1994 (PL 103-413). The first act attempted to maximize tribal participation in the planning and administration of federal services and programs within the Bureau of Indian Affairs and the Indian Health Service. The second act amended the first, establishing self-governance throughout the Department of the Interior and allowing each tribe to voluntarily choose whether and to what degree it wants to participate in self-governance. The bill also requires an orderly transition from federal domination to tribal authority and control with accompanying reduction in the federal bureaucracy. All dealings between the Department of the Interior and a self-governance tribe are to be bilateral and consensual and may not be altered unilaterally.

Executive Order 13007, "Indian Sacred Sites," May 24, 1996. This EO instructed each executive branch agency with statutory or administrative responsibility for the management of federal lands to 1) accommodate to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, access to and ceremonial use of Indian sacred sites by Indian religious practitioners, 2) avoid adversely affecting the physical integrity of such sacred sites, and 3) where appropriate, maintain the confidentiality of such sites.

Presidential Memorandum, "Government to Government Relations with Native American Tribal Governments," April 29, 1994. This presidential memorandum provided guidance and clarification for executive branch departments and agencies with regard to the government-to-government relationship with federally recognized tribal governments. Part "a" makes the head of each executive department and agency responsible for ensuring that the department or agency operates within a government-to-government relationship with federally recognized tribal government. Part "b" requires the department or agency to consult to the greatest extent practicable and to the extent permitted by law. Part "c" requires that the impact of plans, projects, programs and activities on tribal trust resources be assessed and that tribal rights and concerns be considered during the development of such plans, projects, programs, and activities. Part "d" requires the removal of any procedural impediments to working directly and effectively with tribal governments on activities that affect the trust property and/or governmental rights of the tribes. Part "e" requires each executive department and agency to work with other federal departments and agencies to enlist their interest and support in cooperative efforts to accomplish the goals of this memorandum. Part "f" requires application of the requirements of EOs 12875 ("Enhancing the Intergovernmental Partnership") and 12866 ("Regulatory Planning and Review") to design solutions and tailor federal programs, in appropriate circumstances, to address specific or unique needs of tribal communities.

APPENDIX C: COSTS

The assumptions made in estimating costs are for the purposes of comparing alternatives and should not be used for construction estimates.

ALTERNATIVE A

Alternative A assumes that at some point within the next 20 years, maintenance facilities and housing for seasonal employees will have to be replaced. These facilities are already beyond their predicted life expectancies. Structure removal was estimated to cost $300,000, with replacement costs of $500,000 (maintenance facility) and $300,000 (assumes 2 trailers).

It was also assumed that within the next 20 years the Isle Royale wharf would have to be replaced at an estimated removal cost of $450,000 and a replacement cost of $620,000.

The cost of utilities replacement to the site is an unknown. The estimate for this alternative is more than $2 million. No additional staff would be required.

ALTERNATIVE B

Alternative B assumes construction of a heritage center ($6 million), a separate headquarters facility, a new maintenance facility, and two duplexes and one dormitory for housing ($4.6 million total). It assumes that between 5 and 11 buildings would be reconstructed in the stockade (for 5 buildings the range was $1.5–3.5 million, for 11 buildings the range was $4–9 million). Researching, designing, constructing, furnishing, dredging, and placement plus the cost of archeological excavation and a film on the entire process of reconstructing the *Otter* would cost ca. $6 million–$7 million. Annual maintenance costs would average $500,000. The vessel would require replacement approximately every 25 years.

Roadwork is estimated at $1 million. It is assumed that removing the ranger residence, maintenance facility, and seasonal housing and restoring the site would cost $300,000. Wharf removal is assumed to cost $450,000. A more historically accurate dock would cost about $500,000. Removing and replacing the footbridge would cost approximately $350,000.

No cost estimate was determined for reconstruction of the Isle Royale wharf offsite because it was assumed that it would be paid at least partially by the concessioner. The cost of utilities replacement also was an unknown.

The estimate for this alternative ranges from $23.5 million to $30 million.

Additional staff required (per year in FY 2000 dollars) would be as follows.

Archivist/curator, (1), GS-11, $52,900	$ 53,000
Interpreters (3), GS-9, $43,700	131,000
Seasonal rangers, (3.6), GS-4/5, $28,800	104,000
Law enforcement ranger, (1), LE-9, $45,200	45,000
Resource manager, (0.5), GS-9, $43,800	22,000
Vessel captain, (1), GS-12, $63,400	63,000
Maintenance employees, (3), WG-3, $18,169	55,000
Crewmen, (2), WG-7, $42,658	85,000
Total	**$558,000**

ALTERNATIVE C

Alternative C assumes the construction of a heritage center ($6 million), an Ojibwe Cultural Demonstration Shelter ($210,000), reconstruction of 3 structures within the stockade ($2.5 million), roadwork ($3 million), removing ranger residence, maintenance facility, and two duplexes and one dormitory for housing ($1.2 million), construction of a new maintenance facility ($500,000) and

new seasonal housing ($600,000), and wharf removal ($450,000). A more historically accurate dock would cost about $500,000. Removing and replacing the footbridge would cost approximately $350,000.

No cost estimate was determined for reconstructing the Isle Royale wharf offsite because it was assumed that it would be at least partially paid by the concessioner. The cost of utilities replacement also was unknown.

The estimate for this alternative is more than $16 million. Additional staff required (per year in FY 2000 dollars) would be as follows.

Archivist/curator, (1), GS-11, $52,900	$ 53,000
Interpreters (3), GS-9, $43,700	131,000
Seasonal rangers, (3), GS-4/5, $28,800	86,000
Law enforcement ranger, (1), LE-9, $45,200	45,000
Resource manager, (0.5), GS-9, $43,700	22,000
Maintenance employees, (2), WG-3, $18,169	36,000
Total	**$373,000**

ALTERNATIVE D

Alternative D assumes the construction of a heritage center ($6 million), a new maintenance facility ($500,000), and two duplexes and one dormitory for housing ($1,200,000). It also assumes the cost of removing a ranger residence, a maintenance facility, seasonal housing ($300,000), and the wharf ($450,000). Roadwork proposed is estimated at $1.5 million.

No cost estimate was determined for reconstructing of the Isle Royale wharf offsite because it was assumed that it would be at least partially paid by the concessioner. The cost of utilities was also an unknown.

The estimate for this alternative is more than $12 million.

Additional staff required (per year in FY 2000 dollars) would be as follows.

Archivist/curator, (1), GS-11, $52,900	$ 53,000
Interpreters (2), GS-9, $43,700	87,000
Seasonal rangers, (1.6), GS-4/5, $28,800	46,000
Law enforcement ranger, (1), LE-9, $45,200	45,000
Resource manager, (0.5), GS-9, $43,700	22,000
Maintenance employee, (1), WG-5, $39,532	40,000
Total	**$293,000**

ALTERNATIVE E

Alternative E assumes construction of a heritage center ($6 million), an Ojibwe Cultural Demonstration Shelter ($1 million), three reconstructions within the stockade ($2.5 million), a new maintenance facility ($500,000), and two duplexes and one dormitory for new housing ($1,200,000). It also assumes the cost of removing a ranger residence, a maintenance facility, and seasonal housing ($300,000), and a wharf ($450,000). Roadwork would cost $3 million.

No cost estimate was determined for reconstruction of the Isle Royale wharf because it was assumed that it would be at least partially paid by the concessioner. The cost of utilities was also an unknown.

The estimate for this alternative is more than $15 million.

Additional staff required (per year in FY 2000 dollars) would be as follows.

Archivist/curator, (1), GS-11, $52,900	$ 53,000
Interpreters (2), GS-9, $43,700	87,000
Seasonal rangers, (3), GS-4/5, $28,800	86,000
Law enforcement ranger, (1), LE-9, $45,200	45,000
Resource manager, (0.5), GS-9, $43,700	44,000
Maintenance employees, (2), WG-5, $39,532	80,000
Total	**$355,000**

APPENDIX D: CULTURAL RESOURCES

ARCHEOLOGICAL RESOURCES

The cultural resource inventory of Grand Portage National Monument (Woolworth and Woolworth 1982) lists 110 archeological sites and cultural features within (or potentially within) the boundary of the monument. Because much of the monument has not yet been archeologically surveyed (particularly the 8.5-mile Grand Portage) there is great potential for adding more archeological sites to this inventory. In addition, current research into the ethnohistory of Grand Portage, using oral interviews with tribal elders, has the potential to add many sites of ethnographic or traditional cultural significance.

The following paragraphs list the principal archeological and cultural resources in Grand Portage National Monument, outside of the reconstructed North West Company depot area:

XY Company Depot: Written records indicate that the competing XY post was somewhere east of the North West Company post. Its precise location has not been determined, although there is some evidence to indicate that the ruins of this depot may be under the present seasonal housing and maintenance facilities.

Boucher's Little Fort: Boucher's Little Fort is mentioned in historic traders' journals. Minnesota Historical Society fieldwork in 1975 may have encountered remains of this legendary site. It is believed that Boucher's Little Fort was occupied from 1785 to 1802; however, structures found in this area indicate habitation until approximately 1805. According to Woolworth and Woolworth (1982), this is one of the more significant locations in the monument.

American Fur Company Fishing Station: The American Fur Company opened a commercial fishery at Grand Portage in 1836 under the direction of Pierre Coté. According to Carolyn Gilman, the company " . . . provided the nets, barrels, and salt; the Indians provided much of the labor and know-how. From August to November they set nets where trout and whitefish congregated . . ." (Gilman 1992). The fish were cleaned and then salted down in barrels by Ojibwe women, and Coté purchased fish at $3 a barrel. From 300 to 500 barrels a year were shipped east on the company's schooner, the *John Jacob Astor.* An 1839 visitor mentioned several buildings at the fishing station, which was in business till 1841.

The Public Road: In 1778 Lt. Thomas Bennett of the King's Eighth Regiment of Foot began the work of laying out and constructing a "public road." The road ran from the lakeshore, along the Grand Portage east of the creek, and then around the low hill on which the present-day Roman Catholic Church stands.

Prehistoric Lithic Site: A prehistoric lithic site (a campsite or work area containing remains of stone tools) dating to approximately 500 B.C.–0 A.D., discovered by Woolworth, yielded a projectile point, a scraper, and a stone blade. The site is east of Grand Portage Creek and south of the road which was built across the historic voyageur encampment in 1914. According to Woolworth and Woolworth (1982), "Scientifically, this find is of considerable importance. The site of the camp should be preserved." This is the earliest evidence of human habitation or activity in the monument.

BIA Structures: The U.S. Indian Department built Grand Portage's first schoolhouse in 1856. It stood northeast of the stockade near the maintenance boneyard at the monument's southeastern boundary. In 1914 a BIA schoolhouse and outbuildings were built east of Grand Portage Creek in the current picnic area. The school was replaced by a new BIA log structure in 1938 (located outside, but overlooking, the national monument). After use as a cooperative store, recreation hall, and canteen, the 1914 school was torn down in 1946. Additional Indian Department / BIA structures in the area east of Grand Portage Creek included warehouses, a dock, a barn, sheds, and an Indian agency building used by the BIA's assistant government farmer. These sites are significant because they relate to a period of relatively intensive U.S. government involvement with the local Band of Ojibwe. It is possible that these buildings may be superimposed on top of older structures from the fur trade era ca. 1731–1805 (Woolworth and Woolworth 1982).

Midewiwin Lodge Site: At one time this site contained a bark Midewiwin lodge (an Ojibwe ceremonial structure). The precise location of the original Midewiwin ground and church is uncertain. It was also the site of the first wooden Roman Catholic Church, ca. 1851–1865. Eastman Johnson's 1857 painting (Gilman 1992) shows the location of the first church. The original painting is in the collection of the Saint Louis Historical Society in Duluth. The church was moved to higher ground around 1865, sided, enlarged and consecrated to Our Lady of the Holy Rosary; it still stands today (Gilman 1992; Woolworth and Woolworth 1982, Woolworth, personal communication 1999). On this site three successive birch-bark Roman Catholic chapels were built, and a small log cabin was built for Father Pierz in 1858.

Ojibwe Burials: Minnesota Historical Society excavations in 1962 revealed four adult Ojibwe burials (ca. 1800–1825) on a small hill east of the creek in the vicinity of the 1914 BIA school. There are probably additional burials at this site (Woolworth and Woolworth 1982).

The Grand Portage: The Grand Portage leads from Lake Superior's Grand Portage Bay up to the Pigeon River to the northwest. It was developed as a means of bypassing treacherous falls and cascades of the lower Pigeon River. Grand Portage was subsequently used first by French, then by British traders for a period of nearly 75 years until the last rendezvous of 1804 (Gilman 1992). It was used prehistorically by native peoples for hundreds, perhaps thousands of years and by the French explorers, missionaries, French-Canadian voyageurs, Scots partners, guides, and others from the mid-17th century onward. It is best known for its association with the fur trade era, between 1731 and 1803. After the Frenchman La Verendrye recorded his portage experiences in 1731, use of the route was dominated by the voyageurs transporting packs and canoes from the Grand Portage landing site to the Pigeon River, 8 miles to the northwest. However, the extent of French occupation at Grand Portage is still unclear. According to Woolworth and Woolworth (1982) the scanty available historical literature on the French use of the Grand Portage indicates that the French had small wooden structures at each end of the Grand Portage from 1732 to 1760 for the seasonal use of personnel and storage of munitions and supplies.

In its day the portage was acknowledged as the throughway to Canada's prime fur country. Initially it was only a footpath perhaps 3 or 4 feet wide, but by 1787 it had been widened to a narrow trail for two-wheeled carts (Woolworth and Woolworth 1982). While the exact starting point for the Grand Portage is in dispute, Woolworth and Woolworth (1982) state emphatically, "It is the height of folly to assume that the centuries old Grand Portage began at the main gate of the North West Company depot which was erected ca. 1785, and that it then proceeded along the west bank of Grand Portage Creek for a considerable distance. The historical evidence shows instead that the Grand Portage began on the east bank of Grand Portage Creek and that it apparently originated at the lakeshore."

The British assumed control of the fur trade in this region during the summer of 1767. By the 1780s, trade — in fact, most transportation on the portage — was dominated by the North West Company. Although no records survive, it is assumed that the North West Company kept the portage in decent repair using their voyageurs' labor.

After the post was abandoned in 1804, the decreasing frequency of use on the portage resulted in its reverting to an overgrown footpath. Surveyors and missionaries occasionally used it, and members of the Grand Portage Band of Minnesota Chippewa probably used it for a variety of purposes. The trail remained in this state until 1946, when a group of Boy Scouts, working for the Indian Forest Service, cleared 3.5 miles of the route. This work continued until 1948. When the area was established as a national historic site in 1951 (later to be designated a national monument in 1958), the National Park Service assumed responsibility for the care and maintenance of the portage.

Today the Grand Portage is an 8.5-mile trail extending from the reconstructed depot site to the Pigeon River at Fort Charlotte. The monument consists of a narrow (100 foot wide) corridor of land surrounding the Grand Portage and extending for about 1 mile from Grand Portage village to MN 61. The corridor then widens to 600 feet over the rest of the distance to Fort Charlotte. What is believed to be the historic route of the Grand Portage lies generally within the center of this corridor.

The Grand Portage trail remains an international road. Under the terms of the Webster-Ashburton Treaty of 1842, the use of the trail remains free and open to citizens of both the United States and Great Britain. This corridor is of paramount significance to the Grand Portage National Monument. Without the Grand Portage, British and American political history and national boundaries might have been quite different.

Ford: The old ford that served the North West Company depot crossed Grand Portage Creek a short distance upstream of the 1938 stone bridge. This is near the present location of the maintenance facility and seasonal housing.

Poses: Historical data indicate that there were 16–18 poses along the Grand Portage (Gates 1965; Woolworth and Woolworth 1982; Woolworth 1993). Poses were routinely used resting places for voyageurs who, carrying two 90-pound bundles between Fort Charlotte and the North West Company post on Grand Portage Bay at a rapid pace, were in frequent need of repose. Poses were located approximately 600–800 yards apart, often at the crossing of small creeks and springs.

Fort Charlotte: Fort Charlotte, on the Pigeon River, lies at the western end of the portage. Fort Charlotte and the surrounding area encompass 101.15 acres of NPS land. From the late 1770s or early 1780s through about 1803, it functioned as the historic contact point and storage location for the North West Company and the XY Company. At least two smaller companies also had relatively permanent operations at the site. It is likely that before the North West Company's activity, the French had log structures at this site, ca. 1732–1760. A series of palisaded depots eventually developed at Fort Charlotte; their remains were visible as late as 1893. It is a rich archeological resource, with both terrestrial and underwater deposits. More detailed discussion of Fort Charlotte is found in Woolworth and Woolworth (1982) and Woolworth (1993).

Palisades: Upland archeological excavations have not been undertaken at Fort Charlotte. However, a surface survey documented surface remains and soil depressions showing the locations of roadways, palisades, and buildings for both the North West Company and the XY Company (Albinson 1922). The palisade, or stockade wall, was first excavated in 1936–1937 by Minnesota Historical Society archeologist Ralph Brown, directing a crew of Grand Portage Ojibwe workers. Archeological evidence indicates that the palisade was enlarged twice during the North West Company occupation. The NPS Midwest Archeological Center conducted a proton magnetometer survey of Fort Charlotte in 1978. Data from this test supported the findings reported by Albinson (Huggins and Weymouth 1979). It is believed that the palisade depot was built around 1780 and named for Charlotte, consort of King George the III (Woolworth and Woolworth 1982).

Wharf/Dock: Underwater exploration of the Pigeon River at Fort Charlotte in the early 1970s found evidence of a wharf/dock built along the south side of the river, adjacent to the location of the North West Company Post (Birk 1975). The physical remains of the dock area showed that hewn cedar logs paralleled the bank and also projected into the river, suggesting the existence of a wharf and at least one, possibly two docks. The underwater excavations also produced rich evidence of the material culture of the fur trade and the activities that took place at Fort Charlotte (Birk 1975).

XY Company Post: The remains of a short-lived outpost set up by the XY Company in 1797 are evident in the Fort Charlotte area. The site is in an angle formed by Snow Creek on the north and Pigeon River on the west.

SITE HISTORY

Grand Portage National Monument is listed on the National Register of Historic Places for its ". . . important association with the fur trade and the exploration and colonization of the northwest, its historic and geographic link between the United States and Canada, and its excellent state of preservation in a semi-wilderness setting."

The National Register form describes the site's history as follows:

> Grand Portage National Monument is situated on Lake Superior near the northwestern tip of Lake Superior. It encompasses the site

of one of the most important fur posts on the North American continent. Geography, the quest for fur, the search for the Northwest Passage, and a boundary dispute between the United States and Canada caused it to become a great center of activity. The strategic location of Grand Portage between Lake Superior and the interconnected waterway along the present Minnesota-Ontario border guaranteed it an important place in history, because it guarded one of the best natural routes to the northern interior of the continent (the other being Hudson Bay). Because of its geographical advantages, Grand Portage was selected as the headquarters of the North West Company, a powerful British fur trading firm. Because of the importance of the company, Grand Portage was the only scene of military activity in Minnesota during the Revolutionary War when British soldiers were stationed there to protect the company's property.

The Grand Portage, or the "great carrying place," though neither the longest, the most difficult, nor the most spectacular of the portages, was a vital link in the fur trade from Montreal. This nine-mile trail represented the end of travel on the Great Lakes and the beginning of the interior river and lake route.

By 1778, the North West Company's trading post, located on the shores of the small bay at the eastern end of the "great carrying place," was in operation. This post, which took its name from the portage, served as the company's inland headquarters, and it was here that the "Nor' Westers" held their summer rendezvous.

At the peak of the North West Company's trade, there were over a thousand voyageurs in the company's service. These faithful laborers usually carried two 90-pound packs over the portage between Fort Charlotte and Grand Portage, each trip.

The North West Company was unable to maintain a complete monopoly over the trade that passed through Grand Portage. Rivals sprang up from time to time, usually to flourish a few years and then merge with the "Nor' Westers." The most aggressive competitor, the XY Company, operated neighboring posts at Grand Portage and Fort Charlotte from 1797 to 1804.

By 1800 the boom years of Grand Portage were near an end. In that year a United States tax collector visited the North West Company's post and gave notice that the United States would, the next year, levy duties on all merchandise and furs passing over the portage.

The "Nor' Westers" like many others, were uncertain whether the portage lay on United States or Canadian soil. Because they thought that the collector had a good case in the Jay Treaty of 1794 and that his warnings should be taken seriously, they immediately made plans to move their post to the mouth of the Kaministiquia River on Canadian soil, about 30 miles northeast, and to reopen a long abandoned and more difficult route to the west.

By 1803, the new post — first named Fort Kaministiquia and later called Fort William in honor of the company's chief superintendent, William McGillivray — was near completion, and the North West Company bade a final farewell to Grand Portage.

Although the trapping regions and trade routes principally lay in Canada, the people and events of Grand Portage were also significant in United States history. It could be said that Grand Portage played a larger part in the history of Canada than in that of the United States. But, in a larger context, it must be recognized that Grand Portage played a part in the historical development of both nations. The French explorers who used the portage knew no international boundary; they traveled into the Dakotas and the Illinois country, as well as through western Canada.

The Grand Portage trail was and still is an international road. Under the terms of the Webster-Ashburton Treaty of 1842 use of the trail remains free and open to this day to citizens of both the United States and Great Britain.

HISTORIC RESOURCES

The name of Grand Portage became known around the world between 1762 and 1804 because of the old North West fur trade. At the midpoint of the voyageurs' highway into the heart of the continent, it was the site of the principal annual rendezvous. As the site of the inland headquarters for one of North America's great fur trade empires, Grand Portage was possibly the single most important place associated with the fur trade.

The stockade (or depot) area consists of the lands between Lake Superior and the Grand Portage at modern County Road 17. Although archeological evidence is not abundant, native peoples probably used this area occasionally for thousands of years as a

transportation corridor and for seasonal fishing and food gathering activities. A seasonal village (probably Ojibwe) was in place at the time of the La Verendrye expedition to Grand Portage in 1731. The extent of French occupation at Grand Portage is still unclear. According to Woolworth and Woolworth (1982) the scanty available historical literature on the French use of the Grand Portage indicates that the French had small wooden structures at each end of the Grand Portage from 1732 to 1760 for the seasonal use of personnel and storage of munitions and supplies.

Although British traders began using the portage by 1765, the first structures built by the British probably did not appear until 1768. Numerous small competing fur traders became established at Grand Portage through the 1770s, several of whom consolidated into the North West Company in 1784. The development of the new company depot beginning in 1785 (probably incorporating some earlier buildings) was the beginning of the major period of fur trade era construction at Grand Portage (Gilman 1992).

Written accounts and archeological investigations have provided information necessary to accurately reconstruct several of these North West Company structures. These are furnished in the period of 1797. Reconstructed historic features of the stockade area include the white cedar palisade, a wooden dock, a gatehouse, the Great Hall, a kitchen, an outdoor bake oven, a kitchen garden, an Ojibwe garden, a flagpole, a fur press, a canoe-building bed, and a canoe warehouse. Seasonal living history exhibits of a voyageur encampment and an Ojibwe village also add to the historic setting.

Historic furnishings in the structures are mostly replicas and are catalogued as such in the monument's collection. Actual museum pieces such as a historic rotisserie coffee bean roaster, American Indian clothing and artifacts, fur trade era archeological objects, and a birch-bark ricing canoe are also displayed.

RECONSTRUCTIONS

The reconstructed buildings at Grand Portage National Monument represent a small percentage of those that once occupied the site. Sixteen buildings were inside the main palisade in 1793, and an unknown number outside. Historical and archeological evidence indicates that most of the structures were built in the French "*poteaux sur sole*" or post-on-sill construction method. This style is also referred to as the Canadian style or Canadian frame construction. Buildings were built of squared hewn timbers of cedar and white spruce, with shingles of cedar and pine. Doors, posts, and window frames were painted "Spanish brown." The buildings included six storehouses for merchandise and furs, dwellings, shops, a compting house, and a mess house (now called the Great Hall) (Gilman 1992). However, no historic structures remain standing from the fur trade era at the Grand Portage site or at Fort Charlotte; only archeological remains are preserved.

Palisade: As was mentioned above, the palisade was first excavated in 1936–1937, and archeological evidence indicates that it was enlarged twice during the North West Company occupation. In 1938 the Civilian Conservation Corps reconstructed the stockade under the direction of the Bureau of Indian Affairs and based on Brown's research. The National Park Service entirely rebuilt it in 1964 and again in 1988–1989. Today there are 1,574 linear feet of white cedar log palisade wall approximately 14 feet high.

Gatehouse: A 13′ by 13′ reconstructed gatehouse is elevated approximately 12 feet above grade. The present gatehouse was built in 1965 and remains in excellent condition.

Dock: As was mentioned above, limited historical and archeological evidence indicates that a wharf or dock was located along Grand Portage Bay adjacent to the palisade. A 270′-long dock was built in 1931 by the Grand Portage Band and the Cook County Historical Society as a memorial to members of the Andrews family and in commemoration of the bicentennial of the La Verendrye expedition. That dock was destroyed by a storm in 1951. The replacement dock, which is somewhat L-shaped, is placed on 12′ by 12′ log cribs filled with rubble. The dock is in fair condition and is used by the motor vessel *Wenonah,* a boat that carries visitors to and from Isle Royale National Park, 20 miles offshore. The monument's enabling legislation mandates that the Grand Portage Band have unlimited use of this dock, but they have not exercised this right in recent years.

Great Hall: It is believed that John Erskine originally built the Great Hall in 1768. Other documents indicate that the Great Hall and kitchen were constructed around 1785 when the palisades were expanded to enclose additional space. It is uncertain what became of the original building. Minnesota Historical Society archeologist Ralph Brown first excavated the site of the Great Hall in 1936–1937, and the Civilian Conservation Corps reconstructed it in 1938–1940 under the direction of the Bureau of Indian Affairs and based on Brown's research. Some negative impacts resulted from the 1930s reconstructions: the installation of concrete footings for a propane gas tank directly east of the Great Hall and the installation of sewer and water lines destroyed some archeological evidence, including a section of buried stone wall. Lightning struck the CCC-era Great Hall in 1969, and the resulting fire destroyed the Great Hall and many artifacts. However, this damage resulted in an opportunity to conduct additional archeological excavations and rebuild the structure more accurately. Minnesota Historical Society archeologist Alan Woolworth excavated the site a second time in 1970. Based on this research, the National Park Service rebuilt the Great Hall in the early 1970s. It is constructed from square timbers hand-hewn from locally cut logs. The structure measures 30′ by 95′ and is 1½ stories tall with two fireplaces of random coarse fieldstone. The hip roof has six gable dormers and covers the porch running along the south side of the hall. The building is in excellent condition.

Kitchen: The original kitchen, which served the main dining facilities in the Great Hall, was constructed around 1785, when the palisade was expanded to enclose additional space. Minnesota Historical Society archeologist Alan Woolworth extensively excavated the kitchen site in 1970–1971. Approximately 15,000 artifacts were recovered, including rosehead nails, dish fragments, liquor bottles, cutlery and woodworking tools, door and window hardware, fire steels, beads, buckles, brass tinklers, clay pipestems and bowl fragments, and pieces of firearms. The National Park Service reconstructed the kitchen between 1973 and 1976, using archeological evidence and knowledge of construction methods of the day. The present 1½-story structure measures 35′ by 27′ and is connected by a wooden elevated walkway to the Great Hall. Additional archeological work was conducted around the kitchen in 1989 in advance of construction to improve water drainage around the structure (Noble 1990).

Bake Oven: A precise location for an outdoor clay and straw bake oven has never been found. However, it is historically known that large quantities of fresh bread were supplied to arriving voyageurs. What is believed to be a historically accurate reconstructed bake oven was built in 1987 and rebuilt in 1994, following recommendations in the *Historic Structures Report* (1973) for the kitchen. The oven, which is patterned after one used by the Hudson's Bay Company, is used during the summer for demonstrations of historic baking.

Gardens: Written historic accounts of activities at the North West Company depot indicate that hay, potatoes, and livestock were raised at the post. However, inventories of post supplies and records from other posts suggest that many other types of plants could have been cultivated to supplement the post's dried stores, fresh meat, and fish. A raised garden has been established north of the kitchen, representing a post garden that probably was originally located outside the palisade walls. A second garden was established in 1994 in the Ojibwe village exhibit to depict American Indian gardening techniques. Both gardens are built on raised beds to protect archeological deposits. Heirloom seeds, descendants of actual 18th and 19th century cultivars, are grown in these gardens using organic gardening methods.

Flagpole: Archeological evidence has not revealed the precise location of the post's flagpole; however, original written accounts of the Grand Portage depot refer to a flag flying over the depot. The flagpole, flying the North West Company's red ensign, was placed at the southeast corner of the Great Hall in 1994 based on recommendations by Alan Woolworth.

Canoe Warehouse: The site of the canoe warehouse, outside the west wall of the stockade, was excavated by Woolworth in 1973. Evidence indicated that a squared log structure 52′ by 19′ set on piles had been located here. Its reconstruction was completed in 1973, and the ramp and stairs leading to the south end of the building were replaced in 1999. The building is in excellent condition.

Fur Press: A functional, reconstructed lever-style fur press is within the stockade area between the Great Hall and the gate leading to the

dock. There is no archeological evidence indicating the precise location of a fur press.

Ojibwe Village: The Ojibwe village is just west of the stockade, near the canoe warehouse. Precise locations for original villages are uncertain, but they varied through time. The current site consists of the following reconstructed birch-bark structures: a summer (dome-shaped) wigwam, a work shelter, a winter (conical) wigwam, and a long house. An elevated earthen canoe-building bed is also located here. A campfire and elevated earthen canoe building bed were added in 1999. From mid-June through Labor Day, personnel in historic costume staff this living history exhibit.

Voyageur Camps (North Men and Montreal Camps): Historic written records indicate that Montreal voyageur camps were located across Grand Portage Creek, east of the stockade. The location of the North Men camps was to the west of the stockade. Up to 1,000 men would camp here for several weeks each summer. A small voyageur North Men encampment has been reconstructed near the outer southwest corner of the stockade. Personnel in historic costume staff the exhibit from mid-June through Labor Day.

CULTURAL LANDSCAPE

For many years, Grand Portage National Monument has interpreted the history of the fur trade and its associated transportation networks and commemorated the tradition of cross-cultural contact between the Ojibwe and Euro-American explorers. This section describes the cultural resources that are critical to conveying these concepts and might be affected by one or all of the alternatives.

A cultural landscape is the physical result of generations of human activity at a place. The landscape at Grand Portage has many layers, both visible and hidden, portraying both its historic and contemporary significance. Cultural landscapes consist of both built and natural features. The depot, the portage trail and surrounding forest, burials, and the village site are associated with the continuum of use from the original occupation, through the fur trade and logging eras, up to the most recent residential and recreational development of the Grand Portage community. Because the monument's cultural landscape has changed dramatically over time, it does not simply resemble a single period in the past. The four primary component landscapes are the portage, the stockade, Fort Charlotte, and the former Grand Portage village site.

A cultural landscape inventory for Grand Portage National Monument is underway. When completed, the inventory will identify and document critical features to be protected. Before any future development could begin, a more detailed implementation plan such as a cultural landscape report would be completed to guide development and ensure that the cultural landscape would not be adversely impacted.

For the purposes of describing the impacts of the alternatives of this *General Management Plan / Environmental Impact Statement*, the cultural landscape of Grand Portage National Monument includes everything within its boundaries.

The Grand Portage: The Grand Portage, described in detail above, is an important component of the cultural landscape. The present alignment and character of the portage areas are very similar to its appearance during the 1790s, the period of peak use. However, because the forest surrounding the trail has been extensively logged, its species and quality may be dramatically different from that of the fur trade period. What was once native white-pine forest today consists of successional second growth, dominated by both trembling aspen, paper and heartleaf birch, spruce and balsam fir.

The path was a primarily wooded corridor, although meadows appeared along its course, and periodic fires would clear the forest cover. Large groves of sugar maples accessed along the trail were tapped to make maple sugar, and birch bark was collected to build canoes. The portage, which was depicted in various configurations on maps, initially was only a footpath perhaps 3 or 4 feet wide, but by 1787 it had been widened to a narrow trail that became a busy thoroughfare wide enough to accommodate two-wheeled, oxen-drawn carts (Woolworth and Woolworth 1982).

Visitors to Grand Portage National Monument can traverse the narrow rugged path between the Pigeon River and Grand Portage

Bay with very few contemporary intrusions. The trail is a narrow, gradually sloping corridor through the forest. Its sometimes rocky, often swampy and muddy surface allows hikers to contemplate the grueling passages taken by the voyageurs. The present alignment and character of the portage are similar to its appearance during the 1790s, the period of peak use. Because the forest surrounding the trail has been extensively logged, its species and quality may be dramatically different from that of the fur trade period. What was once native white-pine forest today consists of successional second growth, dominated by both quaking aspen, paper and heartleaf birch, spruce and balsam fir.

Stockade: The stockade landscape includes the area west of Grand Portage Creek, between County Road 17 and Lake Superior, as well as Mount Rose. The landscape includes reconstructions of historic structures, as well as contemporary buildings used for either park operations or employee housing. The buildings are interspersed with areas of shrubs and trees, and the landscape within the stockade walls is mown grass. Although the reconstructions serve to interpret the fur trade era for visitors, the landscape does not replicate the historic environment within which these activities occurred. As early as 1767, voyageurs approaching from the water used Mount Rose as a landmark. Drawing near, they probably observed a bustle of activity along a shoreline that had been stripped of vegetation to create voyageur campsites, build fires, and construct the stockade. The cleared area, which ran up to the surrounding ridges, was dotted with encampments, small commercial ventures, and a number of pens for containing the livestock that was raised at the site. The clusters of encampments surrounded the centralized depot and a number of utilitarian buildings.

This historic working landscape contrasts with the contemporary forested Mount Rose and Mount Josephine and the carefully maintained stockade and Ojibwe village. The historically significant view from Mount Rose to Lake Superior continues to provide stunning views of the shoreline; photographs taken over the last century allow us to track changes in the use of the area through patterns of vegetation, circulation, and construction of buildings. Today's carefully maintained monument landscape tells only part of the story; there are very few features that demonstrate the rather scruffy, dirty, somewhat wild quality of life at the stockade and the day-to-day preparations of pelts, rituals of trade, repair of equipment, or seasonal celebrations.

The configuration and appearance of the stockade varied over time. It is not known whether any structures existed at the mouth of Grand Portage creek during the French occupation (1731–1760). After the British assumed control of Canada in 1761, the area was used as a stopping point and campsite until the North West Company constructed its stockade around 1780. In addition to the palisades enclosing the post, at least 16 buildings stood within the confines of the depot during the height of the fur trade.

After the British abandoned the post in 1804, it is not known what became of the stockade and buildings, although it is believed that some of the structures were relocated for use at Fort William. The stockade site remained abandoned until the Grand Portage Band of Minnesota Chippewa started establishing a permanent village ca. 1865. It had been used primarily as a seasonal occupation site, with a focus on "ceremonial, political, and (on rare occasions) military activities" (Gilman). By the early 19th century, approximately 150 Ojibwe were living in the area between Grand Marais and Fort William. An exact count of the Band members living at the village is not available. Itinerant traders came through yearly.

Depression-era federal work projects had a major impact on the Grand Portage landscape. The Civilian Conservation Corps, the Works Progress Administration, and the Civil Works Administration were all active in the community. Many old buildings were cleared; the community itself was reoriented from the water to a system of roads. New homes, a community hall, and a new school were built on an inland ridge. In preparation for the initial stockade reconstruction in 1938, the area at the creek mouth was again cleared of structures and vegetation. Archeological investigations that were done before the reconstruction located the main stockade walls and gate, the stone foundation of the Great Hall, and a number of smaller ancillary structures.

The 1938 reconstruction activity began with the palisade walls, the gatehouse, and the Great Hall. Work stopped with the onset of World

War II. After the initially reconstructed Great Hall burned in 1969, a second, more accurate structure was built (completed in 1974), as well as a canoe warehouse in 1973 and a kitchen in 1978. At present, reconstructions at the stockade include the following features, all described above:

Great Hall	gatehouse
Ojibwe village	flagpole
canoe warehouse	fur press
voyageur camp (North Men and Montreal camps)	kitchen
palisade	gardens

INTERPRETIVE OBJECTS

Items that are known to have existed at the post during the historic period but without a known location include the following:

Fort Charlotte: As described under "Archeological Resources," Fort Charlotte was an important stop in the 18th century. Today, the buildings used in trade are gone, replaced by thick cover of second-growth forest. Campgrounds at the site provide a resting-place for visitors traveling along the portage.

Grand Portage Village Site: The site of the late 19th and early 20th century Grand Portage village sits on the opposite side of Grand Portage Creek, to the east of the portage and the stockade. Until the late 1930s the village appeared much like any small Great Lakes community — a strong orientation to the lake, modest frame houses and commercial buildings, domestic plantings and simple unpaved roads. When Grand Portage National Monument was established, the structures closest to the shore were dismantled in preparation for archeological activity. The village site, now used as a picnic area and open space, contains numerous archeological remains, including a prehistoric campsite, fur trade deposits, traces of the seasonal Ojibwe encampments, early to mid 19th century burials, domestic sites, a U.S. Indian Department warehouse and structures, and a BIA schoolhouse and outbuildings. Extant landscape features include remains of the historic lakefront road, the CCC-period stone bridge (ca. 1938–1940), a jack and red pine (*Pinus banksiana* and *resinosa*) grove planted by CCC crews (Woolworth, 1982), Euro-Asian cultivars such as roses, timothy grass (*Phleum pratense*), tansy (*Tanacetum vulgare*), caraway (*Carum carvi*), and native species cultivated by early residents, such as chives (*Allium schoenoprasum* var. *siberica*). Ojibwe oral tradition also holds that significant Midéwiwin ceremonial grounds were present.

Museum Collection: The legal mandate for the National Park Service to acquire and preserve museum collections is contained in the 1906 Antiquities Act, the NPS Organic Act of 1916, the Historic Sites Act of 1935, the Museum Act of 1955, and the National Historic Preservation Act of 1966 (as amended), specifically sections 106 and 110. Since Grand Portage is largely an archeological site, the Archeological Resources Protection Act (ARPA) of 1979 and ARPA regulations and NPS *Management Policies* apply to its collections management; the Native American Graves Protection and Repatriation Act of 1990 may also come into play with items in the collection.

Most of the catalogued objects in the Grand Portage National Monument collection are in good condition, and it is closely monitored. A collection management plan, a scope of collection statement, and a museum access plan are in place. The scope of collection statement is reviewed every two years.

Conservation treatment has been performed by Minnesota Historical Society staff as necessary. A conservation needs assessment performed in 1998 by NPS conservators sampled high-risk elements of the collection and determined that the collection was stable and well curated, although they cautioned that the collection, as stored, could be damaged if subjected to frequent research use.

Catalogued museum objects are on display in the Great Hall, the kitchen, and the canoe warehouse at the stockade. In addition, two exhibit cases at the Grand Portage Lodge and Casino contain artifacts from the monument collection.

MUSEUM RESOURCES

At present, collections are curated and/or exhibited in five separate locations. Much of the Grand Portage National Monument archeological collection is stored at Minnesota Historical Society facilities in Saint Paul by means of a formal agreement. Approximately 20,000 of these items have been catalogued into the NPS Automated National Catalogue System (ANCS).

Approximately 2,200 artifacts are housed at Grand Portage National Monument headquarters in Grand Marais, Minnesota. These artifacts (including most of the monument's historical, ethnographic, photographic, and archival collections and important portions of the archeological collections, along with related accession records) are stored in a custom-designed climate-controlled structure in a storage building at the Grand Marais Coast Guard Station / NPS headquarters.

The Midwest Archeological Center in Lincoln, Nebraska, is holding about 4,600 archeological items, which have been accessioned and catalogued into the Grand Portage collection by the Midwest Archeological Center staff.

As of 1999, more than 16,198 catalog records had been completed for the collection, which numbers 29,445 objects. A backlog of approximately 250 uncatalogued post-1987 objects and 15,000 uncatalogued pre-1987 archival items remains. In addition, much of the collection has not been photographed. The backlog of pre-1987 uncatalogued non-archival objects was largely eliminated in 1998.

ETHNOGRAPHIC RESOURCES

Grand Portage National Monument has a long-standing relationship with the Grand Portage Band of Minnesota Chippewa. Some natural and cultural resources in the monument should be assumed to have cultural significance to the Band (e.g., The stone bridge, pines, creek, sweet grass, a number of museum objects). Programs of the national monument stress a collaborative approach to interpretation and resource management, and supporting the Band's ongoing culture and lifeways is an important part of the national monument's mission. Grand Portage National Monument also helps visitors interact with Ojibwe people to experience some cross-cultural education and communication.

Ethnographic research includes an ongoing two-part cultural affiliation study of both prehistoric and historic peoples at Grand Portage and an oral history study, including interviews of elders, other Grand Portage Band of Minnesota Chippewa leaders, and relatives at the Fort William Reserve in Thunder Bay, Ontario. A broader ethnohistoric study of the fur trade currently underway encompasses the role and contributions of the Grand Portage Ojibwe.

APPENDIX E: ACT OF SEPTEMBER 2, 1958

23. Grand Portage National Monument

Page

Establishment of monument authorized.....Act of September 2, 1958 430

An Act To provide for the establishment of Grand Portage National Monument in the State of Minnesota, and for other purposes, approved September 2, 1958 (72 Stat. 1751)

Grand Portage National Monument, Minn., establishment.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purpose of preserving an area containing unique historical values, there is hereby authorized to be established, in the manner hereinafter provided, the Grand Portage National Monument in the State of Minnesota which, subject to valid existing rights, shall comprise the following described lands:

NORTHWEST COMPANY AREA

Tract numbered 1 beginning at a point about 28 feet from the water line of Lake Superior and on the east boundary of the southwest quarter of the southeast quarter of section 4, said point marked by a brass plug numbered I; thence northerly along said boundary line a distance of 273.70 feet to a point marked by a brass plug numbered II; thence in a westerly direction parallel to the south one-sixteenth line of section 4 a distance of 1,320 feet to the intersection of said line with the north-south quarter line of section 4, said point of intersection being in the bed of a stream and witnessed by an iron pipe located 60 feet southerly from said point and on the north-south quarter line, and on the west bank of said stream; thence southerly along said north-south quarter line a distance of 120 feet to the point of intersection of said north-south quarter line and the south one-sixteenth line of section 4 marked by an iron pipe set in concrete; thence westerly along said one-sixteenth line a distance of 120 feet to a point in path marked by brass plug numbered IV; thence southerly in a direction parallel to the north-south quarter line of section 4 a distance of 660 feet to an iron bolt in road intersection; thence westerly parallel to the south one-sixteenth line of section 4 a distance of 1,200 feet to the point of intersection of said line with the west one-sixteenth line of said section 4 and marked by a brass plug numbered VI; thence southerly along said west one-sixteenth line a distance of 1,760 feet to a point marked by a brass plug numbered VII; thence easterly along a line parallel to the north section line of section 9 a distance of 486.21 feet to a point marked by an inclined iron pipe, said point being the point where the said iron pipe enters the concrete; thence along the said line extended a distance of approximately 39 feet to the water's edge; thence along

the shore line of Lake Superior to the point where said shore line intersects the east one-sixteenth line of section 4 extended; thence northerly along said one-sixteenth line to place of beginning, all being located in sections 4 and 9, township 63 north, range 6 east, in Grand Portage Indian Reservation, State of Minnesota. Right-of-way for existing Bureau of Indian Affairs roads within the above described parcel of land is excluded therefrom.

NORTHWEST COMPANY AREA

Tract numbered 2 beginning at the point on the west one-sixteenth line of section 9 marked by brass plug numbered VII referred to in the description of tract numbered 1 above, thence westerly along a line parallel to the north section line of section 9 a distance of 275 feet to a point marked by an iron pipe; thence northerly along a line parallel to the west one-sixteenth line of section 9 a distance of 443.63 feet to a point marked by an iron pipe; thence easterly along a line parallel to the north section line of section 9 to the point of intersection of west one-sixteenth line of section 9; thence southerly along said one-sixteenth line to point of beginning, all lying in section 9 of township 63 north, range 6 east, in the Grand Portage Indian Reservation, State of Minnesota.

FORT CHARLOTTE AREA

The northeast quarter, section 29, township 64 north, range 5 east, or such lands within this quarter section as the Secretary of the Interior shall determine to be necessary for the protection and interpretation of the site of Fort Charlotte.

GRAND PORTAGE TRAIL SECTION

A strip of land 100 feet wide centering along the old Portage Trail beginning at the point where the trail intersects the present road to Grand Portage School, and continuing to the proposed United States Highway 61 right-of-way relocation in the northeast quarter of the northwest quarter, section 4, township 63 north, range 6 east, a strip of land 600 feet wide centering along the old Portage Trail as delineated on original General Land Office survey maps, from the north side of the proposed right-of-way to lands described at the Fort Charlotte site.

Establishment of the foregoing areas as the Grand Portage National Monument shall be effective when title to that portion of the aforesaid lands and interests in lands which is held in trust by the United States of America for the Minnesota Chippewa Tribe and the Grand Portage Band of Chippewa Indians, Minnesota, has been relinquished in accordance with section 2 hereof to the Secretary of the Interior for administration as a

part of the Grand Portage National Monument. Notice of the establishment of the monument as authorized and prescribed by this Act shall be published in the Federal Register. (16 U.S.C. § 450oo.)

SEC. 2. The Secretary of the Interior is authorized to accept, as a donation, the relinquishment of all right, title, and interest of the Minnesota Chippewa Tribe and the Grand Portage Band of Chippewa Indians, Minnesota, in and to any of the lands described in section 1 of this Act which is now held in trust by the United States of America for the said tribe or band; the executive committee of the Minnesota Chippewa Tribe and the tribal council of the Grand Portage Band of Chippewa Indians, Minnesota, are hereby authorized to execute such instruments of relinquishment in favor of the United States; and acceptance of the relinquishment by the Secretary shall operate as a transfer of custody, control and administration of such properties for administration and as a part of the Grand Portage National Monument: *Provided*, That upon the acceptance of any donated lands and interests therein the Secretary shall recognize, honor, and respect, in accordance with the terms thereof, any existing life assignments on such properties. (16 U.S.C. § 450oo-1.)

SEC. 3. The Secretary of the Interior is authorized to procure any and all other lands or interests therein within the monument, including, but not limited to, any and all nontrust lands therein owned in fee simple by the Grand Portage Band of Chippewa Indians, Minnesota, and the council of said band is authorized to sell and convey such nontrust lands to the United States of America. (16 U.S.C. § 450oo-2.)

SEC. 4. The Secretary of the Interior, under regulations prescribed by him, shall grant recognized members of the Minnesota Chippewa Tribe the preferential privilege to provide those visitor accommodations and services, including guide services, which he deems are necessary within the monument. (16 U.S.C. § 450oo-3.)

SEC. 5. The Secretary of the Interior shall, insofar as practicable, give first preference to employment of recognized members of the Minnesota Chippewa Tribe in the performance of any construction, maintenance, or any other service within the monument for which they are qualified.

SEC. 6. The Secretary of the Interior shall encourage recognized members of the Minnesota Chippewa Tribe in the production and sale of handicraft objects within the monument. The administration of the Grand Portage National Monument shall not in any manner interfere with the operation or existence of any trade or business of said tribe outside the boundaries of the national monument.

SEC. 7. Recognized members of the Minnesota Chippewa Tribe shall not be denied the privilege of traversing

the area included within the Grand Portage National Monument for the purposes of logging their land, fishing, or boating, or as a means of access to their homes, businesses, or other areas of use and they shall have the right to traverse such area in pursuit of their traditional rights to hunt and trap outside the monument: *Provided*, That, in order to preserve and interpret the historic features and attractions within the monument, the Secretary may prescribe reasonable regulations under which the monument may be traversed.

SEC. 8. The Secretary of the Interior, subject to the availability of appropriated funds, shall construct and maintain docking facilities at the Northwest Company area for use in connection with the monument. Such facilities shall be available for use by the Minnesota Chippewa Tribe and its recognized members, without charge to them, under regulations to be prescribed by the Secretary.

SEC. 9. To the extent that appropriated funds and personnel are available therefor, the Secretary of the Interior shall provide consultative or advisory assistance to the Minnesota Chippewa Tribe and the Grand Portage Band of Chippewa Indians, Minnesota, in the planning of facilities or developments upon the lands adjacent to the monument.

SEC. 10. When establishment of the monument has been effected, pursuant to this Act, the Secretary of the Interior shall administer, protect, and develop the monument in accordance with the provisions of the Act entitled "An Act to establish a National Park Service, and for other purposes" approved August 25, 1916 (39 Stat. 535), as amended. 16 U.S.C. 1.

SEC. 11. In the event the Grand Portage National Monument is abandoned at any time after its establishment, title to the lands relinquished by the Minnesota Chippewa Tribe and the Grand Portage Band of Chippewa Indians, Minnesota, pursuant to section 2 hereof shall thereupon automatically revert to the Minnesota Chippewa Tribe and the Grand Portage Band of Chippewa Indians, Minnesota, their successors or assigns. In such event, the title will be taken in a fee simple status unless the United States holds other lands in trust for the Minnesota Chippewa Tribe or the Grand Portage Band of Chippewa Indians, Minnesota, in which event the title shall revert to the United States in trust for the Minnesota Chippewa Tribe or the Grand Portage Band of Chippewa Indians, Minnesota.

APPENDIX F: IMPLEMENTATION PLANS

Listed below are plans and studies that would be needed to implement the *General Management Plan.* The list is not exhaustive, nor is it complete. Rather, this list provides an indication of the work yet to be completed over the 15–20 year life of the plan.

Environmental Assessments

- Heritage Center, parking
- Loop trail connection to Heritage Center from Mount Rose trail, Old Village loop trail
- Additional structures in the stockade
- Removal of the dock
- Construction of maintenance and housing
- Gateway development
- Portage Restoration

Historic Structures Reports for Reconstructed Buildings

- Guide/Interpreter's Quarters
- Carpenter/Cooper's Shop
- Trading Store

Exhibit Plans

- Guide/Interpreter's Quarters
- Carpenter/Cooper's Shop
- Trading Store

Other Studies

- Cultural Landscape Report for the Old Village landscape east of Grand Portage Creek
- Inventory of Ethnographic Resources
- Historic Maritime Activity Areas Study (vessels, docks, shoreline)
- Monument-wide Archeological Survey
- Archeological Survey of Stockade Interior
- Catalogue of Archival Collections
- Furnishings Plan for the Great Hall Bedrooms
- Fire Management Plan
- Geological Mapping and Geomorphological Analysis Study
- Housing Assessment Update
- Scope of Collections Statement
- Study of Winter Lifeways at Grand Portage
- Publicity/Marketing Plan
- Comprehensive Interpretive Plan

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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