



Grand Portage National Monument

East Meadow Area
Cultural Landscape Rehabilitation and Development Project
Environmental Assessment

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Summary

The Grand Portage National Monument, cooperatively managed by the Grand Portage Band of Lake Superior Chippewa (Ojibwe) and the U.S. Department of the Interior National Park Service, proposes to strengthen the visitor experience through rehabilitating and developing an underutilized portion of the Monument’s cultural landscape known as the East Meadow. This Environmental Assessment (EA) has been prepared in order to comply with the National Environmental Policy Act of 1969, which requires Federal agencies to consider the impacts of their actions on the environment in order to “preserve important historic, cultural, and natural aspects of our national heritage”.

Throughout development of this EA, the Park consulted with the Grand Portage Reservation Tribal Council and Grand Portage Band of Lake Superior Ojibwe members, and engaged other members of the public, at multiple points in the process. This EA identifies and evaluates potential impacts of treatment alternatives proposed by Park staff, the Tribal Council and Band members, and members of the public.

This EA evaluates a No-Action Alternative, Action Alternative 1 (prioritizing a naturalized landscape and unobtrusive interpretation), and Action Alternative 2 (prioritizing ease of visitor access and more active interpretation). Overall, Action Alternative 2 would have beneficial impacts to the experience of Band and other community members and park visitors that surpass those under Action Alternative 1, but it would also involve perceptively greater long-term direct and indirect, and short-term impacts to historic, cultural, and natural resources. Therefore, Action Alternative 1 has been selected as the environmentally preferable alternative.

Prior to Tribal and other public scoping efforts, the Park anticipated that taking a “lighter touch” would allow for rehabilitation and development of the East Meadow area that would highlight but not co-opt the story of its thriving Ojibwe village following the fur trade and up to establishment of the Park and introduction of Highway 61 in the early 1960s. During scoping, however, Band members expressed a desire that the story of their people be interpreted more actively and overtly, and many encouraged the Park to embrace the opportunity to tell even the more challenging stories of loss and exploitation. Based on this feedback, it became apparent that Action Alternative 2 – incorporating physical reconstructions, pronounced wayfinding and signage, and more guest services – would allow for a more complete and nuanced telling of the history of the Grand Portage Ojibwe, their resiliency and self-sufficiency, and their enduring cultural heritage. Therefore, the Park has selected Action Alternative 2 as its preferred alternative.

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Appendix A: Public Comment Analysis

Acronyms, Abbreviations, and Short Forms

Band	Grand Portage Band of Lake Superior Ojibwe
BIA	Bureau of Indian Affairs
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CLR	Cultural Landscape Report
CR	County Road
DO	Director's Order
DOI	United States Department of the Interior
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
et seq.	et sequentia (and the following)
FONSI	Finding of No Significant Impact
FR	Federal Register
GMP	General Management Plan
GRPO	Grant Portage National Monument
IDT	Interdisciplinary Team ("project team")
MNDNR	Minnesota DNR
Monument	Grant Portage National Monument
MPCA	Minnesota Pollution Control Agency
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act of 1966
NPS	National Park Service
NRHP	National Register of Historic Places
Park	Grant Portage National Monument
RTC	Reservation Tribal Council
SHPO	State Historic Preservation Office
SOI	Secretary of the Interior
USC	United States Code
USFWS	United States Fish and Wildlife Service

Chapter 1. Introduction

1.1 Background

The Grand Portage National Monument (the Monument, Park, or GRPO) is cooperatively managed by the Grand Portage Band of Lake Superior Chippewa (Ojibwe) (the Band) and the U.S. Department of the Interior (DOI) National Park Service (NPS). The 710-acre Park is located at the northeastern tip of Minnesota on the north shore of Lake Superior, within the Grand Portage Indian Reservation (Figure 1-1), and was established “for the purpose of preserving an area containing unique historical values” (72 Stat. 1751). The Park proposes to strengthen the visitor experience through rehabilitating and developing an underutilized portion of the Monument’s cultural landscape known as the East Meadow (the project) (Figure 1-2).

This Environmental Assessment (EA) has been prepared in order to comply with the National Environmental Policy Act of 1969 (NEPA) (42 USC 4321-4347), which requires Federal agencies to consider the impacts of their actions on the environment in order to “preserve important historic, cultural, and natural aspects of our national heritage” (42 USC 4331). Further, NEPA requires agencies to present alternatives to their proposed action (42 USC 4332). This EA identifies and evaluates potential impacts of treatment alternatives proposed by Park staff, Band members, and members of the public.

1.1.A Grand Portage National Monument

Congress enacted the Grand Portage National Monument on September 2, 1958, to preserve and interpret an 8.5-mile canoe portage and its cultural landscape and associated archaeological deposits dating from approximately 8,000 B.C. to the first half of the 1900s. The “Grand Portage” trail was a critical link in a complex, trans-continental trade network established by indigenous groups thousands of years prior to European contact. European explorers and fur traders reused the route during early decades of the 1700s through the mid-1800s for shuttling personnel, equipment, furs, and trade goods between Lake Superior and the vast interior of the North American continent, via the Pigeon River that runs along the Minnesota-Ontario border.

The Monument commemorates the northern fur trade era as a “dynamic enterprise that forged diverse and insoluble relationships between Indians and non-Indian peoples” (Birk 2005). However, despite the focus on the fur trade since the Park’s inception in 1958, its enabling legislation calls more broadly for “preserving an area containing unique historical values” (72 Stat. 1751). Greater attention has been paid in recent years to the post-fur trade occupancy and use of the site. About 150 Ojibwe families lived near the trading post when the British took over the fur trade in the 1760s, and following the decline of the fur trade in the early 1800s, Ojibwe continued to live in the area. Ojibwe populations increased regionally between 1821 and 1871

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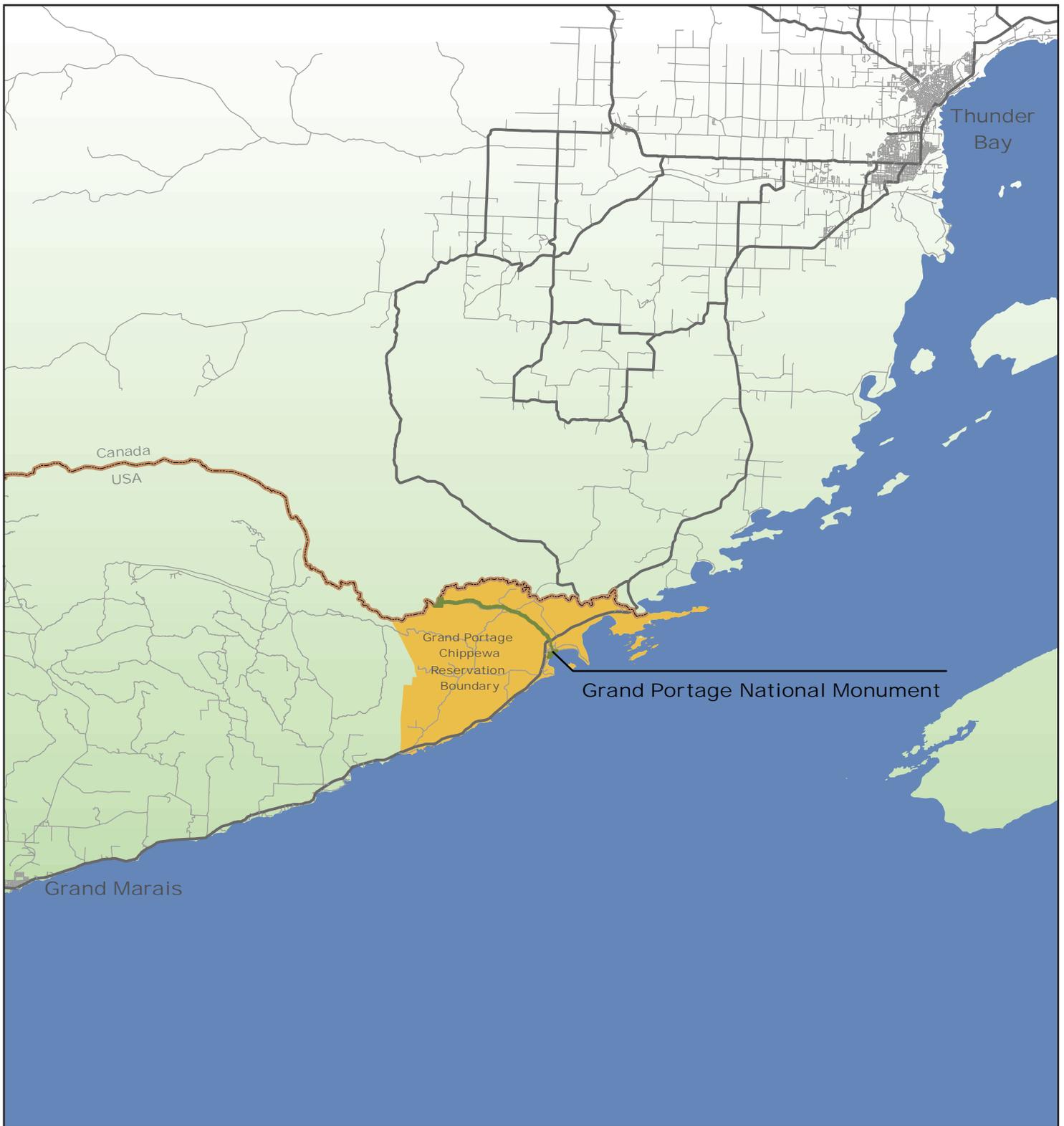
(Cowen 1993, 1994), and in 1854 the local tribes ceded their lands in return for establishment of several reservations, including the Grand Portage reservation (BIA 2014), annuities for a 20 year term, and a grant of usufructuary rights, among other provisions (Kappler 1904). There is some archaeological evidence for a native presence near Grand Portage since at least 8,000 years ago, and the Park has long interpreted this history in its Heritage Center museum and elsewhere. However, the story of the East Meadow's thriving Ojibwe village following the fur trade and up to establishment of the Park and introduction of Highway 61 in the early 1960s is largely invisible.

The Park's founding legislation emphasized the Grand Portage Band's ancestral ties to the area by pledging economic and partnership opportunities for the Band, but its vision fell short when few such prospects arose in the following decades (NPS 2015). The Park renewed its commitment to the Band in 1999 through establishment of a cooperative maintenance agreement (NPS 2015), and in 2007, after longstanding encouragement from the Band, the Park secured adequate funding to open its Heritage Center, "honor[ing] the area's history, people and culture" (NPS 2015). Today, the Grand Portage Reservation is home to not only the Park but to the Tribal headquarters, the Grand Portage Lodge and Casino, and other Tribal businesses and community assets serving the local community.

The Heritage Center houses the Park's administrative offices and a museum hosting interpretation of precontact Native American occupancy, the brief fur trade era, and to a limited degree, the East Meadow's post-fur trade Ojibwe village. However, the reconstructed North West Company Grand Portage Depot remains the primary interpretive amenity at the Monument, most notably hosting the annual Rendezvous Days celebration. The Park's 2003 General Management Plan (GMP) identifies interpretation of the history and culture of the Ojibwe who have continued to call Grand Portage home as a management priority, and input from the Band and broader community in recent years has further informed the need for more nuanced and in-depth interpretation on the topic. The heart of the post-fur trade Ojibwe village, the East Meadow is located approximately a half mile northeast of the Heritage Center and depot and offers an ideal site for this interpretation.

1.1.B Project Area

The East Meadow is the primary location documented for the period of the post-fur trade Ojibwe village; its structures, residents, and landscapes are depicted in paintings beginning in the mid-1800s and in early photographs. Although a few homes were allowed to remain in the East Meadow temporarily after the Park's founding, all structures were removed soon after the Park's establishment, and the only Park use of the area in recent decades has been for a maintenance storage facility known as the "boneyard."



Source: 106 Group

Map Produced by 106 Group 6/15/2015

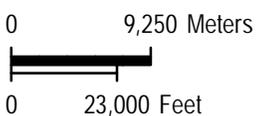
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 Environmental Assessment

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Regional Context

- Grand Portage National Monument
- Reservation Boundary



1:500,000



Figure 1-1



Source: 106 Group

Map Produced by 106 Group 9/16/2015

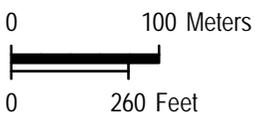
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National Monument Lakeshore Area

- ▭ Project Boundary
- ▭ Park Boundary
- Mt. Rose Trail
- Grand Portage Trail
- Post Office Trail



1:5,102



Figure 1-2

Introduction

The East Meadow is an approximately 18-acre, roughly triangular-shaped parcel with its southeast-facing border abutting the Lake Superior shoreline. Its northern border extends from Lake Superior roughly north and then west along Lower Road before cutting directly west along the northern border of the Park. The western edge of the project area runs north-south, west of County Road (CR) 17 but east of the Grand Portage Trail, returning to the lakeshore but excluding The Pines, an area of spruce outcropping significant to the community (Figure 1-3, project area).

The Monument is located within the North Shore Highlands subsection of the Northern Superior Uplands Section of the Laurentian Mixed Forest Province of Minnesota (MNDNR 2003). This portion of the state is on the southern edge of the North American Boreal Forest, which stretches from interior Alaska across Canada to the Atlantic Ocean. The East Meadow is a mildly undulating open area, sloping gently to the southeast, on fine sandy loam soils that developed on lake terrace (Gafvert 2009). The vegetation of the East Meadow is dominated by a mixture of native and non-native grasses and forbs, with small islands of hardwood trees and conifers scattered throughout the area. The vegetation ranges from upland species to wet-mesic species, reflecting the sloping nature of the site and several areas of groundwater seepage (Zedler and Doherty 2011).

1.1.C Related Laws, Regulations, Policies, and Plans

1.1.C.i Related Laws

This EA has been prepared to satisfy the requirements of NEPA; the National Park Service Organic Act of 1916 (16 USC 1 et seq.); Sections 106 (54 USC 306108) and 110 (54 USC 306101-306114) of the National Historic Preservation Act of 1966 (NHPA); Grand Portage National Monument, Minn., Establishment (enabling legislation) (72 Stat. 1751); the Endangered Species Act (ESA) (16 USC 1531 et seq.); the U.S. Fish and Wildlife Coordination Act (USFWCA) (16 USC 661-667e); and the Clean Water Act (33 USC 1251 et seq.).

1.1.C.ii Related Regulations

This EA has been prepared in accordance with the 1978 Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508); the DOI's regulations on the implementation of NEPA (Department Manual Part 516 and 43 CFR Part 46); and the requirements for NHPA Section 106 Coordination with NEPA (36 CFR Part 800.8).

1.1.C.iii Related Policies

This EA follows the guidance articulated in the 1981 Memorandum to Agencies: Forty Most Asked Questions Concerning Council on Environmental Quality's (CEQ) NEPA Regulations (46 FR 18026); Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making and its accompanying Handbook (DO-12), containing NPS policy and procedures for carrying out NEPA (NPS 2001); and the Grand Portage Superintendent's



Source: 106 Group

Map Produced by 106 Group 9/16/2015

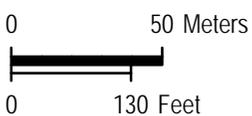
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 Environmental Assessment

Grand Portage, Minnesota

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Project Area

-  Project Boundary
-  Grand Portage Trail
-  Post Office Trail
-  Grand Portage Creek



1:2,500



Figure 1-3

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Compendium Of Designations, Closures, Permit Requirements and Other Restrictions Imposed Under Discretionary Authority (NPS 2015).

1.1.C.iv Related Plans and Studies

The Park proposes to rehabilitate the East Meadow consistent with both the preferred alternative (Alternative E) outlined in the Park's 2003 GMP (NPS 2003) and the provisional Preferred Treatment Concept (Alternative E) proposed in the 2009 "Grand Portage National Monument Cultural Landscape Report" (CLR) (Bahr Vermeer Haecker 2009). In addition, the Park's 2005 *Long-Range Interpretive Plan: Grand Portage National Monument* identifies as a primary interpretive theme that: "The Grand Portage Ojibwe, a people with a distinct culture and proud heritage, have lived for centuries on or near Grand Portage where their culture thrives today" (NPS 2005). The Park's National Register of Historic Places (NRHP) Nomination was also referenced in the preparation of this EA (Birk 2005), as were various studies cited throughout.

The Park's GMP underwent public review as a joint Final GMP and Environmental Impact Statement (EIS). Through its development, an alternative was chosen to guide the management of the Monument over a 15 to 20 year period. Alternative E ("Expanded and Enhanced Site Access and Interpretation") in the GMP, a "hybrid" alternative evaluated as the most environmentally preferable, prioritized integration of the Monument into the community and removal of modern intrusions on the landscape, including the maintenance area and most roads. The East Meadow encompasses two management zones defined in the GMP: the Resources Trust Zone and the Interpretive Historic Zone.

The Resources Trust Zone overlaps the northern third of the project area (Figure 4). This zone is an "archaeological data bank" (NPS 2003) managed to protect unexcavated archaeological resources, wetlands, or areas containing rare species habitat, resources that would be interpreted only indirectly under Alternative E, through brochures or NPS ranger talks. The GMP advises that visitors would not be prohibited in this zone, but that there would be little reason for them to visit it, and no new trails would be developed. Vegetation would be managed minimally through removing dangerous fuels, suppressing invasive exotic plants, and restoring historic forest cover.

The Interpretive Historic Zone encompasses the southern two-thirds of the project area, including the lakeshore, and "would retain its beauty and wild appearance and a semblance of its historical character." A loop trail was envisioned under Alternative E that would connect the portage trail, the stockade, and the Ojibwe village site. Wayside exhibits would interpret the village's historical plant cultivars and archaeological resources, aboveground and archeological features would be actively protected, and demonstrations of Ojibwe crafts and interpretive talks about Ojibwe heritage would occur seasonally. As in the Resources Trust Zone, the emphasis would be on suppressing invasive exotic plants; removing hazardous trees, dangerous fuels, and

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trail obstructions; and restoring historical forest cover. The Boneyard Road (old BIA Route 5) would be downgraded, and rather than fully restoring the Lake Superior shoreline to a specific period, it would be interpreted over a continuum of history.

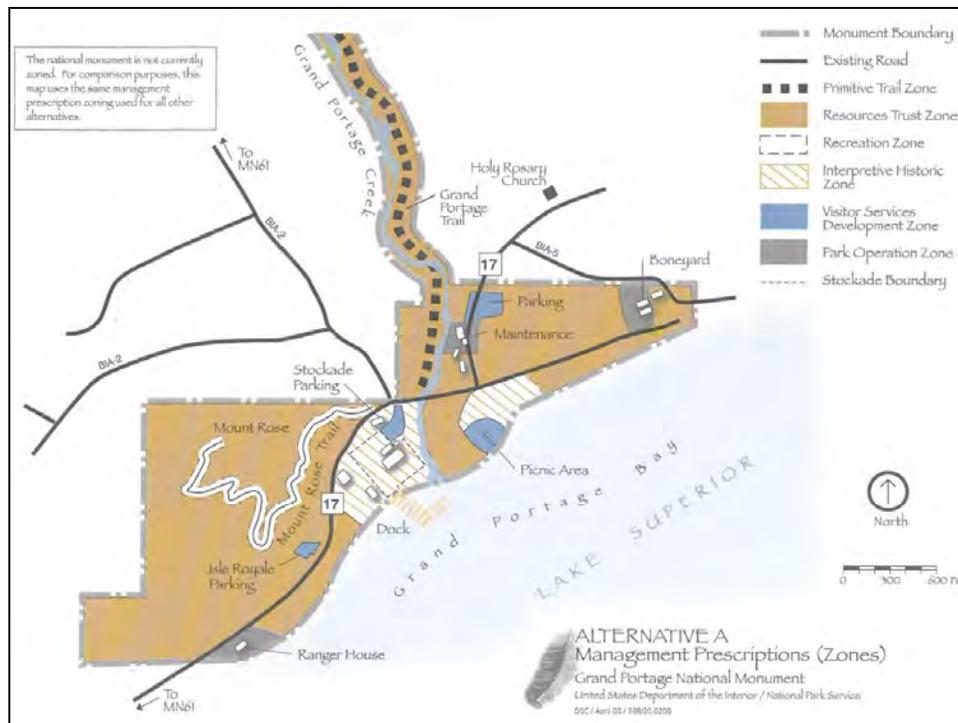


Figure 1-4: Management Zones in 2003 GMP

The CLR identified Alternative E as its Preferred Treatment Concept. However, the CLR has not yet been analyzed under any NEPA review process. A proposed 1.5-mile loop trail would interpret the historic, natural, and cultural resources located along the lakeshore, and incorporate the revegetated former maintenance and boneyard areas. The ethnobotanical uses of plants important to local lifeways, such as white cedar, birch, wild rose, wild strawberry, nettle, sweet grass, caraway, Jerusalem artichoke, and wild chives, would also be interpreted. Waysides, brochures, and exhibits would focus on Ojibwe life up to and following the fur trade era, addressing topics such as their connection to local plants and animals, landforms and geology, and water resources. The CLR suggests that one historic village building would be reconstructed to house exhibits and a restroom facility.

1.2 Purpose and Need

1.2.A Purpose

By rehabilitating the East Meadow, the Park intends to fulfill the following goals and objectives:

- Improve utilization
 - Provide an adequate level of visitor and community access to the East Meadow for ease of use.
 - Improve recreational opportunities available to visitors.
 - Select appropriate treatments for rehabilitating the cultural landscape in and around the East Meadow.
- Adapt to changing infrastructure
 - Determine the proper course of mitigation for retiring existing maintenance buildings, structures, and facilities.
- Accomplish interpretive goals
 - Strengthen Tribal, Park, and community ties through collecting and conveying the stories of the Grand Portage Ojibwe following the fur trade and up to establishment of the Park and introduction of Highway 61 in the early 1960s.
 - Engage visitors in the hidden story of the historic East Meadow Ojibwe village and other associated cultural resources in the East Meadow area.

1.2.B Need

The Park has identified a need to rehabilitate the East Meadow based on the following conditions:

- Underutilization
 - The East Meadow area is underutilized, with little current visitor use and limited opportunities for visitor experience.
 - The East Meadow landscape does not meet the desired conditions stated in the GMP and should be rehabilitated to the *Secretary of the Interior's (SOI's) Standards for Rehabilitation (36 CFR 67)*, as appropriate.
- Changing infrastructure
 - Current maintenance facilities are being replaced with new facilities, so existing facilities need to be retired and their sites rehabilitated according to the GMP and the *SOI's Standards for Rehabilitation*. This includes the maintenance shop and associated parking lot, driveway, and septic system, as well as the boneyard maintenance storage facility and Boneyard Road serving it.
- An untold story
 - Post-fur trade era Ojibwe history is not sufficiently interpreted in the Park, a shortcoming to full implementation of the Park's mission. As the site of the post-

fur trade Ojibwe village, the East Meadow offers an opportunity to interpret this significant period.

- Several elders lived during, or remember stories from, this period, and now is the time to work with them to tell their stories.

1.3 Impact Topics Considered in this EA

Impact topics analyzed in this EA were selected based on relevant laws, policies, and plans referenced in Section 1.1.C. Agency, Tribal, and public scoping efforts also informed which topics were considered, which were carried forward, and which were dismissed from further analysis. An interdisciplinary team (“project team”) comprised of the Park Superintendent, Band members responsible for Park maintenance, Chiefs of Resources Management and Interpretation, the Chief Ranger, and the Biological Science Technician identified issues and opportunities related to the project’s potential impacts to resources in the natural and physical environment and economic and social environment. Additional issues were identified through scoping efforts with the Grand Portage Reservation Tribal Council (RTC), Grand Portage Band of Lake Superior Ojibwe members, and the public. Issues and opportunities identified then informed the selection of which impact topics would be carried forward for full analysis and which would be dismissed.

1.3.A Impact Topics Carried Forward

Rehabilitation of the East Meadow has the potential to impact the natural and physical environment, and the social and economic environment. In particular, NEPA (42 USC 4321-4347) and its implementing regulations (40 CFR 1500-1508) and DO-12 (NPS 2001) were referenced to determine which impact topics to carry forward for further analysis in a corresponding impact topic section in Chapter 3, Affected Environment and Environmental Consequences. The project team utilized DO-12’s Environmental Screening Form to guide its internal scoping discussion. During that discussion, the topics listed below were selected based on the professional opinions of members of the project team that these resources could experience measurable impacts from the project.

- Resources in the natural and physical environment potentially impacted by the project include:
 - Wetlands and Floodplains
 - Endangered and Threatened Species
 - Water Quality
 - Soundscapes
- Resources in the economic and social environment that could potentially be impacted by the proposed action include:
 - Historic and Cultural Resources
 - Visitor Experience

1.3.B Resource Topics Dismissed from Further Analysis

Resource topics listed below either would either not be affected or would be affected only negligibly¹ by the alternatives. Therefore, these topics have been dismissed from further analysis. A brief rationale is provided for eliminating each topic from further analysis.

1.3.B.i Natural and Physical Environment

Energy Conservation

CEQ requires federal agencies to consider the energy requirements of a proposed action and to assess alternative means of energy usage that would result in net conservation of energy resources (40 CFR 1502.16(e)). The proposed rehabilitation of the East Meadow area is not anticipated to be energy intensive. Little heavy machinery or temporary power generation will be required during construction, and any ongoing operations, maintenance, and programming will require only minimal power. Therefore, this topic was dismissed as an impact topic.

Natural Resource Conservation

Similarly, federal agencies are required to consider the depletion of natural resources (e.g., through mining or logging) in the development of a proposed action, and any measures that may be incorporated to conserve those resources (40 CFR 1502.16(f)). Alternatives envisioned for the East Meadow may entail management of natural resources to achieve the project's goals. However, this is not equivalent to depletion of natural resources, and any removal or reduction of natural resources on the site will be minimal. Therefore, this topic was dismissed as an impact topic.

Prime and Unique Agricultural Lands

Project proponents are required to consider the impact of proposed actions on prime and unique farmlands (45 FR 59189). None of the soil units in the East Meadow area are designated as prime and unique agricultural lands (Gafvert 2009). Therefore, prime and unique agricultural lands was dismissed as an impact topic.

Ecologically Critical Areas, Wild and Scenic Rivers, or Other Unique Natural Resources

NPS is required to consider the potential impacts of a proposed action on designated ecologically critical areas, including but not limited to Wild and Scenic Rivers, designated critical habitats, state-designated areas of high biodiversity significance, or sensitive landtype associations (NPS 2006). No U.S. or State of Minnesota natural resource agency has applied any of these designations, or any other ecologically critical designation, to any part of the East Meadow area. Therefore, ecologically critical areas was dismissed as an impact topic.

¹ Negligible effects are effects that would not be detectable over existing conditions.

Introduction

Geological Resources

Bedrock geological resources of the East Meadow area would not be affected by the project. Proposed activities are limited to the surface of the project site. Surficial geological resources would similarly not be affected by the project. While the East Meadow area contains seepage areas, it contains no defined streams (i.e., channels with a defined bed and bank). A portion of Grand Portage Creek is within the project boundary, approximately 250 feet west of the East Meadow, on the opposite side of CR 17. Management activities within the site would potentially require minor alteration of the soil surface; however, there would be no large-scale grading or other alteration of the soil surface or the soils column within the East Meadow. Therefore, geological resources, soils, and streambed impacts were dismissed as impact topics.

Air Quality

Federal agencies are required to consider whether the air quality of the project area, in a measurable condition relative to the National Ambient Air Quality Standards (NAAQS), would be altered by the project alternatives. Management of the East Meadow may require occasional prescribed burns. However, smoke management is addressed in the existing East Meadow burn plan and the GRPO fire management plan (NPS 2015). The project would not involve other activities with potential impacts on air quality. Therefore, air quality was dismissed as an impact topic.

Unique Wildlife or Habitat

Wildlife and wildlife habitat have been extensively studied by the Park and other researchers (MacLean 2002, Gucciardo and Cooper 2008, Kruger and Peterson 2008). The East Meadow area may potentially provide habitat for several songbird, insect, and small mammal species. The limited size and close association with human activities likely precludes utilization of the East Meadow area by larger wildlife species. Nevertheless, there is a need to protect historically, culturally, and ecologically significant species. Proposed activities in the East Meadow area would potentially augment and enhance existing wildlife habitat. Consideration of potential impacts to larger wildlife species was dismissed from the impact topics; however, the EA considers potential detrimental and beneficial impacts to other wildlife species that may utilize the East Meadow in Section 3.7, Endangered and Threatened Species.

Introduction or Promotion of Nonnative Species

The East Meadow area is currently comprised of a mixture of native and nonnative plant species, including nonnatives for which there are reduction/removal plans and at least one nonnative (*Caraway*, *Carum carvi*) for which there is a proposed management plan to retain cultural uses (Zedler and Doherty 2011). Management of nonnative species is conducted under existing NPS policies, and these management policies will not change. Therefore, introduction or promotion of nonnative species was dismissed as an impact topic.

1.3.B.ii Economic and Social Environment

Environmental Justice

Federal agencies are required to identify and address any disproportionately high and adverse human health and environmental effects their actions may have on minority and low-income populations, to the greatest extent practicable, by Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (59 FR 7629). A community is a potential environmental justice community if it is either minority or low income (EPA 2010). The Environmental Protection Agency (EPA) Office of Environmental Justice defines minority to include American Indians, making Grand Portage Reservation a potential environmental justice community (EPA 2010). In adherence to CEQ guidance (CEQ 1997), the scoping process for this EA sought input from Band members, who helped develop and commented on possible alternatives to the proposed action.

None of the alternatives are anticipated to have any high or adverse human health or environmental effects, nor any disproportionate effects to any population group. Redevelopment and subsequent interpretive offerings under either action alternative would have negligible impacts to employment opportunities and the local economy. Therefore, environmental justice was dismissed as an impact topic.

Public Health and Safety

Several potential public health and safety issues were considered by the Park in the development of this EA. Buried utilities are located in the former maintenance area west of CR 17, and the project could involve small-scale excavation to remove or downgrade existing facilities or construct new ones. The safety of community members and Park visitors crossing CR 17 is of concern to the Park. These issues will be addressed through continuing adherence to health and safety standards contained in NPS Management Policies 2006 (NPS 2006) as well as all other applicable laws, policies, and procedures, including providing excavation notice. The project is not anticipated to bring about any new health and safety issues for the Park or exacerbate any existing ones, and management of the above issues is ongoing through general Park operations. Therefore, public health and safety was dismissed as an impact topic.

Indian Trust Resources

The Monument is located within the Grand Portage Reservation, and establishment of the Park was predicated on the relinquishment of title to trust lands held by the U.S. for the Minnesota Chippewa Tribe and Grand Portage Band of Chippewa Indians (72 Stat. 1751). The East Meadow area abuts non-Park trust lands, however, and the Park must evaluate the effects of its actions on Indian Trust Resources, under NPS Management Policies 2006 (NPS, 2006) and EO 13175 Consultation and Coordination with Indian Tribal Governments (65 FR 67249). The Park engages in ongoing consultation with the Grand Portage Band, and Band members were engaged specifically to provide input on the project (see Chapter 5). In addition, the Park and the Band co-manage the Monument. It is not anticipated that the project will have impacts to

Introduction

Indian Trust Resources other than impacts from redevelopment and visitorship effectively equivalent in scale to current Park operations. Connections between various parts of the Grand Portage community traverse the East Meadow, and access to these connections will be maintained. Therefore, Indian Trust Resources has been dismissed as an impact topic.

Other Agency and Tribal Land Use Plans or Policies

NPS Management Policies 2006 (NPS 2006) requires the evaluation of impacts on other agency or tribal land use plans or policies. As described in Section 1.1.3.4, the East Meadow is included in various Park planning documents. In particular, the use of the area envisioned through the project is in keeping with its location within the GMP's Resources Trust and Interpretive Historic Zones (NPS 2003). In addition, the Band has issued a land use ordinance for the reservation (Ordinance Number 95-02, Grand Portage Land Use Management Task Force 1996), which does not contravene the envisioned use. Because the East Meadow will continue in its current state as a relatively passive recreational, cultural, and open-space resource, this topic was dismissed as an impact topic.

Urban Quality and Built Environment

The East Meadow area is located in a predominantly rural area, so the project would have no effect on urban quality. The East Meadow area includes only small maintenance structures that are ancillary to the Monument. Therefore, urban quality and the built environment were dismissed as impact topics.

1.4 Prohibition of Impairment of Park Resources

Park managers must avoid or minimize to the greatest extent practicable adverse impacts on park resources and values, although impacts are allowed when necessary and appropriate to fulfill the purposes of a park as long as the impact does not constitute impairment of the affected resources and values (NPS 2006). Under the NPS Organic Act of 1916 (16 USC 1 et seq.) and the General Authorities Act of 1970 (16 USC 1a-1 et seq.), impairment means “an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.” Whether an impact constitutes impairment “depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts” (NPS 2006).

Specifically, an impact is more likely to be an impairment if it affects a resource or value whose conservation is necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or identified in the park's GMP or other relevant NPS planning documents as being of significance. If an impact is unavoidable, undertaken “to preserve or restore the integrity of park resources or values,” and cannot be further mitigated, it is less likely

Introduction

to constitute an impairment (NPS 2006). Impairment is discussed in the Environmental Consequences section for each relevant impact topic, and a written non-impairment determination will be prepared for the preferred alternative and appended to the Finding of No Significant Impact (FONSI).

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Chapter 2. Alternatives

To satisfy the purpose and need identified in Chapter 1, a range of alternatives were developed and narrowed by the Park, in partnership with the Band and the public. This chapter describes that process and its outcomes, and defines a No-Action alternative as well as two action alternatives for evaluation in Chapter 3.

2.1 Summary of Alternatives Development Process

As described in Chapter 1, a project team comprised of the Park Superintendent, Chief of Resources Management and Chief of Interpretation, the Chief Ranger, and the Biological Science Technician, supported by two members of the consultant team, held an internal scoping meeting on March 23, 2015 at the Heritage Center to discuss the range of alternatives, issues related to the proposal, and potential impact topics. The following day, March 24, 2015, the Park Superintendent and the consultants met with the RTC at its headquarters in Grand Portage to gather feedback on the range of alternatives and elicit any additional ideas or issues.

A public scoping meeting held on April 27 at the Heritage Center presented an opportunity for the Tribal and broader community to share their vision for the project. Materials providing an overview of the process and the preliminary alternatives were developed and presented by four park staff and the two-person consultant team that assisted in preparing this EA. Ten members of the public attended the meeting and engaged in a productive group conversation about ideas and concerns related to rehabilitation of the East Meadow. A summary of the methods used to advertise the meeting, materials developed, and comments from participants is included in Appendix A: Public Comment Analysis. Following the public scoping meeting, the Park released notification of a public comment period closing June 1, 2015, during which time two additional written comments were received. In addition, to clarify alternatives for camping and parking options in the East Meadow, Park staff held a discussion on the topics on May 29, 2015.

2.2 Range of Alternatives

Through the above scoping and outreach efforts, the Park considered a full range of alternatives that would meet the project's need while protecting or minimizing impacts to Monument resources. The preliminary range of alternatives identified encompassed a No-Action alternative; restoration as a naturalized area; rehabilitation as an interpretive area; and full-scale development including interpretation and visitor services mirroring the amenities available at the Depot site. This preliminary range of alternatives was then narrowed to a final selection of only the reasonable alternatives.

2.2.A No-Action Alternative

Under the No-Action Alternative, Park operations would continue according to current plans, as described in Section 1.1.C. Specifically, the East Meadow would continue to be underutilized as a portion of the cultural landscape; maintenance facilities would be retired and mitigated on an ad hoc basis as opposed to within a cohesive, visitor and community-centered framework; and interpretation of the historic Grand Portage Ojibwe village would continue to be lacking. Under the No-Action Alternative, the Park would forego the opportunity to tell the story of a period of time that is often overlooked – the time period following the fur trade up to establishment of the Park and the introduction of Highway 61 in the early 1960s – during which the Ojibwe community underwent dramatic and sometimes forced changes.

2.2.B Range of Reasonable Alternatives

This section will describe how the project team arrived at the final range of reasonable alternatives. Factors that narrowed the range of possibilities include laws and regulations in effect, current Park plans, site characteristics, and sensitive environmental and archaeological resources. Alternatives were narrowed to those that are technically and economically feasible and that show evidence of common sense, and also meet project objectives, resolve need, and alleviate potentially significant impacts to important resources.

The Park developed two action alternatives for consideration through this EA. Both action alternatives seek to tell the story of the East Meadow as the heart of the Grand Portage Ojibwe community from the end of the fur trade up to establishment of the Park and introduction of Highway 61 in the early 1960s. To satisfy the project's purpose and need, and reflect feedback received during public and Tribal scoping, this story should encompass a number of key themes regardless of which action alternative is adopted. The themes include:

- The Grand Portage Ojibwe's ability to cultivate and sustain resiliency, self-sufficiency, and a close relationship with the land and water.
- An enduring cultural heritage despite an isolated geography and centuries of injustices.

There are many ways to convey this story, and the action alternatives are two mechanisms for doing so conceived of by the project team in this early stage of planning. Table 2-1 summarizes elements of each action alternative, including elements common to both (Figure 2-1).

2.2.B.i Action Alternative 1: Subtle Interpretation and Use Alternative

This alternative (Figure 2-2) prioritizes a naturalized landscape and unobtrusive interpretation. For instance, a wayside or small kiosk could welcome visitors to the East Meadow at its southwest corner; interpretive opportunities could be suggestive rather than overt, with an emphasis on light-on-the-land and unobtrusive interpretive media that would be primarily self-guided; trails could be narrow and lightly developed; and interpretive structures and

Alternatives

programming could be minimal and located toward the edge of the project area. Possibilities considered within this alternative include an open gazebo or sheltered area, trails that blend with the landscape, and/or waysides depicting building “ghostings”(outlines of the dimensions of an original structure designed to evoke a building's appearance).

2.2.B.ii Action Alternative 2: Overt Interpretation and Use Alternative

This alternative (Figure 2-3) prioritizes ease of visitor access and more active interpretation, making the hidden story overt. A gateway kiosk and/or public art concept could welcome visitors at the southwest corner; gardens and fenced plots could be re-created as an integral component of the former village area; and any of a number of permanent village structures could also be rebuilt or portrayed through in-ground “ghostings” (for example the school, the store, and/or a typical home), that could host interpretive activities. Larger numbers of visitors would be accommodated simultaneously through new media options and more interpretive staff and programming. Trails would be more robust to accommodate greater visitor access.

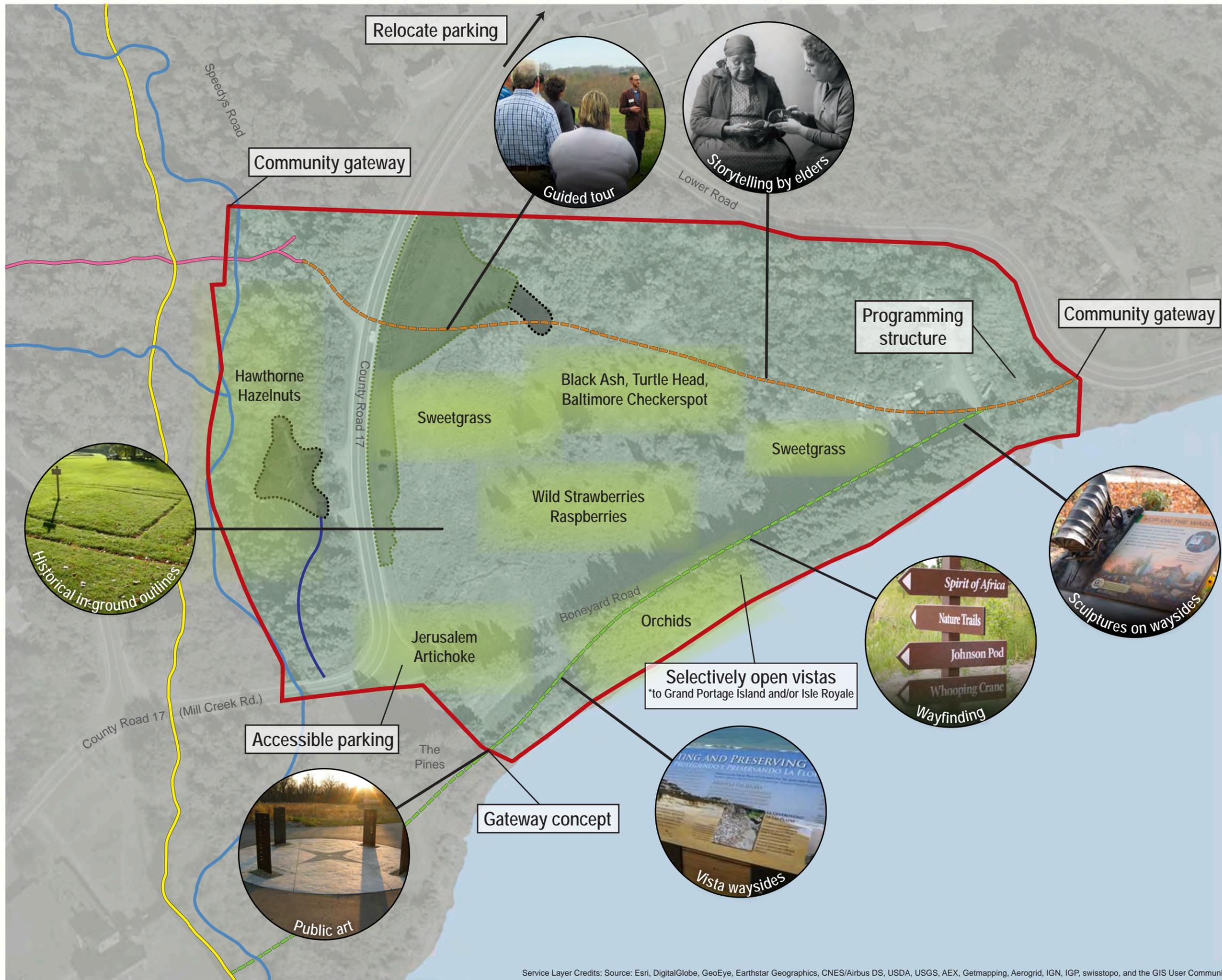
Table 2-1: Description of Action Alternatives

Action Alternative 1 – Subtle	Action Alternative 2 – Overt
<u>Interpretation</u>	
<ul style="list-style-type: none"> • Subtly develop interpretative opportunities: <ul style="list-style-type: none"> – Avoid digital interpretation – Minimize signage and waysides – Offer self-guided tours/site bulletin/brochure – Install subtle ghosting or wayside “ghost-etchings” of buildings (no reconstructions) 	<ul style="list-style-type: none"> • Actively develop interpretative opportunities: <ul style="list-style-type: none"> – Use digital interpretation/social media – Install heavy signage, including waysides – Prioritize personal stories told by interpreters/Tribal elders – Install reconstructions/ghostings of Agent’s House, community residence(s), gardens, fencing
<u>Visitor Amenities</u>	
<ul style="list-style-type: none"> • Subtly implement wayfinding, a “gateway” concept, signage, and management of pedestrian traffic: <ul style="list-style-type: none"> – Install less-pronounced, subtle “gateway” structure 	<ul style="list-style-type: none"> • Actively implement wayfinding, a “gateway” concept, signage, and management of pedestrian traffic: <ul style="list-style-type: none"> – Install pronounced “gateway” structure
<ul style="list-style-type: none"> – <i>Manage pedestrian traffic pattern through progressive interpretation along loop trail</i> 	

Alternatives

Action Alternative 1 – Subtle	Action Alternative 2 – Overt
Infrastructure/Resources Management	
<ul style="list-style-type: none"> • Update parking: <ul style="list-style-type: none"> – Install five-stall lot (with two handicap spots) at Boneyard Road entrance “triangle” – No vault toilet 	<ul style="list-style-type: none"> • Update parking: <ul style="list-style-type: none"> – Install ten-stall lot (with two handicap spots) at Boneyard Road entrance “triangle” – Install vault toilet
<ul style="list-style-type: none"> – <i>Remove overflow parking along west edge of meadow</i> – <i>Provide shuttle to offsite Rendezvous parking</i> 	
<ul style="list-style-type: none"> • Subtly manage vegetation and vistas: <ul style="list-style-type: none"> – Clear trees selectively along Lake Superior shoreline to open strategic vistas to Grand Portage Island and/or Isle Royale, leaving stands in place to protect sensitive species – Manipulate vegetation to evoke selective historic conditions, while avoiding dramatic shifts to landscape from gardens or active clearing 	<ul style="list-style-type: none"> • Actively manage vegetation and vistas: <ul style="list-style-type: none"> – Clear trees actively along Lake Superior shoreline to open vistas to Grand Portage Island and/or Isle Royale, leaving in place only sufficient stands to protect sensitive species – Return meadow to historic conditions
<ul style="list-style-type: none"> – <i>Maintain ethnobotanically significant plants (e.g., black snakeroot, sweetgrass) and activities (e.g., burning)</i> – <i>Maintain/create sight lines to log school and church</i> 	
<ul style="list-style-type: none"> • <i>Manage cultural landscape to reflect historic village conditions</i> 	
<ul style="list-style-type: none"> • <i>Stabilize lakeshore and conduct research into methods to protect shoreline from excessive erosion</i> 	
<ul style="list-style-type: none"> • <i>Downgrade Boneyard Road</i> 	
<ul style="list-style-type: none"> • <i>Install primitive campsite by Grand Portage Creek with vault toilet</i> 	
<ul style="list-style-type: none"> • <i>Install trail following community paths where possible, minimizing wetland intrusions, and keeping trail “style” historical/traditional</i> 	

East Meadow Area Cultural Landscape Rehabilitation and Development Project
 Environmental Assessment
 Grand Portage, Minnesota



Project boundary

Existing Elements

Grand Portage Trail

Post Office Trail

Community trail

Grand Portage Creek

Proposed Project Elements

Historic Trail

1914 Trail

Camping areas

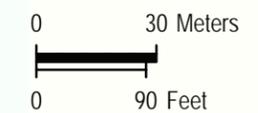
Naturalized areas

Interpretive and other project elements

Significant habitat - representative locations

Note: This figure illustrates elements common to both action alternatives, illustrated in Figures 2-2 and 2-3

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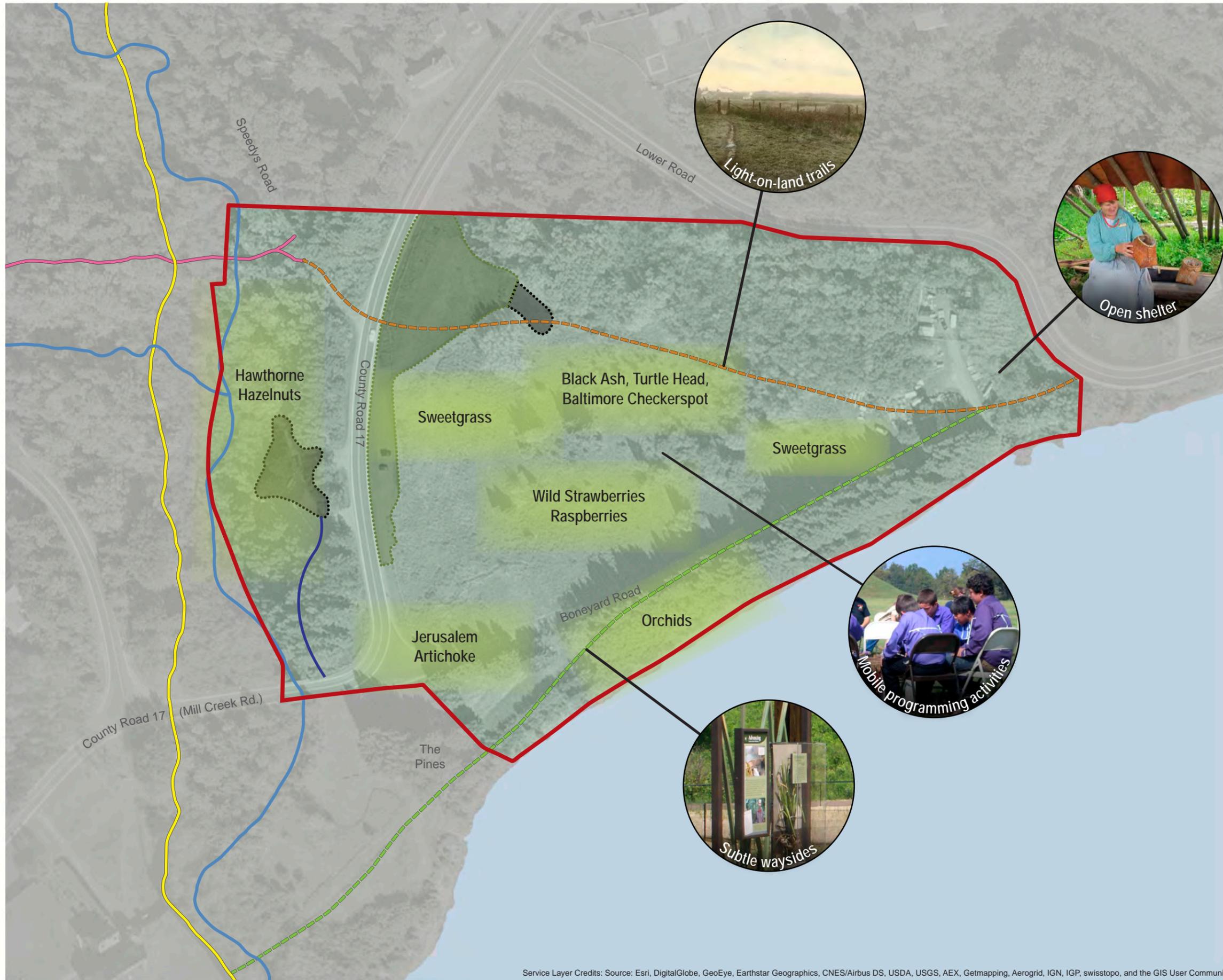


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Elements Common to Both Action Alternatives

East Meadow Area Cultural Landscape Rehabilitation and Development Project
 Environmental Assessment
 Grand Portage, Minnesota



Project boundary

Existing Elements

Grand Portage Trail

Post Office Trail

Community trail

Grand Portage Creek

Proposed Project Elements

Historic Trail

1914 Trail

Camping areas

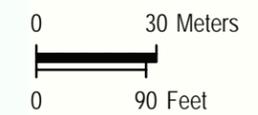
Naturalized areas

Interpretive and other project elements

Significant habitat - representative locations

Note: Action Alternative 1 incorporates elements illustrated on Figure 2-1

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Action Alternative 1:
 Subtle Interpretation and Use

Figure 2-2

East Meadow Area Cultural Landscape Rehabilitation and Development Project
 Environmental Assessment
Grand Portage, Minnesota



Project boundary

Existing Elements

Grand Portage Trail

Post Office Trail

Community trail

Grand Portage Creek

Proposed Project Elements

Historic Trail

1914 Trail

Camping areas

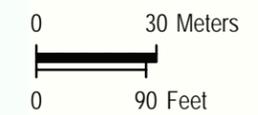
Naturalized areas

Interpretive and other project elements

Significant habitat - representative locations

Note: Action Alternative 2 incorporates elements illustrated on Figure 2-1

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Action Alternative 2:
 Overt Interpretation and Use

Figure 2-3

2.2.C Alternatives Considered but Dismissed

This section describes alternatives considered but eliminated from further study. The reason(s) for dismissal could include technical or economic infeasibility; inability to meet project objectives or resolve need; duplication with other, less environmentally damaging or less expensive alternatives; conflict with an up-to-date and valid park plan, statement of purpose and significance, or other policy, such that a major change in the plan or policy would be needed to implement; or too great an environmental impact. Table 2-2 describes the rationale for dismissing each alternative.

Table 2-2: Rationale for Dismissed Alternatives

Alternative Dismissed	Dismissal Rationale
<u>Interpretation</u>	
Building “ghostings” using upright wood frames.	This effect could be misinterpreted that the Ojibwe who lived in the East Meadow are “gone,” while in reality their descendants are alive and well in the community.
Interpretation of the pre-fur trade era.	The project team identified that the pre-fur trade story is interpreted to the degree desired and feasible in the Heritage Center museum.
Restoration of Revolutionary-era road and/or accessible portion of portage trail.	The project team identified that the Revolutionary-era story is a minor event and is interpreted to the extent necessary in the Heritage Center museum.
<u>Infrastructure/Resources Management</u>	
Large scale ground-disturbing activity, e.g., using heavy machinery to create non-porous surface.	Previous archaeological studies demonstrate that the East Meadow contains underground archaeological resources that would be put at risk by ground disturbance.
Ecological restoration as natural area, e.g., using native plantings.	The East Meadow is unlikely to be a high-value natural area due to its history of human use and disturbance, as well as its current location close to the Grand Portage community. In addition, restoring it as a natural area would not meet the goals of the Park’s enabling legislation.

Chapter 3. Affected Environment and Environmental Consequences

NEPA requires that federal agencies proposing major federal actions significantly affecting the quality of the human environment disclose the proposal's environmental impacts, adverse environmental effects that cannot be avoided, and "irreversible or irretrievable commitments of resources" (42 USC 4332). This chapter describes the project's affected environment: the resources in the East Meadow that could experience environmental impacts from the No-Action Alternative and two action alternatives. It then assesses the environmental consequences: the types and intensities of potential beneficial and adverse effects that each alternative could have on each resource type.

This chapter includes only resource topics potentially affected by the project. Section 1.3.B discusses resource topics dismissed from further analysis. This chapter begins with a presentation of the overall methodology for assessing impacts, informed by CEQ Regulations. Each resource topic section then contains a description of any additional methods used to assess impacts to the specific resource; a list of relevant laws, regulations, and policies; and a description of the affected environment. For each alternative, the environmental consequences analysis then describes potential direct, indirect, and cumulative effects to resources related to each impact topic and characterizes the context and intensity of those effects. If an alternative may adversely affect a resource, the analysis recommends avoidance and minimization measures the Park should implement. When an adverse impact is identified that cannot be avoided or minimized, a discussion of any relevant mitigation opportunities is presented. Each section concludes with an assessment of the alternative's overall effect to the resource (see also Table 4-1).

3.1 Overall Methodology

The primary purpose of this EA is to identify whether potential impacts to any resources impair park resources. The analysis of each resource topic began with a review of existing plans, studies, and other relevant literature. In particular, the NPS Organic Act of 1916 (16 USC 1-4), Management Policies (NPS 2006), the Park's establishing legislation, and the GMP (NPS 2003) identify the resources and values essential to the purpose of the Monument. Information found in existing documentation was augmented through site visits. Park staff, the Grand Portage Band and RTC, and other members of the public provided input at multiple stages (see Chapter 5). Overall, to determine whether the project could significantly affect the East Meadow environment, the context and intensity of potential direct, indirect, and cumulative impacts were assessed. In addition, each resource topic contains a description of the specific methodology used to supplement this overall approach.

Types of Effects

Affected Environment and Environmental Consequences

Effects and impacts are synonymous under NEPA. The types of effects related to each resource topic were identified and include direct, indirect, and cumulative effects (40 CFR 1508.8).

- *Direct effects* are caused by the action, occurring at the same time or place. For example, this could include grading a building site, which would remove onsite soil and vegetation and destroy any surface and subsurface archaeological deposits.
- *Indirect effects* are caused by the action and are still reasonably foreseeable, but they occur later in time or are farther removed in distance. Examples include allowing a utility to string a transmission line through a park to serve a nearby town, or socioeconomic impacts to area businesses from implementing a day-use permit system, and farther in distance, such as water quality far from the actual site of discharging effluent into a river.
- *Cumulative impacts* result from the incremental impact of the proposed actions considered together with other past, present, and reasonably foreseeable future actions – “from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7). Cumulative impacts must be considered regardless of who is undertaking them. There is not a set geographic or time limit for cumulative impacts; they could conceivably extend, for example, “over entire watersheds, or thousands of miles of elk range” (NPS 2001). The boundary for considering cumulative effects is the Grand Portage community, under the rationale that the East Meadow is a small area and impacts from the project would only occur locally. Actions that may have cumulative impacts are listed in Table 3-1. Where cumulative impacts differ significantly between the action alternatives, they are discussed separately for each; however, if they are quite similar, an overall cumulative impacts discussion is included in the conclusion section for that resource topic.

Table 3-1: Projects Assessed for Cumulative Impacts

Activity	Description
“Boneyard” maintenance storage yard decommissioning/relocation	The 2009 Grand Portage Maintenance Facility and Seasonal Housing EA analyzed relocation of these facilities. Relocation activities are in progress.
Maintenance facility relocation, including the relocation of utilities	
“Community trail” development	The segment of trail connecting the Grand Portage Lodge and Casino to the Heritage Center has already been built. The second phase of the trail, from the Heritage Center to the RTC headquarters and other community amenities, is not yet funded nor designed.

Affected Environment and Environmental Consequences

Activity	Description
Overall area development	It is anticipated that there will be ongoing and intermittent development of the Grand Portage Lodge and Casino and other amenities serving the local community and tourists.

Context

The significance of an impact depends on circumstances such as whether the effects are site-specific, regional, or national, and whether they affect society as a whole or only certain individuals, communities, or groups.

- For natural resources, impacts within and adjacent to the project area were considered, since the types of actions proposed will likely have only local impacts. For example, small-scale wetlands might be impacted, but it is unlikely that the far-ranging habitat of a large fauna species or the water resources of an entire watershed would be impacted.
- For cultural, economic, and social resources, impacts were considered more broadly, to the entire Grand Portage community. Many Band members and other residents have employment or cultural ties to the Park, and to the East Meadow, or use the area throughout their everyday lives. Impacts to visitors were considered as well, although other regional and national interests were not areas of focus.

The duration of an impact is also an important consideration:

- *Long-term impacts* are generally the result of project implementation, more difficult to reverse, or longer than one year in duration.
- *Short-term impacts* are generally associated with construction, easily reversed (except for impacts to archaeological resources), or less than one year in duration.

Intensity

The significance of an impact also depends on its severity, or the degree to which it could affect public health, safety, or unique characteristics of a geographic area; be highly controversial; involve unique or unknown risks; adversely affect significant scientific, cultural, or historic resources or critical species or habitat; or violate an environmental requirement (40 CFR 1508.27). Both beneficial and adverse impacts should be considered. For example, because the stated purpose of this project is to enhance visitor experience and demonstrate the continuity of Ojibwe presence in this place over time, this EA reviews the intended beneficial impacts to visitor and Band member experience.

Mitigation

If adverse impacts to resources are anticipated, NEPA requires agencies to identify mitigation measures, which can be considered as part of the proposed action or alternatives, or separately (40 CFR 1502.14). Mitigation encompasses the following (40 CFR 1508.20):

- Avoidance – Refraining from a certain action or eliminating the impact.

Affected Environment and Environmental Consequences

- Minimization – Reducing the magnitude of an action and its implementation through preservation and maintenance operations.
- Rectification – Conducting repair, rehabilitation, or restoration.
- Compensation – Replacing resources or elements of the environment.
- Reduction/elimination – Reducing or eliminating the impact over time by preservation or maintenance operations.

Where mitigation strategies differ significantly between the action alternatives, they are discussed separately for each; however, if they are quite similar, an overall mitigation discussion is included in the conclusion section for that resource topic.

3.2 Historic and Cultural Resources

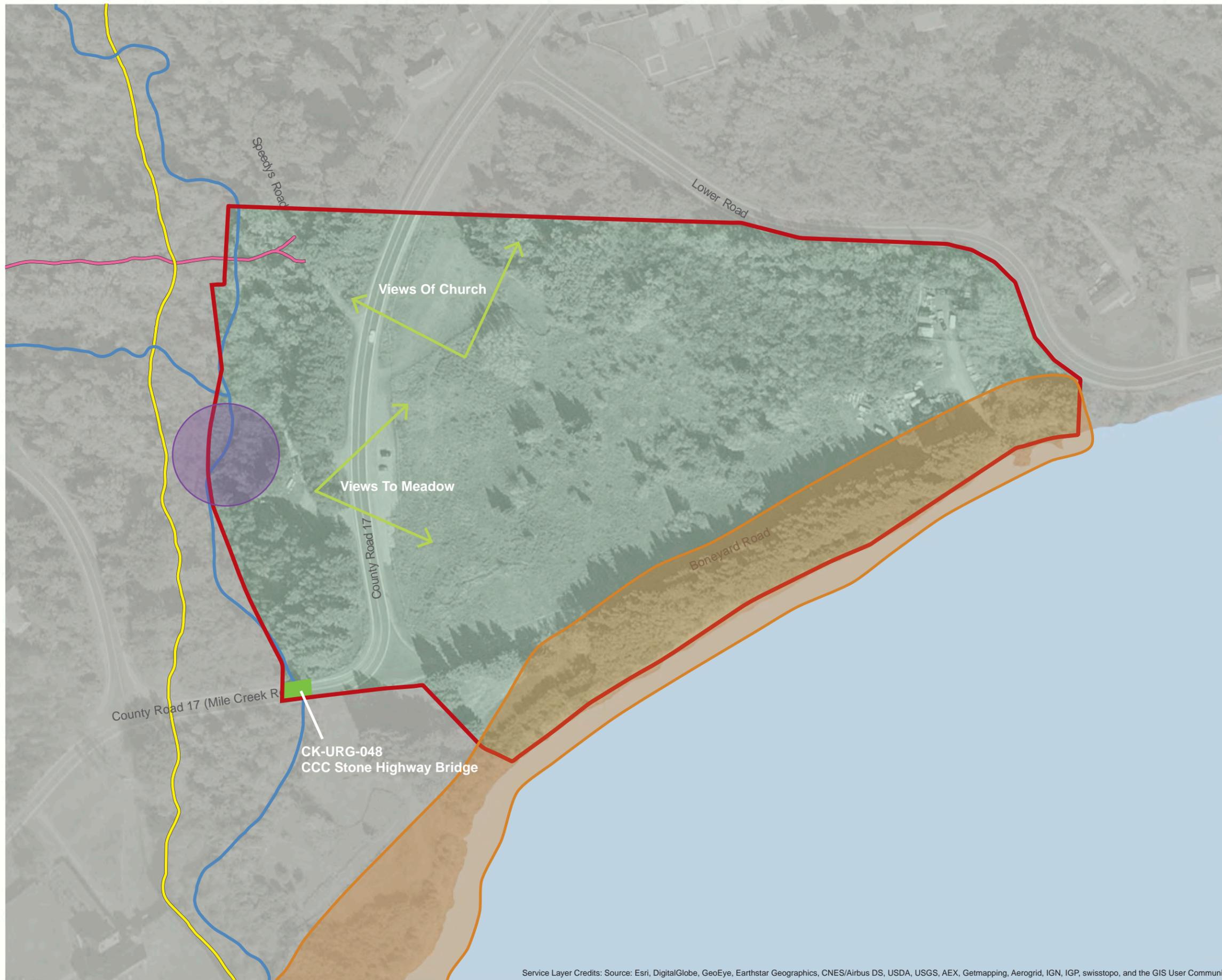
3.2.A Methodology – Historic and Cultural Resources

Section 106 of the NHPA requires assessing effects to historic and cultural resources. Federal agencies are directed to coordinate Section 106 and NEPA compliance efforts, to ensure that the requirements of both statutes can be met “in a timely and efficient manner” (36 CFR 800.8). However, this EA is not a substitute for formal Section 106 requirements.

Scoping meetings with Park staff, Band members, and other members of the public helped the project team elicit information regarding historic and cultural resources. In addition, the park superintendent consulted the RTC when questions arose about specific resources. These efforts are described in further detail in Chapter 5. This outreach, and the professional judgment of park resources management staff and cultural resources analysts, informed the development of the following areas of potential effect (APEs) for the project (Figure 3-1):

- The APE for archaeological resources is the same as the project area, and it includes all areas of proposed construction activities or other potential ground-disturbing activities associated with the proposed project.
- The APE for other cultural resources accounts for any physical, auditory, visual, or other relevant potential effects to historic properties. This includes the project area as well as some properties adjacent to the East Meadow, including the Holy Rosary Church to the north and Mount Rose to the southwest, to encompass historical views into the East Meadow. Although areas adjacent to the project to the east and west are heavily vegetated (Figure 3-2), which screens potential indirect visual and auditory effects, some clearing has been conducted of viewshed points along the Mount Rose trail, and plans are in place to clear further vegetation from the viewshed that existed historically from Mount Rose to the East Meadow.

East Meadow Area Cultural Landscape Rehabilitation and Development Project
 Environmental Assessment
Grand Portage, Minnesota



Project boundary

Existing Elements

Grand Portage Trail

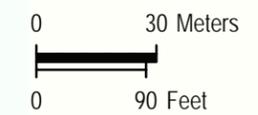
Post Office Trail

Grand Portage Creek

Boneyard Road Bed and Lakeshore Fill

Old Ford Site and Public Road Trace

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Affected Environment:
 Historic and Cultural Resources

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
 Map Produced by 106 Group 9-16-2015

Figure 3.1

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Figure 3-2: Vegetated area at eastern edge of East Meadow

Various studies have previously identified historic and cultural resources within the East Meadow. The Monument is listed in the National Register of Historic Places (NRHP) and includes many significant resources. In addition, the Grand Portage Cultural Landscape Report (CLR) identifies a range of landscape features within the Monument that need to be considered for management purposes. The CLR is a helpful planning tool, but the Park does not consider it to be a definitive statement of which resources are significant under NRHP criteria, and it has not undergone any public review.

This EA describes the landscape features of the East Meadow in accordance with guidance published by NPS and the Secretary of the Interior:

- National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes (NPS 1999)
- National Park Service Cultural Landscapes Inventory Professional Procedures Guide (NPS 1995)
- A Guide to Cultural Landscape Reports: Contents, Process and Techniques (NPS 1998)
- The Secretary of the Interior's Standards (SOI's Standards) for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes (NPS 2000)

The classification system defined in Bulletin 30 is meant to be an aid “for reading a rural landscape and for understanding the natural and cultural forces that have shaped it” (NPS 1999). Each landscape characteristic encompasses “the tangible evidence of the activities and

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habits of the people who occupied, developed, used, and shaped the land to serve human needs; they may reflect the beliefs, attitudes, traditions, and values of these people” (NPS 1999).

Much remains unknown about specific historic resources and the broader cultural significance of the East Meadow. Archaeological investigations are ongoing, and an ethnohistory of the Grand Portage historic village is pending. Effects to historic and cultural properties are assessed in this section pursuant to NEPA; however, compliance with Section 106 will be ongoing throughout planning and implementation of the project. Given the high likelihood of discovering further archaeological resources, and the developing understanding of the cultural landscape, the project will rely heavily on avoidance, minimization, and mitigation opportunities developed in consultation with the Grand Portage Band and its Tribal Historic Preservation Office (THPO).

Effects on cultural resources were assessed according to the following:

- American Antiquities Act of 1906 (16 USC 431-433)
- Archaeological and Historic Preservation Act of 1974 (16 USC 469-469c)
- Archaeological Resources Protection Act of 1979 (16 USC 470aa et seq.)
- Executive Order 11593, Protection and Enhancement of the Cultural Environment (36 FR 8921)
- Executive Order 13007, Indian Sacred Sites (61 FR 26771)
- Historic Sites Act of 1935 (16 USC 461-467)
- Native American Graves Protection and Repatriation Act of 1990 (25 USC 32)
- NPS Director’s Order 28: Cultural Resource Management (NPS 1998)
- NPS Management Policies 2006 (NPS 2006)
- Presidential Memorandum on Government-to-Government Relations with Native American Tribal Governments (59 FR 22951)
- Protection of Historic Properties (36 CFR 800)
- SOI’s Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716)
- SOI’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes (NPS 2000)
- Section 106 of the NHPA (54 USC 306108)

3.2.B Affected Environment – Historic and Cultural Resources

The NRHP-listed Monument encompasses approximately 710 acres of land that include three contributing archaeological sites (Fort Charlotte, the Grand Portage Trail, and the Grand Portage Site Complex), four contributing buildings, and two contributing structures (Birk 2005:7.1-7.2). The East Meadow is an area within the Grand Portage Site Complex that also contains one of the two contributing structures. The Monument, on the whole, is of

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international and regional significance in conveying the fundamental interrelationship between Ojibwe heritage and the establishment of transcontinental trade routes, including its vital roles as a meeting ground and exchange between diverse cultures (NPS 2005:5-6).

The Monument was listed in the NRHP in 1976, and the original NRHP registration form was updated by Birk in 2005 (Busch 1976, Birk 2005). Birk's revision of the 1976 original states, "The GRPO district boundaries still correspond with the administrative boundaries of the park, but the areas of significance have been retailored and the period of significance is now extended from 1731 through 1951" (Birk 2005:7-2). The revision identifies as contributing resources three archeological sites, four replicated fur trade era buildings, one replicated fur trade era structure, and one early twentieth century stone highway bridge, and among the noncontributing resources are four buildings, ten structures, and one object. The early twentieth century stone highway bridge, constructed by the Civilian Conservation Corps (CCC), is located at the western edge of the East Meadow project area. It is both a contributing structure to the Monument and individually eligible for NRHP listing (Birk 2005:7.15).

The CLR provides additional information about archaeological sites and describes other landscape features that contribute to the cultural landscape of the Monument, summarized below. These features include patterns of spatial organization, natural systems and features, land uses and activities, circulation, vegetation, and views and vistas. It is important to note, however, that the NRHP registration form identifies only the Grand Portage Site Complex and CCC stone highway bridge as contributing resources to the NRHP-listed Monument.

Archaeological Sites

Sites of prehistoric or historic activities can include foundations, ruins, privies and middens, and surface remains. They provide insight into past land uses and help reconstruct ancient ways of life (NPS 1999). The NRHP-listed Monument, and specifically the Grand Portage Site Complex, have high potential to contain archaeological resources, including resources that have not been previously identified or excavated (Birk 2005:7.11). The Monument is significant under NRHP Criterion A for contributing to the broad patterns of North American history in the area of Archaeology (among other areas), including Historic Aboriginal and Historic Non-Aboriginal Archaeology. The Monument is also significant under NRHP Criterion D for having provided important archaeological and cultural information about Indian and non-Indian peoples and their activities at Grand Portage during the period of significance, and for its potential to yield additional information through further studies. Additionally, the Monument is significant for its history of archaeological investigations (Birk 2005:8.1). The East Meadow is located within the Grand Portage Site Complex, which is identified as a contributing archaeological site to the Monument (Birk 2005:7.2).

The file maintained by the Minnesota Office of the State Archaeologist contains two registered site numbers wholly or partially within the project area: 21CK6 and 21CK12. Archaeological

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remains of two abandoned road segments may have been located east of Grand Portage Creek, including Old Ford Road and Old Upper Road (Birk 2005). Additionally, foundations of former village structures have been identified (Bahr Vermeer Haecker 2009:3.92). These properties are considered sensitive historic resources under Section 304 of the National Historic Preservation Act of 1966, as amended. In accordance with Section 304, information on these sensitive historic resources may cause a significant invasion of privacy and/or put the resource at risk of harm. Therefore, names, exact locations, and areas of significance of archaeological sites are not disclosed to help preserve these sensitive resources. Since much of the Monument's area has not been extensively surveyed, there is potential for additional sites to be identified. The GMP identified a Resources Trust Zone encompassing the East Meadow area to protect any unexcavated archaeological resources that may exist (NPS 2003:56-59). Professional archaeological investigations in the East Meadow are ongoing.

Buildings and Structures

Buildings and structures communicate much about those who built and used them (NPS 1999). The CCC stone highway bridge (Bridge 7614, CK-UOK-048) carries Mile Creek Road over Grand Portage Creek and was designed and built by the CCC Indian Division-Cass Lake for the village of Grand Portage (Figure 3-3). The revised NRHP registration form identifies this bridge as a contributing feature to the Monument, and as an individually eligible property for listing in the NRHP. The CCC stone highway bridge is significant for its association with government relief programs in the 1930s, the initial development of Grand Portage as a national park, and as an example of rustic CCC-era design that uses indigenous materials reflecting its surroundings. The bridge is also assumed to have cultural significance to the Grand Portage Band (Birk 2005:7.19, 8.18), and the CLR identifies it as a contributing feature to the Monument's cultural landscape.

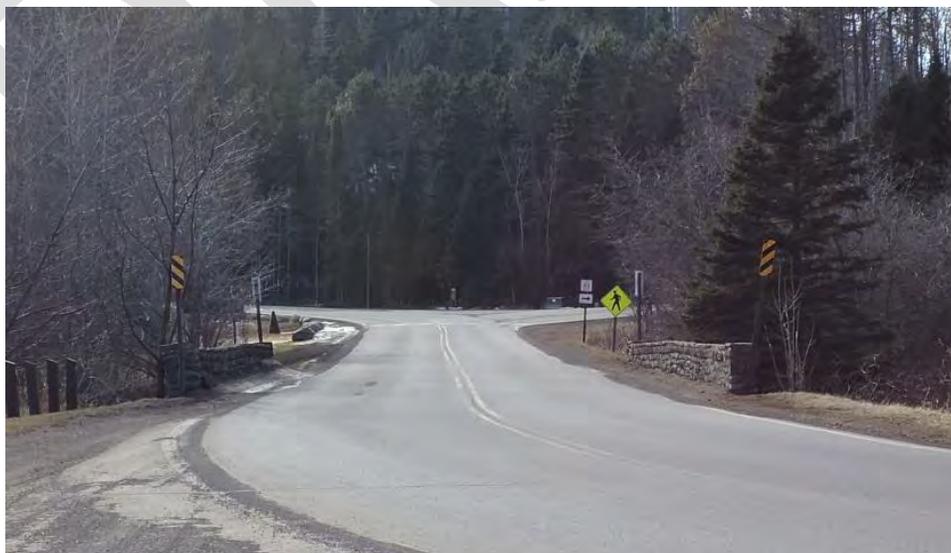


Figure 3-3: CCC Stone Highway Bridge, looking east from the East Meadow

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No contributing original buildings have been identified in the NRHP registration form or the CLR. The revised NRHP registration form includes “four replicated fur trade era buildings” as contributing resources to the Monument, but these are located outside the current project area and outside the APE. The only buildings present in the project area include maintenance and storage facilities that post-date the expanded period of significance (1731–1951) and are not of NRHP historic age (pre-1970).

Other Cultural Landscape Features

Within the Grand Portage Site Complex, the CLR identifies other cultural landscape features that contribute to the historical and cultural significance of the East Meadow. These features are described below to inform the assessment of the environmental consequences of each alternative.

Patterns of Spatial Organization – Communities and other landscapes are organized around their major physical components, predominant landforms and natural features, and the relationships among them on a broad scale. Examples include road systems, field patterns, distance between farmsteads, proximity to water sources, and orientation of structures to sun and wind.

An open vegetative area located east of County Road 17 (CR 17) and south of Holy Rosary Church is the central landscape component of the overall East Meadow project area. The area contains native grasses and forbs, as well as colonizing non-native and woody plants. Trees border the eastern edge of the Meadow, CR 17 borders the north and west, and Boneyard Road parallels the lakeshore to the south. Central organizing features include a visual and physical connection to the lakeshore and a low topography (Bahr Vermeer Haecker 2009:3.59-3.60). The CLR identifies this meadow as a contributing feature to the Monument’s cultural landscape. Its significance derives from its centuries of use by Ojibwe for collecting plants of ethnobotanical interest and conducting games and ceremonies (Bahr Vermeer Haecker 2009:3.17, 4.6), plus two centuries of use as the community’s main settlement. Certain species of culturally significant vegetation continue to exist within the East Meadow and be used by the Grand Portage Tribal community.

Natural Systems and Features – Rural communities have historically organized around major natural features like rivers, lakes, and grasslands. Traditions in land use, construction methods, and social customs commonly evolved as people responded to the physiography and ecological systems of the area where they settled (NPS 1999). The CLR identifies Grand Portage Creek as a contributing natural feature to the Monument’s cultural landscape that survives from the period of significance (Bahr Vermeer Haecker 2009:4-1, 4-36). The CLR also identifies the raised roadbed for Boneyard Road and fill along Lake Superior as contributing features to the Monument’s cultural landscape. These features are significant as examples of cultural responses to natural resources that survive from the expanded period of significance (1731 through 1951).

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Land Uses and Activities – Historical land uses leave imprints on a landscape, shedding light on how former inhabitants interacted with the environment. Present-day activities may represent the continuation of historical activities, but activities can also adapt in innovative yet historically compatible ways (NPS 1999). The East Meadow was the heart of the nineteenth and twentieth century village settlement, and it was traditionally an area for gardening, field cropping, and collecting ethnobotanical plants; holding ceremonies; and playing games such as lacrosse (Bahr Vermeer Haecker 2009:3.24;4.6). More recently, the Meadow has been used for pow wow events (Bahr Vermeer Haecker 2009:3.12). The CLR identifies ceremonial, recreational, museum/educational/interpretive, and transportation land uses as contributing features to the Monument’s cultural landscape, which are significant because they survive from the period of significance.

Circulation – Circulation networks vary widely in scale (for example, trails, highways, or airstrips), items transported (people or goods), and users (a rural community or the surrounding region). The CLR identifies Boneyard Road (Figure 3-4), County Road 17, and the Public Road trace as contributing features to the Monument’s cultural landscape that survive from the period of significance. Band members have also identified dirt walking paths through the East Meadow in historical photographs that they consider to be significant, although the current physical presence of these paths is undocumented.



Figure 3-4: Boneyard Road, looking west into the East Meadow

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Vegetation – Although a landscape’s current vegetation may differ from its historic vegetation, it nonetheless likely reflects past patterns of land use. The CLR identifies species of historic, cultural, and/or ecological significance as contributing features to the Monument’s cultural landscape within the East Meadow. These include meadow-subarea grasses and forbs, and ethnobotanical plants (paper birch, hawthorn, wild strawberry, yarrow, raspberry, wild rose, sweet grass, caraway, and Jerusalem artichoke). These species are significant because they likely were present during the period of significance, and they have documented historical and cultural uses or values. Several state-listed threatened and endangered species (auriculed twayblade, wild chives, and satiny willow) have also been documented within or near the meadow-subarea over the past 30 years. However, due to their rarity, it is not certain that these species were present prior to their documentation and during the period of significance. If they were present during the period of significance, these would also have been species of historic, cultural, and/or ecological significance, especially wild chives and satiny willow.

Views and Vistas – Views and vistas “create or allow a range of vision which can be natural or designed and controlled” (NPS 1998). The CLR identifies the view across the Meadow from near the maintenance buildings to the west (*Figure 3-5*), and the view of the Holy Rosary Church from the Meadow (*Figure 3-6*) as contributing features to the Monument cultural landscape. While Mount Rose is located outside of the project area, it has been included in this analysis because views from three lookout points on Mount Rose offer a broad-scale sense of spatial relationships across the Grand Portage Site Complex, which encompasses the East Meadow area, and expansive views of the nearby lakeshore. The lookout points are significant because they are thought to have been used historically to spot approaching watercraft. While the dramatic views of Grand Portage Bay from the lakefront were important during the fur trade era (*Figure 3-7*), it is not known whether those views informed the choice of the Meadow for the Ojibwe village (Bahr Vermeer Haecker 2009:4.33).



Figure 3-5: View into the East Meadow, looking east from the western edge



Figure 3-6: View from the East Meadow, north to Holy Rosary Church



Figure 3-7: Obscured view from the East Meadow southeast into Grand Portage Bay

3.2.C Environmental Consequences – Historic and Cultural Resources

3.2.C.i No-Action Alternative

Under the No-Action Alternative, management of historic and cultural resources within the East Meadow would continue in accordance with the GMP, which outlines practices to prevent the deterioration or destruction of cultural resources (NPS 2003).

Archaeological Sites

- Everyday use of the Meadow by the community would have a minor to negligible effect to the integrity of archaeological resources in the Grand Portage Site Complex archaeological site, which encompasses the East Meadow. Current management practices include limited recovery of archaeological materials, primarily in response to any threats to integrity from park operations or natural phenomena, including erosion. The No-Action Alternative will not adversely impact archaeological sites.

Buildings and Structures

- The CCC stone highway bridge, which is a contributing resource to the NRHP-listed Monument and has been determined individually eligible for listing in the NRHP, carries CR 17 over Grand Portage Creek. A Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) assessment of the bridge will be completed in fall of 2015, followed by full structural assessment and rehabilitation

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efforts. Any work on this structure should follow the SOI's Standards for the Treatment of Historic Properties to avoid compromising the integrity of this resource. The No-Action Alternative will not adversely impact buildings and structures if this management practice is implemented.

Other Cultural Landscape Features

- The No-Action Alternative would have no effect on patterns of spatial organization, natural systems and features, land uses and activities, circulation, vegetation, or views and vistas. This is due to the Meadow being largely underutilized, except for low levels of use by the community and for archaeological and botanical investigations.

3.2.C.ii Action Alternative 1: Subtle Interpretation and Use

Action Alternative 1 envisions the East Meadow remaining much as it is today, with only subtle accommodations for visitors and the community. Both action alternatives meet the project's purpose and need; however, Action Alternative 1 would more implicitly tell the story of the Meadow's transition from a village center to a more subdued component of the landscape. It would have relatively few impacts, but its improvement would be incremental, meaning that some historic and cultural resources would likely not be interpreted or restored. Action Alternative 1 would have a number of effects to the East Meadow area. These are detailed below according to timeframe (long-term or short-term), and whether long-term effects would be direct or indirect.

Long-Term Direct Effects

Action Alternative 1 would result in the following long-term direct effects to the East Meadow.

Archaeological Sites

- A loss of integrity to archaeological resources could occur from increased visitor traffic and programming, particularly camping, if appropriate stewardship measures are not taken. In addition, ground disturbance resulting from any digging required to install interpretive media, a gazebo structure, and any other fixed amenities, or to remove parking, may expose or alter archaeological resources in the East Meadow area and permanently compromise the integrity of these resources. Since there is high potential for archaeological resources in the East Meadow, avoidance may be difficult and it is likely that some level of mitigation will be required. Overall, there is high potential for long-term direct effects from Action Alternative 1 to adversely impact archaeological resources. Potential mitigation measures for archaeological resources are discussed at the end of this section.

Buildings and Structures

- No work is proposed to the CCC stone highway bridge under Action Alternative 1, nor are use levels of the bridge expected to change, so effects to buildings and structures would be the same as those under the No-Action Alternative. Therefore, long-term

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direct effects from Action Alternative 1 would not adversely impact buildings and structures.

Other Cultural Landscape Features

- *Patterns of Spatial Organization* – Clearing non-native and woody plants would improve the culturally significant view of Lake Superior, reestablish the link to the lakeshore, and eliminate colonizing, non-characteristic vegetation. Therefore, long-term direct effects from Action Alternative 1 would not adversely impact patterns of spatial organization.
- *Natural Systems and Features* – Downgrading Boneyard Road would alter the fill supporting the roadbed. However, this fill material is not identified as a NRHP-contributing resource for the Monument, so long-term direct effects from Action Alternative 1 will not adversely impact natural systems and features.
- *Land Uses and Activities* – A gazebo or covered area could improve land use and visitor offerings while providing a geographically well-defined, low-impact venue for hosting cultural events and subtle interpretation opportunities. Camping could reduce the amount of available space for other programming; however, careful planning could avoid potential land-use conflicts. Therefore, long-term direct effects from Action Alternative 1 will not adversely impact land uses and activities if these management practices are implemented.
- *Circulation* – Better defining circulation patterns for both community and visitor use could improve circulation in the project area. Therefore, long-term direct effects from Action Alternative 1 will not adversely impact circulation.
- *Vegetation* – By removing parking and clearing non-characteristic woody vegetation, land could become available to cultivate ethnobotanical plants, meadow grasses and forbs, and other culturally significant plant communities. However, loss of biomass and environmental stress to ethnobotanical plant communities and meadow grasses and forbs could result from new pathways, the gazebo structure, any clearing required for campgrounds, and any new fixed amenities that are introduced to areas where ethnobotanical plants and meadow grasses and forbs currently exist. A 2015 plant species inventory conducted in a representative part of the meadow identified 127 species from 32 families, many of which are culturally significant. In addition, there are two state-endangered plant species documented in the East Meadow, and three other state-listed species nearby. An additional inventory of the entire East Meadow should be conducted to identify the presence and locations of other rare, threatened, and endangered species that are culturally and historically significant, and which may not be able to naturally regenerate from disturbance related to construction activities, in order to avoid long-term loss of these species. Additionally, new pathways, structures, and amenities should be concentrated in areas of lower integrity (i.e., where woody, non-characteristic vegetation is cleared) to avoid or minimize any potential long-term biomass loss to historically and culturally significant vegetation that cannot naturally

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regenerate. Long-term direct effects from Action Alternative 1 will not adversely impact vegetation if these management practices are implemented.

- *Views and Vistas* – Clearing vegetation would increase the visual prominence of Holy Rosary Church, as it had existed historically, and will restore views to the lakeshore from the East Meadow area and to the East Meadow area from Mount Rose. The introduction of small-scale, non-characteristic vertical elements, like camping equipment and the gazebo structure, to culturally and historically significant views could result in visual impacts. New construction of permanent buildings and structures within historic districts should follow the SOI's Standards for the Treatment of Historic Properties to minimize potential impacts. Long-term direct effects from Action Alternative 1 will not adversely impact views and vistas if these management practices are implemented.

Long-Term Indirect Effects

Action Alternative 1 would result in the following long-term indirect effects to the East Meadow.

Archaeological Sites

- Interpretation would create greater understanding and appreciation for archaeological resources by communicating much about those who lived in and used the area. However, providing specific information about project area resources could increase the potential for unregulated exploring or excavating at the East Meadow. This effect could be avoided or minimized through limiting the amount of information provided on location, status, content, or conditions of any resources that may exist in the East Meadow. In addition, interpretive materials should incorporate no-looting messages, including education about the importance and sensitivity of archaeological resources and the enforcement consequences of disturbing them. Long-term indirect, adverse impacts from Action Alternative 1 would be avoided or minimized if these management practices are implemented.

Buildings and Structures

- Interpretive buildings and structures constructed under Action Alternative 1 could contribute to greater understanding of, and appreciation for, those who lived in and used the East Meadow historically. These efforts would focus on the CCC stone highway bridge, but could also highlight non-extant village buildings and structures, again with fewer impacts than through physically restoring or reconstructing them. Long-term indirect effects from Action Alternative 1 will not adversely impact buildings and structures.

Other Landscape Features

- *Patterns of Spatial Organization* – Action Alternative 1 does not propose any changes that would indirectly affect patterns of spatial organization.

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- *Natural Systems and Features* – Action Alternative 1 does not propose any changes that would indirectly affect natural systems and features.
- *Land Uses and Activities* – The interpretative elements envisioned under Action Alternative 1 could raise awareness among the community and visitors about historical land uses. Camping for Boundary Waters Canoe Area Wilderness (BWCAW) portagers, including a vault toilet, could indirectly reduce the amount of available space for other programming due to scheduling conflicts; however, careful planning could avoid potential land-use conflicts. Long-term indirect effects from Action Alternative 1, therefore, will not adversely impact land uses and activities.
- *Circulation* – While some current circulation patterns may reflect the location of historical routes, better defined path locations could improve understanding, appreciation, and preservation of culturally and historically significant circulation patterns. In particular, the subtler approach under Alternative 1 would better represent the narrow dirt walking paths portrayed in photographs that formerly existed in the Meadow, which some Band members expressed to be significant. Reintroducing pedestrian circulation routes and former vehicular circulation routes (such the “1914 road”) could create potential conflicts between pedestrian and vehicular traffic. Signage, pavement markings, and separation of vehicular and pedestrian routes, to the extent possible, could help to avoid or minimize these effects. Overall, long-term indirect effects from Action Alternative 1 will not adversely impact circulation if these management practices are implemented.
- *Vegetation* – Educational and interpretive efforts related to the East Meadow’s vegetation could increase understanding and motivate stewardship of ethnobotanical plants and meadow grasses and forbs. However, providing specific information about plant species, locations, and uses could increase the risk of unregulated harvesting, which could increase stress, lead to biomass loss, and compromise the integrity of historically and culturally significant plant communities. Interpretive content shared with the general public should avoid providing specific information identifying individual plants, and should include a directive to not disturb these sensitive resources in order to avoid or minimize these effects. Gathering by Tribal members will continue, however policies related to Tribal gathering practices should ensure sustainable use and incorporate results of the proposed rulemaking underway on Gathering of Certain Plants or Plant Parts by Federally Recognized Indian Tribes for Traditional Purposes (80 FR 21674). Long-term indirect effects from Action Alternative 1 will not adversely impact vegetation if these management practices are implemented.
- *Views and Vistas* – Action Alternative 1 does not propose any changes that would indirectly affect views and vistas.

Short-Term Effects

Action Alternative 1 would result in the following short-term effects to the East Meadow.

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Archaeological Sites

- Impacts to archaeological sites would encompass those under the No-Action Alternative. There may also be additional short-term adverse impacts to archaeological resources associated with construction of some of the proposed elements of Action Alternative 1. However, overall, short-term adverse impacts from Action Alternative 1 could be avoided or minimized if proper management practices are implemented.

Buildings and Structures

- No work is proposed to any buildings or structures in the East Meadow under Action Alternative 1, so construction and other short-term impacts would be the same as those under the No-Action Alternative. Therefore, short-term effects from Action Alternative 1 will not adversely impact buildings and structures.

Other Cultural Landscape Features

- *Patterns of Spatial Organization* – No work is proposed that would substantially alter patterns of spatial organization in the East Meadow during the implementation of Action Alternative 1. Therefore, short-term impacts to patterns of spatial organization would be the same as those under the No-Action Alternative and will not adversely impact patterns of spatial organization.
- *Natural Systems and Features* – No work is proposed that would create short-term impacts to natural systems and features.
- *Land Uses and Activities* – Construction and staging activities could affect land uses and activities in the East Meadow area. Directional signage, staging of construction work away from visitor and event spaces, and prioritizing schedules for traditional cultural events over construction work could help to avoid potential use conflicts. Short-term effects from Action Alternative 1 will not adversely impact land uses and activities if these management practices are implemented.
- *Circulation* – Construction and staging activities could affect circulation systems and access to the East Meadow area. Directional signage, staging of construction work away from visitor and event spaces, and prioritizing schedules for traditional cultural events over construction work could help to avoid potential circulation conflicts. Short-term effects from Action Alternative 1 will not adversely impact circulation if these management practices are implemented.
- *Vegetation* – Construction staging and activity could result in short-term biomass loss and stress to plants until natural regeneration occurs over time. A plan should be developed in response to the current botanical inventory that identifies sensitive areas, protective measures needed to avoid or minimize effects, and plans to preserve or re-cultivate existing species of cultural significance. The management plan should establish goals for preservation of native species in the East Meadow, including both general and species-specific goals. The plan should also detail the specific management practices and

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contingency actions that would best meet the goals. Overall, short-term effects from Action Alternative 1 will not adversely impact vegetation if these management practices are implemented.

- *Views and Vistas* – Construction and staging activities could affect culturally and historically significant views of the East Meadow from the west and from Mount Rose, and to Holy Rosary Church from the East Meadow. However, the relatively small scale and limited duration of these activities means they would not adversely affect the views. Signage at the construction site illustrating the design concept could convey the intended beneficial outcomes from Action Alternative 1 to minimize any temporary visual impacts. Overall, short-term effects from Action Alternative 1 will not adversely impact views and vistas if these management practices are implemented.

Cumulative Impacts

Impacts to cultural resources could increase because of the activities in Table 3-1 combined with the implementation of Action Alternative 1. The activities assessed for cumulative impacts could exacerbate the long-term adverse effects to archaeological resources under Action Alternative 1, due to greater overall use and development of the East Meadow. There could also be greater short-term construction impacts to circulation, vegetation, and views if the implementation of Action Alternative 1 coincides with construction activities for these projects.

Some of these cumulative impacts could be beneficial. Improvements to patterns of spatial organization, land use and activities, and views under Action Alternative 1 would further improve conditions in the East Meadow resulting from the relocation of maintenance facilities. Similarly, development of the “community trail” and of the Grand Portage area could further improve interpretation opportunities at the Park.

Summary of Impacts

Under Action Alternative 1, cultural resources in the East Meadow could experience a number of long- and short-term impacts. Many of these effects would be beneficial; however, land use and circulation conflicts, loss of significant vegetation, and introduction of non-characteristic features into significant views could also occur. Implementation of management practices should avoid or minimize some or all of these potential impacts. Adverse impacts to archaeological resources will likely require mitigation, although these impacts could be avoided or minimized in some instances. Since the level of ground-disturbance associated with Action Alternative 1 is somewhat limited, potentially fewer sites may be affected. However, since archaeological testing is also ongoing, the number of sites that may be affected is currently unknown.

Construction and staging activities could have a number of short-term impacts to land uses and activities, circulation, vegetation, and views, but these can be avoided and minimized. As these impacts are short-term, they are unlikely to have an overall adverse impact that would require

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mitigation. Action Alternative 1 envisions subtle and unobtrusive use of the landscape, so it is low impact by definition. Action Alternative 1 has the potential to adversely impact archaeological sites but would not have an adverse impact to other historic and cultural resources within the East Meadow if appropriate management practices are applied.

Mitigation

Due to the likelihood of adverse effects to archaeological resources from ground disturbance required under Action Alternative 1 to install interpretive media, a gazebo structure, and any other fixed amenities, or to remove parking, the Park should implement the following mitigation measures:

- Systematic survey should occur prior to any ground-disturbing work, such as clearing, topsoil removal, excavation, or landscaping, directed by the Monument's archaeologist.
- Discovered resources should be evaluated for their potential eligibility for listing in the NRHP. Procedures should follow those outlined in 36 CFR 800, Protection of Historic Properties. If significant finds are uncovered, consideration should be given to relocate proposed construction work to a non-sensitive area.
- All areas of impact where significant archaeological resources are uncovered and that cannot be avoided should undergo systematic data recovery, which will be informed by ongoing collaboration with the Band. In addition, archaeological monitoring should occur for any ground-disturbing work. Construction personnel should be educated about the need to protect any cultural resources encountered, and work crews should be informed that it is illegal to collect artifacts on Federal lands.
- It is not anticipated that any human remains would be found, however, in advance of ground-disturbing activities, instructions should be given to construction personnel regarding respectful treatment of human remains and notification of the appropriate personnel in the event such remains are discovered.
- To minimize ground disturbance, all staging areas, materials stockpiling, vehicle storage, and other construction-related facilities and areas should be limited to previously disturbed areas or on hardened surfaces to the extent possible.
- Mitigation measures should be commensurate with resource significance and preservation needs.

3.2.C.iii Action Alternative 2: Overt Interpretation and Use

Impacts to historic and cultural resources from Action Alternative 2 are comparable in type to those described from Action Alternative 1, but both adverse and beneficial impacts are generally of a greater intensity. Action Alternative 2 envisions similar improvements to the East Meadow as under Action Alternative 1 but with more apparent interpretation and active use. The atmosphere in the Meadow would hearken back to its past as a village center hosting residential, commercial, recreational, and cultural uses. Both action alternatives meet the project's purpose and need; however, Action Alternative 2 would more noticeably transition the Meadow's landscape from what it is today. In many ways, this would offer visitors and the community

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more information about and exposure to the East Meadow's historic and cultural resources, and as a result, it would likely have greater impacts to many of those same resources.

Each category of landscape features described below will experience impacts similar to those described as a result of Action Alternative 1. Where impacts would differ by type or intensity, this section describes any variation.

Long-Term Direct Effects

Action Alternative 2 would result in the following long-term direct effects to the East Meadow.

Archaeological Sites

- Effects to archaeological sites would be similar to but greater than those under Alternative 1 due to more extensive ground disturbance for reconstructing village buildings, constructing heavier-duty trails and parking, restoring gardens, and restoring lakeshore vegetation. There is heightened potential for long-term direct effects from Action Alternative 2 to adversely impact archaeological resources. Potential mitigation measures for archaeological resources are discussed under Action Alternative 1.

Buildings and Structures

- Effects to buildings and structures would be similar to but greater than those under Action Alternative 1 due to a slight increase in vehicle traffic, including heavy vehicles, across the CCC stone highway bridge from increased programming in the East Meadow. Heavier visitor traffic will increase the need for maintenance work on the bridge, which should follow the SOI's Standards for the Treatment of Historic Properties to avoid or minimize any potential impacts. Long-term direct effects from Action Alternative 2 will not adversely impact buildings and structures if these management practices are implemented.

Other Cultural Landscape Features

- ***Patterns of Spatial Organization*** – Effects to patterns of spatial organization would be similar to but greater than those under Action Alternative 1 due to the reconstruction of buildings and gardens. However, these reconstructed features would help visitors and community members recall historic patterns of land use. Long-term direct effects from Action Alternative 2 will not adversely impact patterns of spatial organization.
- ***Natural Systems and Features*** – Effects to natural systems and features would be similar to those under Action Alternative 1 and will not adversely impact natural systems and features.
- ***Land Use and Activities*** – Land use conflicts would be similar to but greater than those under Action Alternative 1 due to more competing space and use demands from expanded parking and/or reconstructed village structures or gardens. Careful planning could avoid potential land use conflicts. Long-term direct effects from Action

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Alternative 2 will not adversely impact land uses and activities if management practices are implemented.

- **Circulation** – Circulation impacts would be similar to but greater than those under Action Alternative 1. Heavier traffic from increased programming at the East Meadow could result in more frequent conflicts and increased maintenance needs for CR 17, as more visitors are drawn from other areas of the Monument to the East Meadow. Signage, pavement markings, and separation of vehicular and pedestrian routes, to the extent possible, could help to avoid or minimize these effects. However, any substantial changes to historically significant circulation paths – including Boneyard Road, CR 17, the Public Road trace, and any traces of walking paths identified by Band members – should be avoided to maintain the historical integrity of these features. Additionally, any repair work or potential realignment of CR 17 and the Boneyard Road that may be required should follow the SOI's Standards for the Treatment of Historic Properties to avoid compromising the historical integrity of these features. Long-term direct effects from Action Alternative 2 will not adversely impact circulation if these management practices are implemented.
- **Vegetation** – Impacts to vegetation would be similar to but greater than those under Action Alternative 1, due to more developed pathways and parking areas, increased visitor traffic, reconstructed village structures, restoration of the gardens, clearing required for campgrounds, and any new amenities introduced. Similarly, the presence of species that cannot naturally regenerate should be identified and a plan should be developed to protect these species and plant communities from increased stress and potential biomass loss, in order to avoid compromising the integrity of historically and culturally significant vegetation. In addition, any necessary disturbance should be limited to a confined area to minimize these potentially adverse effects. Long-term direct effects from Action Alternative 2 will not adversely impact vegetation if these management practices are implemented.
- **Views and Vistas** – Effects to views and vistas would again be similar to those under Action Alternative 1 but more beneficial in some cases, since Alternative 2 introduces additional characteristic features to the East Meadow that can also be seen from the vantage point west of the meadow (near the maintenance buildings). Restoring lakeshore vegetation and reconstructing village buildings could encourage further historical and cultural understanding among community members and visitors. New construction within historic districts should follow the SOI's Standards for the Treatment of Historic Properties to minimize potential visual impacts. Long-term direct effects from Action Alternative 2 will not adversely impact views and vistas if management practices are implemented.

Long-Term Indirect Effects

Action Alternative 2 would result in the following long-term indirect effects to the East Meadow.

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Archaeological Sites

- Indirect effects to archaeological sites would be the same as those under Action Alternative 1, since the additional programming and facilities proposed under Action Alternative 2 would not change the type or intensity of the indirect effects. Potential impacts could be avoided or minimized by restricting information about the location of resources and promoting the no-looting educational messages described under Action Alternative 1. Long-term adverse impacts from Action Alternative 2 could be avoided or minimized if these management practices are implemented.

Buildings and Structures

- Impacts to buildings and structures would be similar to but greater than those under Action Alternative 1, since reconstructing currently non-extant village buildings would have greater impacts. However, reconstruction of historic structures would support the CCC stone highway bridge and Holy Rosary Church in evoking the historic period defined in the project's purpose and need. Reconstruction of historic buildings and structures should follow the SOI's Standards for the Treatment of Historic Properties to avoid potential impacts to the setting of the CCC stone highway bridge and Holy Rosary Church. Long-term indirect effects from Action Alternative 2 will not adversely impact buildings and structures if management practices are implemented.

Other Cultural Landscape Features

- *Patterns of Spatial Organization* – Action Alternative 2 does not propose any changes that would indirectly affect patterns of spatial organization.
- *Natural Systems and Features* – Action Alternative 2 does not propose any changes that would indirectly affect natural systems and features.
- Impacts to land uses and activities would be similar to those under Action Alternative 1, including building awareness among the community and visitors about historical land uses. Camping and addition of a vault toilet could indirectly reduce the amount of available space for other programming due to scheduling conflicts; however, careful planning could avoid potential land-use conflicts. Long-term indirect effects from Action Alternative 2, therefore, will not adversely impact land uses and activities.
- *Circulation* – Impacts to circulation would be similar to those under Action Alternative 1, including the greater potential for pedestrian and vehicular conflicts. However, the more developed paths in Action Alternative 2 would offer less historically evocative benefits than reconstructed historical dirt walking paths envisioned under Action Alternative 1. Signage, pavement markings, and separation of vehicular and pedestrian routes, to the extent possible, could help to avoid or minimize these effects. Long-term indirect effects from Action Alternative 2 will not adversely impact circulation if these management practices are implemented.

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- *Vegetation* – Impacts to vegetation would be similar to but greater than those under Action Alternative 1, due to more overt interpretation that could include larger educational gatherings and more active interpretive programming. While this could increase the understanding and motivation for stewardship, it could also potentially increase the risk for unregulated harvesting. Therefore, interpretive content shared with the general public should avoid identifying individual plants or groupings of plants, and should include a directive to not disturb these sensitive resources. In addition, the Park should revisit its policies on Tribal harvesting as described under Action Alternative 1. Overall, long-term indirect effects from Action Alternative 1 will not adversely impact vegetation if these management practices are introduced.
- *Views and Vistas* – Action Alternative 2 does not propose any changes that would indirectly affect views and vistas.

Short-Term Effects

Action Alternative 2 would result in the following short-term effects to the East Meadow.

Archaeological Sites

- Impacts to archaeological sites under Action Alternative 2 would include those under Action Alternative 1 but could be greater and more numerous, due to more extensive construction activity.

Buildings and Structures

- No work is proposed to buildings and structures under Action Alternative 2.

Other Cultural Landscape Features

- *Patterns of Spatial Organization* – Impacts to patterns of spatial organization would be the same as those under Action Alternative 1 since construction activities under Action Alternative 2 would not substantially alter patterns of spatial organization. Short-term effects from Action Alternative 1 will not adversely impact patterns of spatial organization.
- *Natural Systems and Features* – More extensive construction work under Action Alternative 2 could increase runoff from the East Meadow area into the Grand Portage Creek and affect the quantity and quality of water in the creek, which could impact its appearance or use during construction activities. However, these effects would not rise to the level of adverse since they would be minor and temporary.
- *Land Uses and Activities* – Impacts to land uses and activities would be similar to but greater than those under Action Alternative 1, due to additional programming that would increase the potential for land use conflicts. Directional signage, staging of construction work away from visitor and event spaces, and prioritizing schedules for traditional cultural events over construction work could help to avoid potential use

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conflicts. Short-term effects from Action Alternative 2 will not adversely impact land uses and activities if these management practices are implemented.

- *Circulation* – Impacts to circulation would be similar to those under Action Alternative 1 but more extensive, due to more construction and staging activities associated with more-extensive development. Directional signage, staging of construction work away from visitor and event spaces, and prioritizing schedules for traditional cultural events over construction work could help to avoid potential circulation conflicts. Short-term effects from Action Alternative 2 will not adversely impact circulation if these management practices are implemented.
- *Vegetation* – Impacts to vegetation would be similar to but greater than those under Action Alternative 1, due to more extensive construction activity. A plan should be developed in response to the current botanical inventory that identifies sensitive areas and protective measures needed to avoid or minimize these effects. Short-term effects from Action Alternative 2 will not adversely impact vegetation if these management practices are implemented.
- *Views and Vistas* – Impacts to views and vistas would be similar to but greater than those under Alternative 1, due to more extensive construction and staging activities. However, these activities would remain relatively small scale and limited in duration, meaning they would not adversely affect the views. Similarly, signage at the construction site illustrating the design concept could convey the intended beneficial outcomes from Action Alternative 2 to minimize any temporary visual impacts. Short-term effects from Action Alternative 2 will not adversely impact views and vistas if these management practices are implemented.

Cumulative Impacts

Impacts to cultural resources could increase because of the activities in Table 3-1 combined with the implementation of Alternative 2, to a greater extent than under Action Alternative 1. Beneficial effects could be greater than under Action Alternative 1 due to views of reconstructed characteristic features in combination with maintenance facility relocation. Impacts under Action Alternative 2 would be similar to those under Action Alternative 1 but greater overall, and with increased circulation conflicts and maintenance needs in combination with overall area development. Similarly, there could be even greater benefits with implementation of Action Alternative 2, “community trail” development, and overall area development. However, even greater long-term adverse effects would result to archaeological resources in combination with projects assessed for cumulative impacts, yet the data gleaned from any archaeological investigation may provide important information to increase our understanding of the historical activities that have taken place in the East Meadow area. Short-term construction impacts would also be greater to circulation and views if the implementation of Action Alternative 2 coincides with construction activity for these projects, but the impacts can be managed and thereby minimized through careful planning.

Summary of Impacts

Action Alternative 2 would offer a more robust program for interpreting the East Meadow's cultural resources, and more active redevelopment could better reflect historical characteristics of the East Meadow. Under Action Alternative 2, cultural resources within the East Meadow could experience a number of long- and short-term effects that are similar to but greater than those under Action Alternative 1. Many of these effects would be beneficial, including the introduction of characteristic features (reconstructed village buildings and gardens) to significant views. However, these reconstructed features should follow the SOI's Standards for the Treatment of Historic Properties to avoid potential adverse impacts to the setting of the CCC stone bridge, Holy Rosary Church, and the Monument historic district on whole. Additional impacts would result from circulation conflicts, which could be avoided or minimized through management practices. Of greatest concern, however, are the potentially heightened adverse effects to archaeological resources from more construction and ongoing use of the East Meadow. Short-term effects from construction would be similar to those in Action Alternative 1, but greater.

Mitigation

As in Alternative 1, mitigation for archaeological resources will be required in response to any potential adverse effects that may occur. The Park should implement the same measures as listed under Action Alternative 1.

3.2.D Conclusion – Historic and Cultural Resources

Under the No-Action Alternative, management of historic and cultural resources within the East Meadow would continue in accordance with the GMP, which outlines practices to prevent the deterioration or destruction of cultural resources (NPS 2003). The East Meadow is largely unutilized, so the No-Action Alternative would have only minor effects to historic and cultural resources. Both action alternatives would change the use and appearance of the East Meadow landscape, resulting in a number of long- and short-term; direct and indirect; and beneficial and negative impacts. Adverse impacts to archaeological resources would result under both action alternatives, although adverse impacts could be greater under Action Alternative 2 unless mitigation efforts are scaled to address the potential for greater impacts. Similarly, impacts to cultural resources from either action alternative would intensify the impacts from other projects assessed for cumulative impacts, but these impacts could again be greater under Action Alternative 2 unless mitigation efforts are scaled. While impacts to circulation and particularly to archaeological resources could be more severe under Action Alternative 2, the more active rehabilitation of the landscape could better highlight the East Meadow's historic and cultural significance.

3.3 Visitor Experience

3.3.A Methodology – Visitor Experience

Visitor experience focuses on access, use and enjoyment, and unique and meaningful engagement with the stories of this site. Effects to the visitor experience from the two action alternatives and the No-Action Alternative were assessed using the overall methodology described in Section 3.1. In addition, the analysis relied on NPS visitation data, input from park staff on potential effects to visitors under each alternative, and a comparison of current and proposed interpretive offerings, within the framework of the following regulations and policies:

- Management Policies (NPS 2006)
- NPS Organic Act of 1916, 16 USC 1
- Grand Portage National Monument Establishment, 72 Stat. 1751

The Organic Act identifies “enjoyment” as a primary purpose of national parks (16 USC 1), and *NPS Management Policies* call for interpretive programs that “connect people to their parks” and provide “opportunities for all visitors to form their own intellectual, emotional, and physical connections to the meanings and values found in the parks’ stories” (NPS 2006). NPS Management Policies further direct that “All practicable efforts will be made to make NPS facilities, programs, [and] services ... accessible and usable by all people, including those with disabilities” (NPS 2006). Any future planning for the project will necessitate further study of the needs and desires of the defined audiences and the project’s effects on them.

3.3.B Affected Environment – Visitor Experience

The project intends to have a positive effect on the visitor experience by opening up an underutilized part of the Park to extend its story beyond the fur trade era, revealing the continuity and resilience of the Ojibwe community in this place. Visitor access pertains to Tribal and other local community members, as well as tourists who come to the East Meadow, and these are the primary audiences targeted by the project. From 2005 to 2014, the Monument averaged over 82,000 visitors per year, primarily in the months of May through October. However, annual visitor counts have been declining over the past five years (NPS 2015). Most visitors have primary destinations other than the Park, and the average length of stay is one to one-and-a-half hours (NPS 2005).

Visitor activities at the Monument currently center on the reconstructed stockade and eighteenth century fur trade. Ojibwe culture is conveyed through the reconstructed Ojibwe Village adjacent to the stockade. An annual pow wow event takes place near the Reservation RTC offices during Rendezvous Days, and together the events attracted over 3,000 visitors during a three-day period in August 2014 (NPS 2015). With the exception of these two events, the East Meadow area is largely underutilized. Smaller numbers of visitors from the BWCAW

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disembark near the depot and choose to explore surrounding areas, such as the East Meadow, with limited information or direction. Although a pull-off and small, roadside dirt lot provide access to the perimeter of the meadow, there are no trails or vantage points offered for visitors. Boneyard Road is passable but its access is typically gated except during Rendezvous Days, when it is opened to provide roadside parking. The East Meadow is quiet and secluded, lacking clearly developed linkages to the stockade, Holy Rosary Church, or lakeshore.

3.3.C Environmental Consequences – Visitor Experience

3.3.C.i No-Action Alternative

Under the No-Action Alternative, management would continue in accordance with the GMP, which includes policies for maximizing accessibility under Universal Design Principles² and providing visitors with opportunities to enjoy the Monument while leaving its resources unimpaired for future generations (NPS 2003). However, the East Meadow would remain somewhat secluded from adjacent areas, and the hidden story of the centuries-long Ojibwe presence on this land would remain invisible. The No-Action Alternative would have no effect on the visitor experience, as visitor levels are likely to stabilize and remain steady, and interpretive offerings would remain largely the same.

3.3.C.ii Action Alternative 1: Subtle Interpretation and Use

Action Alternative 1 envisions the East Meadow remaining much as it is today, with only subtle accommodations for Tribal and other local community members, as well as tourists. Both action alternatives meet the project's purpose and need to better utilize the East Meadow area; however, Action Alternative 1 would only restore some uses and recreational opportunities, and its subtle approach means its story may not be obvious to some visitors. NPS staff anticipate Action Alternative 1 would draw more visitors from other areas of the Monument into the East Meadow area, rather than generate an overall increase in visitorship levels to the Monument. Potential access barriers and use conflicts could be avoided or minimized through management practices.

Action Alternative 1 would have a number of effects to the East Meadow area. These are detailed below according to time frame (long-term or short-term), and whether long-term effects would be direct or indirect.

Long-Term Direct Effects

Subtle interpretation would offer more educational content about the East Meadow than is currently available. A gazebo or covered shelter would offer space for gathering, resting, and enjoying views. Expanded campgrounds would accommodate more BWCAW visitors, and a vault toilet would be included with whatever primitive campsite element is proposed. These programs and facilities would support visitor use, but NPS staff anticipate they would likely

² Universal Design is an approach to designing products and environments to be usable by everyone, without adaptation or special design.

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generate only minor to negligible increases in visitation, and minor increases to recreation activities. Trails would provide access routes to and through the East Meadow. A wayside or small kiosk would help orient visitors. While trails are intended to reflect the rustic quality of the site, the design of these trails should adhere to NPS policies for Americans with Disabilities Act (ADA) compliance and Universal Design Principles to ensure maximum accessibility. Rendezvous Days visitors will likely be inconvenienced by removal of parking on the west edge of the meadow and event parking along Boneyard Road. Due to the volume of parking required for visitors during this event, the Park will need to plan for other parking options, likely including shuttle service from offsite, prior to removal of this parking. Long-term direct effects from Action Alternative 1 can be avoided or minimized if these management and planning practices are implemented.

Long-Term Indirect Effects

Long-term indirect effects to the visitor experience include that visitors from the BWCAW would be better accommodated than they are currently, by being offered information, directions, and camping options at the East Meadow and a vault toilet with the primitive campsite. For other visitors, the subtle engagement is less likely to have a strong impact on their memories of their visit. Lack of proximity and access to other accommodations (such as full restrooms and food and beverage facilities) may limit the number of visitors willing to access the East Meadow if they perceive the experience will be uncomfortable. However, long-term indirect effects from Action Alternative 1 would not result in adverse impacts to visitor experience.

Short-Term Effects

Short-term effects to visitor experience are anticipated to be minimal. Construction activities would limit visitor access to the East Meadow and should be staged away from primary access routes to avoid impacts. Construction activities should not be scheduled during traditional cultural events to avoid impacts to visitor access, use, and recreational opportunities. In addition, consultation with the Grand Portage Band would provide insight into how the Meadow is currently being used for cultural practices, and how the Band would like to utilize it if Action Alternative 1 is implemented. Short-term adverse effects from Action Alternative 1 to visitor experience could be avoided or minimized if these management practices are implemented.

Cumulative Impacts

Impacts to visitor experience could increase because of the activities in Table 3.1 combined with the implementation of Action Alternative 1. Improvements to visitor access and better utilization of the East Meadow through engaging interpretation and better accommodations would contribute to the beneficial effects of relocating maintenance facilities. Similarly, there could be synergies between increased interpretation opportunities associated with Action Alternative 1, “community trail” development, and overall development of the Grand Portage area. However, there could also be greater short-term construction impacts to access and

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accommodations if the implementation of Action Alternative 1 coincides with construction activity for the other anticipated projects.

Summary of Impacts

Under Action Alternative 1, visitor access and use within the East Meadow could experience a number of long- and short-term impacts. Many of these would be beneficial, but dirt pathways could entail access issues, and the distance from guest services at the Heritage Center and depot could affect comfort levels. Management practices and awareness during subsequent phases of planning could help to avoid or minimize these impacts. In addition, construction and staging activities would have a number of short-term impacts to access and accommodations. Overall, implementation of Action Alternative 1 would involve subtle changes to and unobtrusive use of the landscape. Action Alternative 1 is low-impact by its nature; however, careful event planning and construction scheduling and staging could avoid or minimize potential adverse impacts to visitor access and use and recreation during the height of the tourist season.

Mitigation

Long-term impacts to visitor experience under Action Alternative 1 can be avoided or minimized through management practices and do not rise to the level of adverse effects that would permanently alter, degrade, or destroy these resources. Therefore, no mitigation is necessary.

3.3.C.iii Action Alternative 2: Overt Interpretation and Use

Action Alternative 2 envisions similar improvements to the East Meadow as under Action Alternative 1 but with more apparent interpretation and active use that would strengthen visitor offerings and enjoyment. Both action alternatives meet the project's purpose and need to better utilize the East Meadow; however, Action Alternative 2 would dramatically transform the Meadow's landscape from what it is today by actively revealing the post-fur trade and pre-Monument era. In many ways, this would offer visitors and the community more interpretive and recreational opportunities, and as a result, it would likely have greater impacts to many of those same resources. However, as in Action Alternative 1, NPS staff also anticipate that Action Alternative 2 will draw more visitors from other areas of the Monument, rather than generate an overall increase to visitorship levels at the Monument.

Generally, effects to visitor experience from Action Alternative 2 are similar to the effects described under Action Alternative 1. It can be assumed that each category of resources will experience similar effects to those described under Action Alternative 1. Where additional types or greater intensities of effects may occur, they are described below.

Long-Term Direct Effects

Effects would include those discussed under Action Alternative 1, with the addition of circulation conflicts due to increased activity at the East Meadow Area. Traffic management, wayfinding signage, and alternative transportation options (such as shuttles) between the East Meadow and adjacent attractions could minimize these impacts. Visitors' use of the reconstructed buildings and more programming overall could potentially lead to programming conflicts. As in Action Alternative 1, Rendezvous Days parking will no longer be available on the west edge of the meadow and along Boneyard Road, so alternative plans will need to be developed during project planning. Land use planning and seasonal event scheduling would lessen the potential for conflicts in use during the seasonal height in August. As with Action Alternative 1, interpretation would meet the project's goal of telling the story of the site beyond the fur trade. This alternative envisions revealing that story through more visible approaches, meaning that more visitors would be likely to find the story and choose to engage with it, improving visitor experience.

Long-Term Indirect Effects

Indirect effects would be similar to those under Action Alternative 1 since proximity of the East Meadow to the Heritage Center and Depot is constant. However, increased interpretation could result in slightly greater indirect effects. Similarly, provision of multiple vault toilets and

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potentially additional guest services would help accommodate basic visitor needs onsite, and encourage visitors to access the site. By creating more reasons for visitors to engage with the story, this alternative increases enjoyment and is expected to generate long-term memories of the visit. Long-term indirect effects from Action Alternative 2 would not result in adverse impacts to scenic and aesthetic resources.

Short-Term Effects

Short-term effects would be similar to those under Action Alternative 1, but to a greater degree, due to more extensive construction that would increase potential limitations and/or conflicts to visitor access. Construction activities should not be scheduled during traditional cultural events, and staging should occur away from primary access routes to avoid potential impacts. Adverse effects from Action Alternative 2 to visitor experience could be avoided or minimized if these management practices are implemented.

Cumulative Impacts

Impacts to visitor experience could increase because of the activities in Table 3.1 combined with the implementation of Action Alternative 2, to an even greater extent than under Action Alternative 1. There could be even greater synergies between Alternative 2, “community trail” development, and overall area development. Negative effects to visitor access from circulation conflicts in combination with overall area development would be similar to those under Action Alternative 1 but greater, due to a cumulative traffic volume increase at or near the East Meadow area. Short-term construction impacts would also be greater to visitor access and accommodations if the implementation of Action Alternative 2 coincides with construction for activities assessed for cumulative impacts.

Summary of Impacts

Action Alternative 2 would offer a more robust interpretive program, and more active redevelopment would improve visitor experience in the East Meadow. Under Action Alternative 2, visitor access and use and recreation within the East Meadow could experience a number of long- and short-term effects that are similar to but greater than those under Action Alternative 1. Many of these effects would be beneficial. Additional effects to visitor access and use would result from circulation and programming conflicts, which could be avoided or minimized through management practices. Short-term effects from construction would be slightly increased over Action Alternative 1 due to more extensive construction.

Mitigation

Long-term impacts to visitor experience under Action Alternative 2 can be avoided or minimized through management practices and do not rise to the level of adverse effects that would permanently alter, degrade or destroy these resources; therefore, no mitigation is necessary.

3.3.D Conclusion – Visitor Experience

Under both action alternatives, the visitor experience could be impacted by programming conflicts and construction activities; however, these effects can be avoided or minimized through management practices. Visitor engagement is improved to a greater degree under Action Alternative 2 due to more and, and more in-depth, interpretive opportunities.

3.4 Scenic and Aesthetic Resources

3.4.A Methodology – Scenic and Aesthetic Resources

Effects to scenic and aesthetic resources were assessed according to both the magnitude of change in the visual resource (visual character and quality) and viewers' responses to and concern for those changes, within the framework of the following regulations and policies:

- Management Policies (NPS 2006)
- NPS Organic Act of 1916, 16 USC 1
- Grand Portage National Monument Establishment, 72 Stat. 1751

3.4.B Affected Environment – Scenic and Aesthetic Resources

The Organic Act identifies that a fundamental purpose of national parks is “to conserve the scenery” (16 USC 1). Park resources and values that are subject to the no-impairment standard include scenery, scenic features, natural daytime and nighttime visibility, and natural landscapes (NPS 2006). The Monument has a predominantly rural quality near the Grand Portage Site Complex and a backcountry quality outside of the complex. The CLR describes the Monument as having a “generally rustic aesthetic” (Bahr Vermeer Haecker 2009:4.43). The East Meadow is largely characterized by its vegetation, including the central open area and surrounding woody areas. Woody vegetation helps screen the former Boneyard maintenance area (Figure 3-2) but also blocks views of Holy Rosary Church to the north (Figure 3-6) and the lakeshore to the southeast (Figure 3-7).

3.4.C Environmental Consequences – Scenic and Aesthetic Resources

3.4.C.i No-Action Alternative

Under the No-Action Alternative, non-characteristic woody vegetation would continue to block lakeshore views and encroach further on meadow vegetation.

3.4.C.ii Action Alternative 1: Subtle Interpretation and Use

Under Action Alternative 1, subtle changes to vegetation would include clearing trees selectively along the shoreline to open strategic views and minimally throughout the meadow to evoke historical conditions. Clearing vegetation and opening up the landscape and lakeshore views will improve scenic and aesthetic resources by restoring more of the characteristic vegetation

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and views that were traditionally associated with the East Meadow. However, these views have been impeded for many decades, and some Tribal and other community members may disfavor altering the landscape. The Holy Rosary Church will be more visually prominent to the north. Clearing vegetation and opening up views will also enable visitors to see the East Meadow from the lakeshore, which will add to the overall scenic quality from this vantage point. There are no long-term direct or indirect adverse effects from Action Alternative 1 anticipated to scenic and aesthetic resources.

Construction and staging activities could distract from views across the Meadow and views to the Holy Rosary Church. However, the relatively small scale and temporary nature of construction and staging will have only minor effects on the scenic and aesthetic resources of the East Meadow. Signage at the construction site illustrating the design concept would also convey the intended beneficial outcomes from Action Alternative 1, and help to minimize the temporary, negative visual quality of the construction site. Adverse effects from Action Alternative 1 to scenic and aesthetic resources could be avoided or minimized if these management practices are implemented.

3.4.C.iii Action Alternative 2: Overt Interpretation and Use

Generally, effects to scenic and aesthetic resources from Action Alternative 2 are similar to the effects described under Action Alternative 1. However, restoring characteristic buildings and vegetation would have a greater effect, improving visitors' experience of the scenery from historical and interpretive perspectives but entailing more dramatic changes from the views that exist currently. Greater impacts could be perceived by Tribal and other community members who value the current landscape. Long-term direct and indirect effects from Action Alternative 2 are not anticipated to result in adverse impacts to scenic and aesthetic resources.

Short-term effects would be similar to those under Action Alternative 1, but of a greater degree, due to more extensive construction. However, due to the scale and timeframe, this activity would not rise to an overall adverse effect on the scenic and cultural resources of the East Meadow.

3.4.D Conclusion – Scenic and Aesthetic Resources

Cumulative Impacts

Impacts to scenic and aesthetic resources could increase because of the activities in Table 3.1 combined with implementation of the project. Improvements from the project would contribute to the benefits of relocating maintenance facilities under both action alternatives. Under Action Alternative 2, more active clearing of vegetation and addition of structures to the landscape could combine with overall development of the Grand Portage area to have greater overall impacts, although many of these would be beneficial. There could also be greater short-term construction impacts to scenic and aesthetic resources if project implementation coincides with construction activity for the other anticipated projects.

Mitigation

Long-term impacts to scenic and aesthetic resources can be avoided or minimized through management practices and do not rise to the level of adverse effects that would permanently alter, degrade, or destroy these resources. Therefore, no mitigation is necessary.

Summary of Impacts

Both action alternatives would have a number of long-term direct and indirect, and short-term, effects on scenic and aesthetic resources. The project could improve scenic and aesthetic resources through clearing vegetation that has encroached on historical views. However, these views have now been impeded for many decades, so continued Tribal and public engagement during project planning could help ascertain which views should be cleared. Overall, implementation of Action Alternative 1 would involve subtle changes to the landscape, while Action Alternative 2 could more dramatically improve the scenic and aesthetic resources of the East Meadow.

3.5 Soundscapes

3.5.A Methodology – Soundscapes

Soundscapes are an important natural resource found within parks that must be preserved to the greatest extent possible. Culturally appropriate sounds are also considered important elements of the national park experience in many parks. Acceptable levels of unnatural sound vary throughout a park, and among different parks, and are generally greater in developed areas (NPS 2006). “Noise” is generally defined as undesired sound, often unpleasant in quality, intensity, or repetition; it is also recognized as a subset of human-generated noise (NPS 2000). Effects on soundscapes were analyzed within the framework of the following regulations and policies:

- NPS Soundscape Management Policy 4.9 (NPS 2006)
- NPS Cultural Soundscape Management Policy 5.3.1.7 (NPS 2006)
- NPS Director’s Order 47: Soundscape Preservation and Noise Management (DO-47) (NPS 2000b)

In accordance with DO-47, effects to soundscapes were determined according to the type, magnitude, duration, and frequency of occurrence of noise that is compatible or incompatible with protecting the natural resources and the visitor experience for which the park was established and planned. The natural ambient sound level, absent of any human-produced noise, is the baseline condition for determining effects to soundscape resources (NPS 2000).

3.5.B Affected Environment

According to NPS Management Policies, “soundscape resources encompass all the natural sounds that occur in parks, including the physical capacity for transmitting those natural sounds

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and the interrelationships among the park's natural sounds of different frequencies and volumes" (NPS 2006). The East Meadow area is located in a rural environment that has a low level of utilization outside of annual Rendezvous Days and pow wow events, and ongoing maintenance activities. The area does see foot traffic from the community, archaeological and environmental investigations, and other low-noise uses; however, it is an area where natural sounds predominate. Higher noise levels occur infrequently but originate from culturally appropriate activities, such as Rendezvous Days and pow wow events, that are consistent with the purpose and visitor experience of the Monument.

3.5.C Environmental Consequences – Soundscapes

3.5.C.i No-Action Alternative

Under the No-Action Alternative, overall area development may affect the type, magnitude, duration, and frequency of human-generated noises that can be heard within the East Meadow. However, no other changes are anticipated at the Park that would significantly affect noise levels.

3.5.C.ii Action Alternative 1: Subtle Interpretation and Use

Since Action Alternative 1 would generate minor to negligible increases in visitation, and minor increases to recreation activities, human-generated and equipment noise would remain at low levels on an infrequent basis. Any long-term direct or indirect effects from Action Alternative 1 would not result in adverse impacts to soundscapes. Construction activities would be limited to those needed to construct the gazebo, interpretive signage, and minimal pathways. Since extensive, heavy construction is not required for implementation of Action Alternative 1, short-term effects from Action Alternative 1 would not result in adverse impacts to soundscapes.

3.5.C.iii Action Alternative 2: Overt Interpretation

Generally, effects to soundscapes from Action Alternative 2 are similar to but greater than the effects described from Action Alternative 1. Both action alternatives meet the project's purpose and need to better utilize the East Meadow. Action Alternative 2 envisions similar improvements to the East Meadow as under Action Alternative 1 but with more active interpretation and use that would introduce higher noise levels to the area. These higher overall noise levels could occasionally be quite intense, but typically only during culturally significant events. Activities envisioned under Action Alternative 2 would increase the level and frequency of human-generated and equipment noise, but not to a level that would entail unacceptable or adverse impacts to the Park's soundscapes.

3.5.D Conclusion – Soundscapes

Cumulative Impacts

Impacts to soundscapes could increase because of the activities in Table 3-1 combined with the implementation of the action alternatives. However, removal of maintenance facilities will decrease human-generated noises within the East Meadow. Noise generated by construction

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activities would be greater if the implementation of the project coincides with development of the “community trail” or with overall area development. Careful planning, scheduling, and staging could minimize or avoid the potential for adverse effects from overlapping construction.

Mitigation

Long-term impacts to soundscape resources do not rise to the level of adverse effects that would permanently alter, degrade, or destroy this resource; therefore, no mitigation is necessary.

Summary of Impacts

Both action alternatives would have impacts to the natural sounds present within the Monument. Long-term impacts from operations will be negligible, and along with any occasionally high noise levels from cultural events, will be consistent with the intent and purpose of the Monument. Short-term construction impacts can be avoided or minimized through careful planning, scheduling, and staging. None of the impacts would be adverse so do not require mitigation.

3.6 Wetlands and Floodplains

3.6.A Methodology – Wetlands and Floodplains

Wetlands and floodplains within and adjacent to the East Meadow area were identified and evaluated using existing GIS data, aerial imagery, and other available information. GIS layers consulted included the USFWS National Wetlands Inventory (NWI), USDA/NRCS soils mapping, and topography data. Aerial imagery consulted included both recent color aerial photos and color infrared images. The Federal Emergency Management Agency (FEMA) online Flood Map Service and FEMA GIS layers were used to identify any mapped floodplains in the area.

NWI was developed in the late-1970s, based primarily on interpretation of aerial photographs. Over the years, with ongoing changes to the landscape, the NWI dataset has been found to contain inaccuracies, and it often underestimates wetland coverage. In order to obtain a more accurate mapping of wetlands in the project area, a wetland delineation of the East Meadow area was conducted on June 18-22, 2015 by a qualified team composed of a soil scientist and a botanist.

The NPS policy for wetlands (Director's Order #77-1, NPS 2002) requires GRPO staff to evaluate park activities for potential adverse impacts to wetlands and to follow specific procedures for protecting and restoring wetlands (Procedural Manual #77-1, NPS 2012). Any area that is defined as a wetland according to the U.S. Fish and Wildlife Service definition in Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979) is subject to DO 77-1. In addition to complying with DO 77-1, park managers must comply with wetland regulations outlined in Sections 404 and 401 of the Clean Water Act (CWA). Section

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404 of the CWA is administered by the United States Army Corps of Engineers (USACE) and prohibits placement of fill into waters of the United States. The definition of waters of the United States generally includes navigable waters as well as wetlands and streams that are tributary to navigable waters. Section 401 of the CWA is administered by the United States Environmental Protection Agency (EPA); however, in Minnesota, EPA has delegated its Section 401 authority to the Minnesota Pollution Control Agency (MPCA). Section 401 of the CWA requires certification from the administering agency that activities resulting in discharges to waters of the United States will not result in adverse water quality impacts to those waters.

Wetlands present within the East Meadow area meet several defining criteria for waters of the United States, including being within 1,500 feet of the ordinary high water mark of Lake Superior and being a tributary to a navigable water used for interstate commerce (Lake Superior). The USACE should be contacted for a Jurisdictional Determination to verify that wetlands present on the site meet the definition of waters of the United States and therefore fall under the jurisdiction of the CWA. If the proposed project results in excavation or placement of fill into jurisdictional wetlands, the USACE and MPCA would be contacted to apply for a joint CWA Section 404/401 permit.

3.6.B Affected Environment – Wetlands and Floodplains

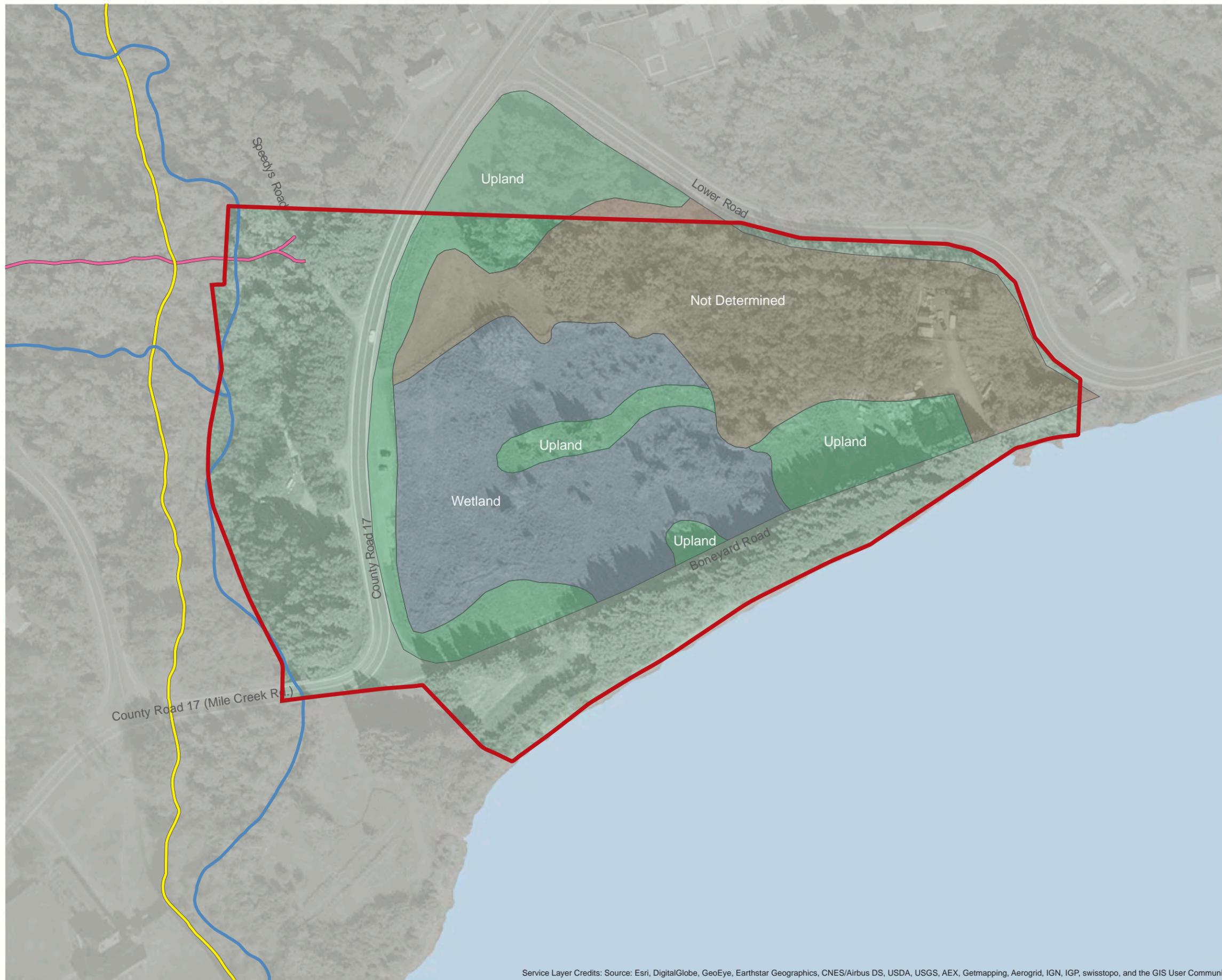
Wetlands

Examination of aerial imagery, ground photos, and soils mapping indicates that the East Meadow is a relatively flat area, sloping slightly to the southeast, with a mixture of upland and wetland communities. NWI mapping shows no wetlands within the project area. However, the June 2015 wetland delineation identified an approximately 4.2 acre wetland in the East Meadow area (Seney 2015, Figure 3-8).

The wetland mapped during the June 2015 delineation occupies most of the southwest quadrant of the East Meadow. The wetland has a somewhat rounded rectangular shape, with a narrow upland intrusion extending from the eastern wetland edge into the center of the wetland. There is also a small upland intrusion along the southern edge of the wetland. The June 2015 wetland delineation identified four separate areas of upland in the East Meadow, totaling 3.4 acres. The north edge of the wetland abuts a 4.7-acre area where the June 2015 wetland survey made no determination of the wetland status. However, the topography of this part of the East Meadow slopes to the southeast. Moreover, aerial and ground photography indicate that the northern half of the East Meadow project area is predominantly upland hardwood and coniferous tree species. For these reasons, it is most likely that the northern half of the East Meadow project area, identified as “Not Determined” on Figure 3-8, is upland forest and not wetland.

Wetlands are described under several classification systems. The main wetland classification systems used in Minnesota are the Cowardin system (Cowardin et al.1979), the USFWS Circular

East Meadow Area Cultural Landscape Rehabilitation and Development Project
Environmental Assessment
Grand Portage, Minnesota



Project boundary

Existing Elements

Grand Portage Trail

Post Office Trail

Grand Portage Creek

DRAFT

0 30 Meters
0 90 Feet

1:1,800



Wetland Map

Affected Environment and Environmental Consequences

39 system (USFWS 1971) and the Eggers and Reed (1997) system. The wetland identified and mapped in the East Meadow area is a palustrine emergent, saturated wetland according to the Cowardin system. This corresponds to Type 2, inland fresh meadow, under the USFWS Circular 39 classification system (USFWS 1971), and fresh (wet) meadow under the Eggers and Reed (1997) classification system. Dominant herbaceous species are native sedges and shrubs, and non-native grasses.

Floodplains

FEMA has not completed studies to determine flood hazards in the Grand Portage National Monument area. As a result, mapping of floodplains in the East Meadow area is not available. However, it is unlikely that the East Meadow area is within a 100-year or 500-year floodplain. Lake Superior has a long-term mean surface water elevation, recorded from 1860 to 2015, of approximately 601 feet above sea level, with very little fluctuation in average monthly water levels over that same period. The highest monthly water elevation that Lake Superior has reached dating to 1860 is 604 feet above sea level (NOAA 2015). This elevation is below the elevation of the East Meadow area (approximately 610 to 660 feet above sea level).

3.6.C Environmental Consequences – Wetlands and Floodplains

Wetlands

Proposed activities under both action alternatives would potentially result in the placement of fill into wetlands. Fill may be required for the construction of the interpretive trail proposed under both action alternatives. The actual acreage of wetland impacts will be determined when the wetland delineation report is completed, and when a trail design is available.

Direct impacts to wetlands would occur if the trail is constructed in the wetlands. Wetland impacts could be avoided by keeping the trail alignment entirely out of the delineated wetland area. If the trail alignment were to enter or cross wetlands, direct wetland impacts could be minimized by constructing the trail as an elevated boardwalk above the wetlands. This would greatly reduce the need to grade and/or place fill in the wetlands. With a boardwalk system, fill in wetlands would only occur at the posts that form the substructure of the boardwalk. Shade from a boardwalk system would likely cause changes in the vegetation beneath the boardwalk. However, the vegetation under the boardwalk would still be composed of wetland-dependent species, because the local soils and hydrology favoring wetland species would not be altered by a boardwalk.

Additional impacts to wetlands under both action alternatives include the following:

- Shifts in vegetation community species composition would be expected due to the proposed controlled burn program. Regular controlled burns would likely reduce the relative cover of shrub-dominated wetlands, and would promote the spread of emergent wetland vegetation.

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- Upgrading culverts under Boneyard Road, if required, would potentially alter the existing hydrologic regime of the wetlands. However, this impact could be minimized by retaining the current elevations of the existing culverts.
- Encouraging increased visitor access to and through the wetlands would potentially increase the likelihood of introducing non-native invasive species and/or trash into the wetlands. However, this is a minor impact with low potential to seriously degrade the wetlands. Moreover, the controlled burn program would ostensibly control non-native species.
- Increased visitor access would have a minor effect on wildlife utilization of the wetlands, particularly amphibians, birds, and small mammals. Wildlife would be less likely to utilize wetland habitats during periods of higher visitor access. This effect would vary by species.

Impacts to wetlands during construction of the trail could be further avoided or minimized by implementing appropriate best design, construction, and operational management practices (BMPs). The goal of implementing these BMPs is to maximize ecosystem services and minimize impacts to natural resources.

Project design BMPs could be implemented by the Park staff to be consistent with this goal. These BMPs would function as general guidelines for Park staff in the design of the trail system and other amenities in the project area. The BMPs would be implemented as feasible, in a manner that would accommodate the need for providing visitor service and interpretive opportunities.

Recommended project design BMPs include the following:

- Maximizing the contiguous extent of undisturbed "old field" vegetation subject to ethnobotanically significant practices such as burning and harvesting. Utilizing or otherwise expanding upon extant vegetation edges when siting trails and designing other development.
- Limiting development and impervious surface construction to minimally achieve visitor service and community connectivity necessary to serve interpretive goals.
- Excluding trail construction from wetlands where possible.
- Siting the trail and other development in such a way as to not artificially segment culturally significant plant species that have a characteristically clumped distribution, such as sweetgrass.
- Designing trails to the minimum extent practicable to provide visitor service and community connectivity. Constructing a loop trail only if necessary, as other shapes may provide equal service with less footprint.
- Minimizing development of undisturbed areas, and taking advantage of those areas already cleared (woodland around the maintenance shop), developed (maintenance

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shop footprint), disturbed (current parking lot/Boneyard Road) or otherwise devoid of "old field" vegetation (mown grass) for construction of non-specific cultural landscape elements such as vault toilets, campsites, parking lots, and trails.

Impacts to wetlands during construction of the trail could be further avoided or minimized by implementing the following construction BMPs:

- Minimizing construction vehicle disturbance, including by use of low-impact equipment, e.g, low ground pressure equipment, tracked equipment (as opposed to tires), and smaller-scale equipment such as mini-excavators or tracked skid vehicles.
- Designating areas for equipment parking, supply stockpiles, and spoil storage away from wetlands and other sensitive areas.
- Implementing measures to prevent the introduction and spread of non-native invasives (routine equipment inspection and washing as needed).
- Installation of erosion and sediment control measures (silt fence, coir logs, straw bales, etc.) at appropriate locations during construction to capture sediment-laden runoff from graded upland areas into wetlands and streams.
- Revegetation with native seeds, ideally with seed collected from the East Meadow area.
- Using weed-free mulches, topsoils and seed mixes if these are needed.

Impacts to wetlands during operation of the trail system could be minimized by implementing the following suggested management practices:

- Control of invasive species by implementing good weed and invasive species monitoring and management, including targeted herbicide treatments and periodic prescribed burns.
- Signage and other educational components that would discourage negative visitor impacts such as littering, leaving the trail to enter the wetlands, and collecting of plants.
- Limited visitor access to the wetlands by prohibiting entrance into the wetland by any means other than the trail.
- Preventing offsite impacts to wetland hydrology, e.g., additions or alterations to parking areas that result in extra runoff to the wetland or cut off overland flow to the wetland.

Floodplains

Neither action alternative would have an impact on floodplains in the East Meadow area, as there are no floodplains.

3.6.C.i No-Action Alternative

Under the current conditions, wetlands may be experiencing occasional minor impacts as a result of community foot traffic through the East Meadow for various activities, including gathering sweetgrass and other culturally important plants, as well as general exploration of the

natural features of the East Meadow. Under the No-Action Alternative, the frequency and magnitude of these existing impacts would continue, and additional impacts are unlikely.

3.6.C.ii Action Alternative 1 – Subtle Interpretation and Use

Action Alternative 1 would have the general impacts common to both action alternatives, but at a lower degree of impact. Wetland impacts resulting from the waysides or gazebo would more likely be sited outside of wetland boundaries. The interpretive trail would be narrower and less developed and would therefore require less fill than in Action Alternative 2. The emphasis on light-on-the-land access and use would result in lower-magnitude wetland impacts relative to Action Alternative 2.

3.6.C.iii Action Alternative 2 – Overt Interpretation and Use

Action Alternative 2 would result in most of the general impacts common to both action alternatives, but at a higher magnitude. The potential amount of fill placed in wetlands would be higher, due to the wider trails proposed. The construction of additional structures would potentially result in increased wetland impacts, unless the structures were located in upland areas. This alternative would also accommodate larger numbers of visitors at one time, which would have a more pronounced effect on wildlife utilization of the wetlands.

3.6.D Conclusion – Wetlands and Floodplains

Cumulative Impacts

Wetland impacts resulting from the cumulative actions of the projects in Table 3-1 and those of the action alternatives are estimated to be minimal, and they would not result in a significant loss of wetland area spatially in the region or temporally through the construction and operation of the projects.

Mitigation

Wetland impacts would be avoided or minimized to the extent practicable. The dirt trails, waysides, and gazebo envisioned under Action Alternative 1 and trails, waysides, kiosks and other interpretive structures under Action Alternative 2 would be designed and sited in a manner that avoids wetlands entirely, or minimizes wetland impacts by constructing a boardwalk where the trail enters wetlands. Mitigation for fill activities would be negotiated with the USACE during permitting for the project. Potential mitigation could include enhancement of the existing wetlands, or purchase of wetland mitigation bank credits to offset wetland losses.

Summary of Impacts

Impacts to wetlands will be calculated when a trail alignment is determined. However, they are expected to be minimal. For example, if 1,000 feet of ground-level trail were constructed in the wetlands, that would result in a 0.23-acre total wetland impact. Moreover, as noted above, wetland impacts could be avoided by keeping the trail alignment out of the wetlands, or minimized by constructing an elevated boardwalk in wetland areas. Cumulative impacts to wetlands from the projects listed in Table 3-1 are also expected to be minimal and/or avoidable.

3.7 Endangered and Threatened Species

3.7.A Methodology – Endangered and Threatened Species

The potential for sensitive species within the East Meadow, including those with federal or state protected designations, was evaluated using GIS data and previous natural resource survey reports. USFWS and MNDNR GIS data for the East Meadow area provided the documented presence of federally- or state-listed species. USFWS GIS data provided documentation of known occurrences of designated critical habitat for federally-endangered species.

Plant survey data from a March 2011 report on vegetation in the project area (Zedler and Doherty 2011) was also reviewed for recent documented occurrences of federal and state endangered or threatened species, as was a 2002 report on moth species within the park (MacLean 2002) and a 2008 survey of bat species at the Monument (Kruger and Peterson 2008). There is limited existing additional information specific to the presence of sensitive species within the East Meadow area. A botanical survey of a representative portion of the East Meadow was conducted in June 2015. In addition, based on the MNDNR Natural Heritage Information System (NHIS) database records, rare plant species surveys have been conducted in the East Meadow and the immediate vicinity dating back to at least 1929.

Species considered to be endangered or threatened at a national level are protected under the Endangered Species Act (ESA) of 1973 (16 USC 1531). The USFWS administers the ESA and maintains the lists of federally endangered and threatened species, and candidate species. The ESA prohibits the “take” of federally endangered and threatened species, defined as actions that “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” If a project has the potential to take a federally listed species, the USFWS is consulted to determine the effect on the species and to identify potential mitigation measures.

Under the ESA, USFWS also designates critical habitat for listed species, when sufficient information is available to do so. If a project occurs within the designated critical habitat of a federally-listed species, USFWS is consulted to determine whether the activity would result in an “adverse modification” of designated critical habitat. Additional federal laws that protect sensitive species include the *Bald and Golden Eagle Protection Act of 1940* (16 USC 668) and the *Migratory Bird Treaty Act of 1918* (16 USC 703-712).

At the state level, the *Minnesota Protection of Threatened and Endangered Species Statute* (MN Statute 84.0895) prohibits the take of species listed by the MNDNR as endangered or threatened in Minnesota. Special concern species are not protected under the statute. The MNDNR endangered and threatened species list is found under Minnesota Administrative Rules, Chapter 6134, and state regulations regarding the permitted take of state-listed species are found at Minnesota Administrative Rules 6212.1800 through 6212.2300.

3.7.B Affected Environment – Endangered and Threatened Species

Animal Species

There are three federally-listed species documented in Cook County. These species and their federal and state protection statuses are listed below:

- Canada lynx (*Lynx canadensis*), federally threatened, no MN status.
- Gray Wolf (*Canis lupus*), federally threatened, MN Special Concern.
- Northern long-eared bat (*Myotis septentrionalis*), federally threatened, MN Special Concern.

The MNDNR NHIS database contains the documented occurrences of listed species throughout Minnesota. The NHIS database has no records for Canada lynx, gray wolf, or northern long-eared bat within at least two miles of the East Meadow area. However, a 2008 survey for bat species at the Monument captured 29 northern long-eared bats in three locations within the park (Kruger and Peterson 2008). None of these captures occurred in the East Meadow.

In addition, the USFWS has designated critical habitat for Canada lynx and gray wolf. The East Meadow area is outside of the designated critical habitat for Canada lynx. However, the East Meadow is within the Zone 1 designated critical habitat for the gray wolf (USFWS 2015). The USFWS has not designated critical habitat for the northern long-eared bat. However, it is a night-foraging species that prefers hunting along forested ridges. Preferred roost trees are a minimum of three inches diameter, with loose, flaky bark and/or cracks, holes, or crevices in the trunk. Winter hibernation habitat is typically caves or old mines. Overall, the East Meadow provides only marginal foraging and roosting habitat, and no winter habitat, for northern long-eared bat.

With regard to other sensitive taxa potentially present in the East Meadow, there is limited information. A 2002 moth inventory identified 82 species of moths from 10 different families (MacLean 2002). However, none of these species is listed at the federal or state level.

Plant Species

At the state level, there are documented occurrences of three species, all vascular plants, within the proposed project boundary. These include the following:

- Wild chives (*Allium schoenoprasum*), MN endangered.
- Auricled twayblade (*Neottia* [Syn: *Listera*] *auriculata*), MN endangered.
- Rock whitlow-grass (*Draba arabicans*), MN Special Concern.

The NHIS records indicate that wild chives and rock whitlow-grass are in the East Meadow itself, with the auricled twayblade to the southeast. The wild chives and rock whitlow-grass NHIS records are from 1998, and the auricled twayblade record is from 2005. The 2015

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botanical survey identified 127 plant species from 32 families. The most-represented plant families were the aster family (Asteraceae, 27 species present), rose family (Rosaceae, 17 species present), and the sedge family (Cyperaceae, 13 species present). The survey did not identify the two endangered and one special concern species previously found on the site; however, it did not cover the entire East Meadow or the line of trees to the southeast.

There are at least four other state-listed species documented within one mile of the Meadow:

- A species of lichen (*Punctelia stictica*), MN endangered.
- Rocky Mountain woodsia (*Woodsia scopulina* ssp. *laurentiana*), MN threatened.
- Satiny willow (*Salix pellita*), MN threatened.
- Black Hawthorn (*Crataegus douglasii*), MN Special Concern.

Habitat for the lichen species and the Rocky Mountain woodsia is not present in the East Meadow. The wooded margins of the East Meadow may provide habitat for black hawthorn.

3.7.C Environmental Consequences – Endangered and Threatened Species

Proposed activities under both action alternatives would have little effect on any of the three federally-listed species known to occur in Cook County. Project impacts to gray wolf-designated critical habitat would be minimal and would not be regarded by USFWS as an “adverse modification” of the designated critical habitat.

Proposed activities under both action alternatives would have minor to moderate effects on state-listed species. These effects would include:

- Loss of individuals or populations of state-listed species as a result of the proposed controlled burn program. Controlled burns currently occur occasionally on the site, but are implemented less frequently than the program proposed under the proposed action. As a result, the magnitude of impacts, both beneficial and detrimental, on state-listed species may increase. Rock whitlow-grass would likely be unaffected by controlled burns, and may increase under this management regime. Wild chives may survive controlled burns. Auricled twayblade would likely not survive controlled burns.
- The controlled burn management may result in a shift in vegetation community species composition. Changes in vegetation community species composition could be a positive effect, however, because the controlled burn program would encourage native plant growth and decrease cover, hence competition from non-native species.
- Encouraging increased visitor access to and through the East Meadow would potentially increase the likelihood of introducing non-native invasive species and/or trash into native plant communities and sensitive species habitats. However, this is a relatively minor impact that would be offset by the benefits of a controlled burn program.

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Impacts to sensitive plant species during construction of the project and in the course of future operations could be further minimized by implementing some of the suggested best management practices outlined for wetlands in Section 3.5.C. As with wetlands, control of invasive species via implementation of sound weed and invasive species monitoring and management will be important to maintaining viable populations of and habitat for ecologically-sensitive and culturally important plant species. Signage and educational components will also help visitors understand their potential impacts on vegetation in the East Meadow.

3.7.C.i No-Action Alternative

Under the No-Action Alternative, there would be no impact to endangered or threatened species present within the East Meadow area.

3.7.C.ii Action Alternative 1 – Subtle Interpretation and Use

Similar to the assessment of impacts to wetlands, the potential impacts to endangered and threatened species are essentially the same between the two action alternatives, with the principal difference being the magnitude of the impacts. Under Action Alternative 1, the more subtle, “light-on-the-land” approach would result in minor occurrences of the general impacts described above.

3.7.C.iii Action Alternative 2 – Overt Interpretation and Use

Action Alternative 2 would result in impacts similar to those in Action Alternative 1, but these impacts may be more widespread and of greater magnitude. Trails may be wider under Action Alternative 2 with more surface requiring more intensive construction. This may increase the potential for incidental take of a state-listed species and/or loss of habitat for that species. In addition, the proposed additional structures that are part of this alternative would increase the potential for loss of state-listed species or their habitat.

3.7.D Conclusion – Endangered and Threatened Species

Cumulative Impacts

Endangered and threatened species impacts resulting from the cumulative actions of the Table 3-1 projects and the action alternatives are estimated to be minimal and/or avoidable, and would not result in a significant loss of federal- or state-listed species or their habitats, either spatially in the region or temporally through the construction and operation of the projects.

Mitigation

The 2015 botanical survey did not identify any additional state-listed plant species beyond those known from the MNDNR NHIS database. Impacts to endangered and threatened species would be avoided or minimized to the extent practicable.

Summary of Impacts

Impacts to endangered and threatened species are expected to be minimal. The existing botanical data, including the NHIS data and the 2015 botanical survey report, will be used to evaluate options for avoiding or minimizing impacts to endangered and threatened species.

Cumulative impacts to endangered and threatened species from the projects listed in Table 3-1 are also expected to be minimal and/or avoidable.

3.8 Water Quality

3.8.A Methodology – Water Quality

The Clean Water Act (CWA) establishes the structure for developing water quality standards for surface waters (33 USC 1344 and 1311 et seq). Under the CWA, the EPA has established water quality standards for contaminants in surface waters. Under the CWA, the EPA regulates discharge of pollutants from point and non-point sources into surface waters unless a National Pollutant Discharge Elimination System (NPDES) permit is obtained (33 USC 1342). In Minnesota, an NPDES permit must be obtained for stormwater discharge from construction activities that disrupt more than one acre.

Under Section 303(d) of the CWA, states are required to monitor and assess their waters to determine if they meet water quality standards and, thereby, support the beneficial uses they are intended to provide (33 USC 1313(d)). Waters that do not meet their designated uses because of water quality standard violations are classified as impaired. In Minnesota, the MPCA monitors and assesses Minnesota waters to determine if they meet water quality standards for designated uses and lists as impaired those waters that do not meet their designated uses due to water quality standard exceedances.

Groundwater resources are afforded federal and state protections. The Federal Safe Drinking Water Act requires states to develop programs to protect public water supplies from contamination (2 USC 300(f) et seq). The State of Minnesota regulates drinking water in Minnesota Rules, chapter 7050. The MDH implements safe drinking water standards for the state through its Wellhead Protection Program (Minnesota Administrative Rules, Chapter 4720).

Surface water resources within and adjacent to the East Meadow area were identified and evaluated using existing GIS data, aerial imagery, and other available information. GIS layers consulted included the MNDNR Public Water Inventory, watershed and trout stream layers, as well as topography data.

3.8.B Affected Environment – Water Quality

Surface water resources within the East Meadow include the wetlands present there, as well as the Grand Portage Creek. Wetlands are discussed above. There are no defined streams, i.e., channels with defined bed and bank, within the meadow itself. The Grand Portage Creek flows toward Lake Superior approximately 250 feet west of the East Meadow, on the opposite side of CR 17. The west edge of the project boundary runs along an approximately 800-foot reach of the

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Grand Portage Creek, including two short reaches (approximately 175 feet and approximately 115 feet) that are fully within the boundary. However, despite its proximity to the East Meadow, the Grand Portage Creek is on the opposite side of a minor watershed divide and does not receive runoff from the East Meadow. Surface runoff from the East Meadow flows generally overland to the southeast directly toward Lake Superior.

3.8.C Environmental Consequences – Water Quality

3.8.C.i No-Action

Under the No-Action Alternative, there would be no impact to surface waters or water quality within the East Meadow area.

3.8.C.ii Action Alternatives

The difference in impact type and magnitude between the two action alternatives would be negligible. Neither Action Alternative would result in appreciable impacts to surface water resources (other than wetlands) and water quality on the site. The East Meadow is situated extremely low in the watershed; therefore, impacts from trail construction or installation of other amenities would have a negligible downslope effect. Downgrading of Boneyard Road would not have an appreciable effect on surface runoff to or within the East Meadow.

3.8.D Conclusion – Water Quality

Cumulative Impacts

Impacts to surface water resources and water quality resulting from the cumulative actions of the Table 3.1 projects and the action alternatives are estimated to be minimal, and would not result in a loss of surface water resources or impairment of water quality, either spatially in the region or temporally through the construction and operation of the project.

Mitigation

Since neither alternative would result in appreciable impacts to water quality in the East Meadow, no mitigation is necessary. Best management practices, such as erosion control tools and practices, would be implemented for any project activities immediately adjacent to the Grand Portage Creek with the potential for runoff over exposed soil into the creek.

Summary of Impacts

Impacts to surface water resources and water quality resulting from the action alternatives are anticipated to be negligible. Impacts to surface water resources and water quality from the projects listed in Table 3.1 are also expected to be minimal and/or avoidable.

Chapter 4. Comparison of Alternatives

This chapter compares the environmental impacts of the No-Action and two action alternatives to inform the identification of the environmentally- and agency- preferred alternatives under NEPA. The comparisons presented in this chapter summarize the analysis presented in Chapter 3, focusing on information that distinguishes the alternatives from one another rather than presenting additional lengthy analysis.

4.1. Ability of the Alternatives to Meet the Project's Purpose and Need

The purpose and need for the project are described in detail in Chapter 1. In summary, the Park has identified a need to rehabilitate the East Meadow. It is currently an underutilized area with changing infrastructure needs, and the untold story of post-fur trade era Ojibwe history is not currently interpreted anywhere in the Park. By rehabilitating the East Meadow, the Park intends to improve use of the area, adapt to the changing infrastructure needs, and accomplish interpretive goals related to broader Ojibwe history.

The No-Action Alternative represents existing conditions and activities in the East Meadow, projected into the future. Therefore, it would not fulfill the project's purpose, because the full potential of the East Meadow would not be met. Action Alternative 1 would more implicitly tell the story of the Meadow's transition from a village center to a passive component of the landscape. Its improvement would be incremental, and some historic and cultural resources would likely not be interpreted or restored. Action Alternative 2 envisions similar improvements to the East Meadow as under Action Alternative 1, but with more apparent interpretation and active use. The atmosphere in the Meadow would harken back to its past as a village center hosting residential, commercial, recreational, and cultural uses. Both action alternatives meet the project's purpose and need; however, Action Alternative 2 would more noticeably transition the Meadow's landscape from what it is today. In many ways, this would offer visitors and the community more information about and exposure to the East Meadow's historic and cultural resources, but as a result, it would likely have greater impacts to many of those same resources.

4.2. Comparison of Alternatives

Overall, both action alternatives will quite dramatically transform the East Meadow from its current state of underutilization. In some cases, there is little to differentiate the No-Action and action alternatives in terms of their effects to a particular resource type. For some resources, however, there are key differential effects that sharply distinguish the trade-offs among alternatives. Table 4-1 summarizes each alternative's long-term direct, long-term indirect, and short-term effects to each resource type.

Table 4-1: Summary of the Project’s Effects by Alternative

Impact Topic	No-Action Alternative	Alternative 1	Alternative 2
3.2 Historic and Cultural Resources	<ul style="list-style-type: none"> No short- or long-term direct or indirect impacts. 	<ul style="list-style-type: none"> Archaeological Sites – Adverse impacts that cannot be avoided or minimized will require mitigation. Buildings and Structures; Other Cultural Landscape Features – Potential adverse impacts avoided or minimized through management practices. Cumulative impacts – Beneficial impacts to a number of resources; short-term adverse impacts avoided or minimized through planning. 	<ul style="list-style-type: none"> Archaeological Sites – Adverse impacts that cannot be avoided or minimized will require mitigation. Buildings and Structures; Other Cultural Landscape Features – Potential adverse impacts similar to, but greater than, Alternative 1 avoided or minimized through management practices. Cumulative impacts – Beneficial impacts to a number of resources similar to, but greater than, Alternative 1; short-term adverse impacts avoided or minimized through planning. Increased adverse impacts to archaeological resources.
	NO IMPACTS	POTENTIAL ADVERSE IMPACTS TO ARCHAEOLOGICAL SITES	ADVERSE IMPACTS, GREATER THAN UNDER ALTERNATIVE 1

Comparison of Alternatives

Impact Topic	No-Action Alternative	Alternative 1	Alternative 2
3.3 Visitor Experience	<ul style="list-style-type: none"> No short- or long-term direct or indirect impacts. 	<ul style="list-style-type: none"> Potential adverse impacts will be minimized or avoided through management practices. Cumulative impacts – Beneficial impacts to a number of resources; short-term adverse impacts could be avoided or minimized through careful planning. 	<ul style="list-style-type: none"> Potential adverse impacts similar to, but greater than, Alternative 1 will be minimized or avoided through management practices. Cumulative impacts – Beneficial impacts to a number of resources similar to, but greater than, Alternative 1; short-term adverse impacts avoided or minimized through planning.
	NO IMPACTS	NO ADVERSE IMPACTS	NO ADVERSE IMPACTS
3.4 Scenic and Aesthetic Resources	<ul style="list-style-type: none"> No short- or long-term direct or indirect impacts. 	<ul style="list-style-type: none"> Potential adverse impacts will be minimized or avoided through management practices. Cumulative impacts – Beneficial impacts includes improvement coinciding with removal of maintenance facilities. 	<ul style="list-style-type: none"> Potential adverse impacts, similar to but in some respects greater than and in some less than in Alternative 1, will be minimized or avoided through management practices. Cumulative impacts – Beneficial impacts includes improvement coinciding with removal of maintenance facilities.
	NO IMPACTS	NO ADVERSE IMPACTS	NO ADVERSE IMPACTS

Comparison of Alternatives

Impact Topic	No-Action Alternative	Alternative 1	Alternative 2
3.5 Soundscapes	<ul style="list-style-type: none"> No short- or long-term direct or indirect impacts. 	<ul style="list-style-type: none"> Potential adverse impacts will be minimized or avoided through management practices. Cumulative impacts – Beneficial impacts includes a reduction in human-generated noise. 	<ul style="list-style-type: none"> Potential adverse impacts similar to, but greater than, Alternative 1 will be minimized or avoided through management practices. Cumulative impacts - Beneficial impacts similar to Alternative 1; adverse impacts avoided or minimized through planning.
	NO IMPACTS	NO ADVERSE IMPACTS	NO ADVERSE IMPACTS
3.6 Wetlands and Floodplains	<ul style="list-style-type: none"> No short- or long-term direct or indirect impacts. 	<ul style="list-style-type: none"> Potential adverse impacts will be minimized or avoided through management practices. 	<ul style="list-style-type: none"> Potential adverse impacts similar to, but greater than, Alternative 1 will be minimized or avoided through management practices.
	NO IMPACTS	NO ADVERSE IMPACTS	NO ADVERSE IMPACTS
3.7 Endangered Species and Threats	<ul style="list-style-type: none"> No short- or long-term direct or indirect impacts. 	<ul style="list-style-type: none"> Potential adverse impacts will be minimized or avoided through management practices. 	<ul style="list-style-type: none"> Potential adverse impacts similar to, but greater than, Alternative 1 will be minimized or avoided through management practices.
	NO IMPACTS	NO ADVERSE IMPACTS	NO ADVERSE IMPACTS
3.8 Water Quality	<ul style="list-style-type: none"> No short- or long-term direct or indirect impacts. 	<ul style="list-style-type: none"> Potential adverse impacts will be minimized or avoided through management practices. 	<ul style="list-style-type: none"> Potential adverse impacts similar to, but greater than, Alternative 1 will be minimized or avoided through management practices.
	NO IMPACTS	NO ADVERSE IMPACTS	NO ADVERSE IMPACTS

4.3. Environmentally Preferable Alternative

The environmentally preferable alternative will best promote the nation’s environmental policy under NEPA. It should cause the least damage to the biological and physical environment while also best protecting, preserving, and enhancing historic, cultural, and natural resources (CEQ 1981). Selection of the environmentally preferable alternative often involves balancing impacts to various resources, and agencies are encouraged to incorporate the views of the public and other agencies when making these judgments.

Overall, while Action Alternative 2 would have some beneficial effects that surpass those under Action Alternative 1, it would also involve perceptively greater long-term direct and indirect, and short-term impacts to historic, cultural, and natural resources (summarized in Table 4.1). Therefore, Action Alternative 1 has been selected as the environmentally preferable alternative.

4.4. Agency’s Preferred Alternative

The agency’s preferred alternative is that “which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors” (CEQ 1981). It may or may not be the same as the environmentally preferred alternative, but it must be identified so that the public and other agencies are informed about the lead agency’s preferences.

Prior to Tribal and other public scoping efforts, the Park anticipated that taking a “lighter touch” would allow for rehabilitation and development of the East Meadow area that would highlight but not co-opt the story of its thriving Ojibwe village following the fur trade and up to establishment of the Park and introduction of Highway 61 in the early 1960s. During scoping, however, Band members expressed a desire that the story of their people be interpreted more actively and overtly, and many encouraged the Park to embrace the opportunity to tell even the more challenging stories of loss and exploitation. Based on this feedback, it became apparent that Action Alternative 2 – incorporating physical reconstructions, pronounced wayfinding and signage, and more guest services – would allow for a more complete and nuanced telling of the history of the Grand Portage Ojibwe, their resiliency and self-sufficiency, and their enduring cultural heritage. Therefore, the Park has selected Action Alternative 2 as its preferred alternative.

Chapter 5. Consultation and Coordination

This section provides an overview of consultation and coordination efforts undertaken during development of the East Meadow EA, including with the Grand Portage Band and RTC, other agencies and organizations, and the public. NEPA requires that agencies make a “diligent” effort to involve the interested and affected public on a proposal for which an EA is prepared (40 CFR 1506.6 (a)). Under NPS policy, this includes public scoping, public review of EAs, responses to comments, and other relevant actions (NPS 2011).

5.1. Internal and Tribal/Public Scoping

Development of this EA began with project scoping efforts to gather input from Park staff, the Grand Portage Band, and other members of the public, for the purposes of identifying issues and concerns and evaluating project alternatives. The Park hosted a series of internal and public meetings, conducted ongoing consultation and coordination with the RTC and Band members, and made themselves available throughout development of this EA for comments at any time.

5.1.1. Internal Scoping

On March 23, 2015, members of the project team including the Park Superintendent, the Chiefs of Resources Management and Interpretation, and the Biological Science Technician held a meeting at the Heritage Center, supported by two members of the consultant team. During this meeting, the team drafted purpose and need statements and identified issues concerning the project’s impacts to natural, cultural, social, and economic resources that must be addressed in the course of accomplishing the Park’s objectives. In addition, to clarify alternatives for camping and parking options in the East Meadow, Park staff held an internal meeting on the topic on May 29, 2015. As needed, the project team continued to meet during development of this EA as issues arose.

The project team considered a full range of alternatives that would meet the purpose and need while protecting or minimizing impacts to Monument resources. The preliminary range of alternatives identified encompassed a No-Action Alternative; restoration as a naturalized area; rehabilitation as a subtle interpretive area; and full-scale development including interpretation and visitor services, with amenities mirroring those available at the Depot site. This preliminary range of alternatives was then narrowed to a final selection of only the reasonable alternatives – a No-Action Alternative and two action alternatives – discussed in further detail in Chapter 2.

5.1.2. Tribal and Public Scoping

Public scoping is encouraged where an interested or affected public exists, but agencies are only required to involve appropriate federal, state, and local agencies and any affected Indian Tribe (NPS 2011). Because the Monument is cooperatively managed by the Band and NPS, the Park

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engages in ongoing consultation with the Band on all management decisions. In particular, Park staff elicited input from Band members on options for rehabilitating the East Meadow because of its significant history as an Ojibwe village and continuing cultural significance.

To engage the Tribal and broader community in decision-making, a public scoping meeting was held on April 27, 2015 at the Heritage Center, followed by a 30-day public comment period. The meeting was announced in the Cook County News Herald, WTIP radio, the Boreal.org community website, the community center bulletin board, and by word of mouth through Park staff. Posters and handouts were developed to provide an overview of the process and present the preliminary alternatives. Ten members of the public attended the meeting and engaged in a productive group conversation about ideas and concerns related to rehabilitation of the East Meadow. The Park Superintendent led the conversation, with expertise offered by the Chiefs of Resources Management and Interpretation, the Museum Technician, and the Chief Ranger, and facilitation support by the two-member consultant team. A full description of the methods used to advertise the meeting, materials developed, and comments from participants are included in Appendix A: Public Comment Analysis.

Following the public scoping meeting, the Park released notification of a public comment period closing June 1, 2015, during which time two additional written comments were received.



Figure 5-1: April 27, 2015 public meeting at the National Monument Heritage Center

Overall, over a dozen Grand Portage Band members, other community members, seasonal interpreters, Park staff, and others contributed substantive comments during the public scoping phase of the East Meadow EA. Recommendations were shared for what physical changes to

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make to the landscape, as well as appropriate topics and methods for interpretation. In addition, meeting participants asked about past and ongoing archaeology in and around the project area. Park staff responded to questions and comments during the public meeting as well as responded to emailed comments. All comments received during and after the meeting were sorted into three topical categories: physical changes, hopes for interpretation, and archaeology, plus a fourth general comment category. All comments are analyzed in the Public Comment Analysis.

5.2. Outreach on the Draft EA

Note: This section will be updated in the Final EA.

An EA must be posted for a minimum of 30 days for review by the interested and affected public, agencies, and tribes (NPS 2001). A draft of this EA was posted for public comment 14 days in advance of a November 2, 2015 public review meeting. At this meeting, the Park will present the draft EA and its preliminary conclusions for discussion and public comment. Tribal and other community members will have an opportunity to ask questions of Park and consultant staff, discuss preliminary results presented in the draft EA, and offer formal comments. A public comment period will extend for 30 days after release of the draft EA, closing on November 18, 2015.

5.3. Tribal Consultation and Agency Coordination

The founding legislation of the Grand Portage National Monument (72 Stat. 1751) recognizes certain rights and privileges of the Band and the Minnesota Chippewa Tribe (MCT), which together donated approximately half of the land that makes up the present-day Monument. These rights and privileges include preferential Tribal employment and privileges to provide visitor accommodations and services, as well as the right to traverse the Monument land.

In 1999, the Park entered into an agreement with the Band under the *Tribal Self Governance Act of 1994* (25 USC 458aa-hh), which authorized tribes to receive funding to take charge of federal programs serving or benefiting Tribes. Through this formal agreement, the Band receives annual funding to manage maintenance work at the Monument (NPS 2015b, Bahr Vermeer Haecker 2009:64).

Coordination with the RTC and Band members was ongoing throughout the EA process. Early in the scoping process, the Park consulted the Band to help develop and comment on possible alternatives to the proposed project and to identify any issues important to the Band. Involvement by the Band and RTC included a March 24, 2015 meeting with the RTC, Park Superintendent, and consultants, to gather feedback on the range of alternatives, brainstorm any additional alternatives, and identify issues and concerns; Chairman Norman Deschampe and

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other Band members' participation in the April 27, 2015 scoping meeting; and the Park Superintendent's ongoing consultation with the RTC on sacred sites and other topics as needed.

The Park has conducted ongoing outreach and consultation with the RTC and Band members as part of the NEPA process and pursuant to the cooperative partnership between GRPO and the Band. When funding is in place to allow for more precise scoping of project implementation, and prior to development of any final plans or the start of construction, NPS will initiate formal consultation with relevant agencies. At this time, NPS will also initiate formal consultation under Section 106 with the Grand Portage Band.

5.4. List of Participants

Table 5.1 lists those who assisted in identifying important issues, developing alternatives, and analyzing impacts.

Table 5-1: Planning Team Participants

Name	Title/Role	Organization/Affiliation
Jessica Barr	Chief Ranger	Grand Portage National Monument
Vivian Carlson	Member of the Public	Grand Portage Band
Bill Clayton	Chief of Resource Management	Grand Portage National Monument
Jaye Clearwater	Member of the Public	Grand Portage Band
Tim Cochrane	Park Superintendant	Grand Portage National Monument
Norman Deschampe	Chairman	Grand Portage Reservation Tribal Council
Tina Deschampe	Grand Portage Reservation Tribal Judge/NPS staff	Grand Portage Band/Grand Portage National Monument
Curtis Gagnon	Member of the Public	Grand Portage Band
Mary Ann Gagnon	Member of the Public	Grand Portage Band
Melvin Gagnon	Member of the Public	Grand Portage Band
Betty Lou Hoffman	Member of the Public	Grand Portage Band
Rob Hull	Council Member	Grand Portage Reservation Tribal Council
Karl Koster	Member of the Public	Grand Portage National Monument volunteer interpreter
Shelley McIntire	Member of the Public	Grand Portage Band
Pamela Neil	Chief of Interpretation	Grand Portage National Monument
Travis Novitsky	Member of the Public	Grand Portage Band
Brandon Seitz	Biological Sciences Technician	Grand Portage National Monument
Steve Veit	Museum Technician	Grand Portage National Monument

5.5. List of Recipients

Note: This section will be updated in the Final EA.

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Appendix A: Public Comment Analysis

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Appendix A: Public Scoping Comment Analysis

I. Background

The Grand Portage National Monument (the Monument, Park, or GRPO) proposes to rehabilitate an under-utilized portion of the Monument’s cultural landscape known as the East Meadow (the project), necessitating the development of an environmental assessment (EA). The Park is cooperatively managed by the Grand Portage Band of Lake Superior Chippewa (Ojibwe) (the Band) and the U.S. Department of the Interior (DOI) National Park Service (NPS). The 710-acre Park is located at the northeastern tip of Minnesota on the north shore of Lake Superior, within the Grand Portage Indian Reservation, and was founded “for the purpose of preserving an area containing unique historical values” (72 Stat. 1751).

The National Environmental Policy Act of 1969 (NEPA) (42 USC 4321-4347) requires Federal agencies to consider the impacts of their actions on the environment in order to “preserve important historic, cultural, and natural aspects of our national heritage” (42 USC 4331), and to present alternatives to their proposed action (42 USC 4332). The EA in development identifies and evaluates potential impacts of various treatment alternatives developed by Park staff, Band members, and other organizations and members of the public. This document reports on public involvement efforts conducted during the preliminary project scoping stage, reflecting the Park’s “diligent efforts to involve the public in preparing and implementing their NEPA procedures (40 CFR 1506.6 (a)). Scoping is required on all EAs prepared by NPS and involves requesting early input before analysis of a project formally begins (NPS, 2001). Public scoping is encouraged where an interested or affected public exists, but issuing offices are only required to involve appropriate federal, state, and local agencies and any affected Indian tribe (NPS, 2001). NPS has discretion to decide the method of scoping (NPS, 2001).

II. Summary of the Public Scoping Process

The Park held a public scoping meetings on the evening of April 27, 2015, at the National Monument Heritage Center. The public meeting was announced in the Cook County News Herald, WTIP radio, the Boreal.org community website, the community center bulletin board, and word of mouth through Park staff (relevant documentation will be included in the EA decision file). In attendance at the public meeting were 10 members of the public, five park staff, and two consultant staff from The 106 Group Ltd. (106 Group) of St. Paul (a list of attendees is included in Appendix 1). The team presented the goals, purpose, and need of the project, and the project schedule. A number of graphics were prepared to assist with discussion – including a project site map with inset photos, a collage of historical photos of the project area and Tribal

Public Scoping Comment Analysis

community members, and others (included in Appendix 2). The bulk of the public meeting consisted of discussion among the public, questions for the Park regarding ideas for rehabilitating the Meadow, and issues the public and Tribal members would like addressed. 106 Group staff took detailed notes of the discussion, and one handwritten comment sheet was received at the close of the meeting.

Following the meeting, a 30-day public comment period was announced in the Cook County News Herald, through June 1, 2015. At the close of the comment period, the Park provided 106 Group with two additional comments received. All comments received during and after the meeting were sorted and analyzed, and this report contains the results of that analysis and responses from the Park offered during and after the meeting.



April 27, 2015 public meeting at the National Monument Heritage Center

III. Analysis of the Public Comments

All comments received by the Park during the April 2015 public meeting and subsequent public comment period are sorted below into one of three topical categories, and related subcategories, or a general comment category:

- A. Physical Changes
 - i. Built Environment
 - ii. Meadow Restoration
 - iii. Trees
 - iv. Trails
- B. Hopes for Interpretation
 - i. Our Land and Home
 - ii. Everyday Life
 - iii. Impact of Institutions
 - iv. Environment

Public Scoping Comment Analysis

- C. Archaeology
- D. General Comments

Comments and Park responses have been edited lightly to ensure consistency between spoken and written comments. When a single comment touched on multiple themes, it has been separated into the appropriate sections.

Category A. Physical Changes

Key themes: Built Environment, Meadow Restoration, Trees, and Trails

i. Built Environment

Input around the built environment focused on changes to the infrastructure that would support park visitors, such as re-constructing historical buildings for interpretation or adding camping areas.

Park's Overall Response

The Park is mindful of adding new structures and will consider the best use of the space before proposing new infrastructure. There is a potential for rebuilding the school or treaty house for interpretive purposes.

Related Comments and Responses

- Comment: Will Rendezvous Days get bigger and use more space?
 - Response: Even if it stays the same size, we need to think about whether parking is the highest and best use of the area. Over the last few years, attendance has stayed pretty steady.
- Comment: What could be rebuilt?
 - Response: The school, the treaty house – those are some examples.
- Comment: Sometimes the imagination is better at visualization than interpretive reconstructions. A trail with some information to trigger the imagination might be a good thing. I would advise to not overdo it.
 - Response: We appreciate your comments and respect your caution for overdoing it. This is something we're very mindful of in this planning process. Any further discussion or comments please feel free to call.
- Comment: It is a good idea to have some camping areas for portagers coming down the trail with canoes and gear, rather than having them wander around the community not knowing where to go.
 - Response: Camping options will be integrated into the alternatives analyzed in the EA.

ii. Meadow Restoration

Respondents expressed a desire to restore the meadow, which was the center of the 20th century Ojibwe village in Grand Portage.

Public Scoping Comment Analysis

Park's Overall Response

Restoring or rehabilitating the meadow is the central goal in this project, and various options for doing so are being evaluated through development of the EA.

Related Comments and Responses

- Comment: The meadow was the center of our village, facing the water, with access to the Grand Portage. It should be preserved as it is now, and the dam should be removed so water will drain to the lake and the meadow's vegetation will revert back to what it was. I've heard people are buried there so it's important to respect the area; nobody wants things built there. There were houses in the past, but they didn't have concrete foundations. We shouldn't use bulldozers in the meadow.
 - Response: The road's curve has likely backed up the water and caused the wetland, because that area used to have houses. If the higher use dictates changing the road, we can do that – downgrading the road is an option that will be evaluated in the EA.
- Comment: [In response to the meeting question: What does the EM mean to you?] The East Meadow is spacious, and we should keep things simple – it has natural grasses and wild flowers. The meadow's past history should be told, yet it should not be made into re-created village. The beach view should be opened up again.

iii. Trees

The public discussed the potential impact of removing trees along the shoreline that block the view of the lake. Removing the trees could revive memories and provide better context for telling the community's stories. However, one respondent pointed out that the trees are part of the younger generation's experiences living in Grand Portage.

Park's Overall Response

The Park acknowledged that there are various and sometimes contradictory views on what to do with the trees. The U.S. Forest Service planted the trees in the 1950s and 1960s for reason that are unknown. Allowing the tree plantation to continue to grow without maintenance will cause bioturbation, which could damage archaeological resources. Plantations could either be maintained to decrease the likelihood of windthrow-driven bioturbation or converted to another cover type, such as shrubs, to prevent windthrow.

Related Comments and Responses

- Comment: Are there plans to do excavations or build anything?
 - Response: Not in the Pines. The archaeological excavations by the shore are continuing this summer. The Park's Cultural Landscape Report notes the changes in the landscape over time.
- Comment: Getting rid of the trees would really change things – it would really be powerful. Why were the trees planted?
 - Response: We do not know why the trees were planted.

Public Scoping Comment Analysis

- Comment: Removing the trees would revive memories, and it would have a big impact, because now you cannot see Pete's Island. Maybe a path along the shoreline would be a good thing. We were always close to the water, and if you can't see it, you can't connect to the story or to seeing the island. Seeing the lake gives you a good feeling.
- Comment: We should remove the trees blocking the view of the lake.
- Comment: There is a lot of talk of getting rid of the big pine trees along the shore, as most elders can remember a time before those trees were there. I, on the other hand, have childhood memories filled with those trees. They were already very mature trees when I was a kid, and every memory I have of that meadow and picnic area includes those big trees. While a part of me is intrigued to see the area without those trees, I know a part of me would also really miss them, as to me they are a part of what that area of Grand Portage is now. It goes along with the whole concept of how things are always changing. Sure, for the older generations, they can still remember what it was like when that area was completely open. But, the younger generations have no memory of that and for them, their memories of what Grand Portage is are completely different. The trick is going to be balancing what it is with what it has become over the years. It reflects the question of, "do we pick one time in history and interpret that, or do we try to interpret a broader scale of time and interpret that." In my mind, the second option makes a whole lot more sense, although it will be a lot more challenging. History is change, and if we come away with any one major idea about the meadow, it is that the area has seen a lot of change over the years. And every part of that change is a part of that area's history."



Views from the East Meadow, toward the church (left) and the bay (right)

iv. Trails

Respondents discussed potential trail locations and interpretive themes for the trails. Locations that could be interpreted along the trail are the old school house, store, treaty payment building, community garden, and protected bay for fishing. There could be a meadow trail with waysides that touch on the meadow's history and heritage. Interpretation on the trails should not only be about the fur trade.

Related Comments

- Comment: I was out walking the trail by the “boneyard” [maintenance storage area] the other day, and it felt like 50 years ago on Bill LaPlante’s trail by the Pines. It felt like I stepped back in time. A trail used to go up to the old log school, and another across the wooden bridge to the store, that predated the road. An idea could be a tour trail that would be fun and offer a sense of going back in time. Grand Portage people know little about this place. This is a unique, deep, protected bay with fish and an island break; it’s not all about the fur post. We were here before the fur trade and made it successful.
- Comment: There used to be community gardens here, and some might not remember it.
- Comment: I really like the idea of restoring some of the paths and having some interpretive waysides along those paths – waysides that touch on the different aspects of the meadow's history and heritage. It would be beneficial not only for visitors but for locals as well. Undoubtedly, there would be locals (including youth) who would wander along the paths and, in all likelihood, will learn things about that area that they had no idea about. I'm sure there are countless young people around here who have no idea there was ever a school down there, let alone two schools. As far as many of the youth know, the existing old log school was the original school.

Category B. Hopes for Interpretation

Key Themes: Our Land and Home, Everyday Life, Institutions, and Environment

i. Our Land and Home

Respondents discussed their people’s connections to the East Meadow across time. This is the land where they made their homes. In a way, their isolation allowed them to thrive without as much disturbance as other tribes experienced. The way people thought about land and boundaries changed over time – any interpretation should encompass a broad scale of time and not just the time of the fur trade.

Park's Overall Response

This is indeed an unknown story outside of the tribal community and should be told. There is a lack of land records for the area. The legislation that created the Park is in alignment with what Band members and the public are requesting. It does not mention the fur trade but rather discusses historical values more generally.

Related Comments and Responses

- Comment: Nobody told us it was difficult up here, it is just how we lived. I’m glad the land was so isolated because it meant we got to keep it. The highway wasn’t here, and it was hard to get here. You could only come by water.
- Comment: Just because our parents and grandparents grew up here didn’t mean we would get to keep it. We only got to stay here and not be relocated because nobody else wanted the land – you couldn’t grow anything, and it was too far away.

Public Scoping Comment Analysis

- Comment: It should be known that it was the center of our people, we would spread out and come back throughout the year, and it was the heart of our community. I didn't like the idea of the park at first, but maybe it's better because otherwise the meadow could have been paved over. It's important because it's a spiritual place, where our wigwams were, where we held powwows, it was a clear area in the late 1800s and early 1900s. We should have talks on archaeology and history and what the area means to the people. In the meadow, we should preserve the past, present, and future.
- Comment: Once the East Meadow was donated to NPS, everything stopped, so history couldn't continue to be developed. I remember the trails well. There used to be a lot of activity at the school, where the foundation is. What would have happened to the area if the Park hadn't come – it's not a critical idea for interpretation, but it's interesting. Did we save it or stop history within these boundaries? Boundaries are an important theme.
- Comment: Lots of land and house records don't exist, it's just our memories. We weren't separating land back then, and it's important not to forget that prior to allocation there were no physical boundaries, no us and them.
 - Response: Yes, there are no land records, no sign of any sales or allotments anywhere from the U.S. government. There are no ownership records.
- Comment: Isolation is a key theme. It went from most people living here to living on farms in Mineral Center before the government bought that land and we shrunk back down to this land.
- Comment: The Indians stayed here, but you don't see any voyageurs walking around. The fur trade was boom and bust.
- Comment: [In response to: What would you like visitor to know about the East Meadow?] People have lived here for many generations. We could let them know that the meadow spot was the heart of the community by displaying signs and photographs.
- Comment: We should tackle some of the harder topics, such as the role of the church in the community.
- Comment: That is my great-great-uncle in the pictures displayed. We go back to the time before the fur trade. We lived off the land, so we considered ourselves wealthy and were not affected by the Great Depression. Change came with getting money in the 1940s and 1950s, when there became more of a separation between rich and poor.
- Comment: What's the reason for doing this – for NPS and for the public are both good goals, since education and interpretation are what the park is all about. For Indian people, this is what we have, this is us. We don't have an "old country" – this is our old country. People criticize us, asking why are you protective, why do you want special treatment? Anything that NPS could interpret about this story would be good.
 - Response: The legislation that created the Park didn't mention the fur trade. It more generally mentions historical value, and what Band members are asking about is spot on with what NPS should be doing.

Public Scoping Comment Analysis

- Comment: Things are always changing.
- Comment: Connections are key – the connection to Isle Royale, the view, other parts of Lake Superior, La Pointe. Whole families and kids used to paddle places, and we should re-enact this. Schoolteachers vacationed in Grand Marais while Ojibwe families were in the “sugar bush.”

ii. Everyday Life

These are stories that extend beyond individual events. Visitors should understand that the Band was here before and European arrival and since the fur trade period ended. They discussed how people lived and how everyday life changed. This included how houses changed over time. The group was agreeable to interpretation of these stories on a reconstructed path.

Park's Overall Response

The Park responded that the stories discussed could be interpreted along reconstructed paths (trails). In cases, it may be hard to communicate how things have changed over time.

Related Comments and Responses

- Comment: We used to leave pots [to collect tree sap] back in the sugar bush where our parents went with their parents.
- Comment: Grandma told me about this too in the 1970s, about her [tree sap collecting] in 1920s.
- Comment: Who were the last people to live there in the meadow?
- Comment: Grand Louise and LaPlante houses were by the “boneyard,” and I remember that there were two trails. Trees were planted there, and there used to be berry bushes.
- Comment: There used to be tag alder.
- Comment: The photos on the boards seem to be chronological – the lower right has a wigwam and birch canoe, then into the late 1800s with houses and log houses. The photos on the boards trace our progression as a community. The lower left has photos of fishing, and that activity was important. Our grandparents lived in wigwams and dovetail construction type houses. They made a skating rink in the meadow.
- Comment: Washing and cooking was done in teepees by our grandparents, even when they lived in houses.
- Comment: I never knew about summer kitchens, an attached but separate porch, lean-to, or wigwam. People did different things in each structure.
 - Response: Maybe we should do reconstructed paths and use those stories to interpret the area? [Participants responded positively.]
- Comment: I wasn't born or raised here, but I have heard that the monument ripped out the heart of community. I would like to see all these photos lined up chronologically to see the change and to evoke memories. We could do maps with locations so people would remember.
 - Response: It is hard to convey changes through time.

Public Scoping Comment Analysis

- Comment: I suggest waysides with well chosen pictures on each, such as the one of the church where you're looking up at it, and the one looking out at the lake. This would help us remember. This would also give people an idea that lots of Indians were around, and not just here during the fur trade era. All you beloved non-Indians depended on us.
- Comment: How far back are we going? We're talking about lacrosse; how about softball, which I played? Nowadays the Indian sport is softball. The lower right picture is a ballfield and powwow grounds.



Historical photo collage, printed large format for the public meeting

iii. Institutions

This section discusses how institutions, such as the U.S. government, schools, and churches, impacted the Grand Portage tribal community .

Park's Overall Response

The Park confirmed that many government land records and ownership records do not exist but acknowledged the need to find a way to tell stories about treaties and relations with the U.S. government. The Park has historically avoided talking about native religion.

Public Scoping Comment Analysis

Related Comments and Responses

Government:

- Comment: Rather than what we shouldn't talk about, the better question is what should we be talking about. The impact of what the government buildings represented, of the Tribal Reorganization Act in 1934 – these are important things to talk about.
- Comment: The aboriginal title is an important idea that is related to the idea of treaty payments. Non-Indians think the government gave us land. It was an offset for them reneging on promises and terms of contracts, not handouts. Treaty payments were not the U.S. giving us money, it was us being paid for a contract for our land. Still, there is an idea around that we were given money. This is tribal trust land, this was always an Indian place. Europeans didn't have the skills to make the fur trade happen.
 - Response: It sounds like we need to find a way to tell the story of treaties and relations with the U.S. government.
- Comment: The change in food is part of the story, and part of treaty payments.

Schools:

- Comment: Four generations of schools were here. We could do bronze plaques of each school.
- Comment: The first school in the 1830s or 1840s was not a government school. It was run by a priest, a schoolteacher. He taught in Ojibwe and got in trouble.

Church:

- Comment: Who determines what's going to be told - us?
 - Response: Typically we avoid religious topics.
- Comment: The role of the church in Grand Portage has been good and bad. The first thing you see when you come is the church on a hill. This is a big part of the story, which had a huge impact on our culture, loss of our traditional religion, and language.
- Comment: We lost our beliefs and culture because of the church.
- Comment: The third picture down on the left is my grandpa. He was a medicine man, but the church made him give up his bundles and be baptized to marry a Catholic woman. Love changed a lot of people's thinking.

iv. Environment

The section summarizes discussions about how climate change has affected the Grand Portage area and its ecosystem.

Park's Overall Response

The Park responded that climate and landscape changes are part of the “change through time” story, which included birch and cedar declines, decline of the moose population, and increase in wood ticks, turkey vultures, and raccoons.

Public Scoping Comment Analysis

Related Comments and Responses

- Comment: Can anything be brought up about climate change and what it's doing to us and the lake?
 - Response: It is a little bit of a stretch with historical values, but yes if it's about how the landscape has changed. The shoreline has changed, but this might not be due to climate change. Climate is another "change through time" topic that includes: birch and cedar declining, wood ticks, turkey vultures, decline of moose, more raccoons – this is all part of story.
- Comment: We could tell about when the meadow was exposed 10,000-15,000 years ago. Our relatives were part of climate change too. The caribou were disappearing. We could tie the meadow to stories of larger land and water use as well as trails and rivers; all of this is related.

Category C. Archaeology

Respondents requested updates on what was found during archaeological surveys.

Park's Overall Response

The Park responded that human remains were found by Woolworth near the Pines (outside the project area) and returned to the Grand Portage Band. There is potential that more remains could be found near the meadow. Other digs are just starting, and the archaeologists have found building foundations. Community members are welcome to come out to the digs and help out too.

Related Comments and Responses

- Comment: Human remains were found in the past, right?
 - Response: Yes, remains of four people were found by Woolworth near the Pines. The remains were taken away and then returned to Grand Portage, but they burned in the Great Hall fire. We think there is the potential to find more remains in that same area, by the road's curve.
- Comment: I've heard people are buried there so it's important to respect the area. Nobody wants things built there.
- Comment: During the archaeological digs, was anything of importance found?
 - Response: They are just starting; initial ground-penetrating radar testing found building foundations and maybe patchy yard areas. Later, they will do subsurface testing. The NPS Midwest Archaeological Center is helping out, and community members can come out and help too.

Category D. General Comments

Respondents made several general comments about the process, which do not fit into any of the above categories.

Public Scoping Comment Analysis

Related Comments and Responses

- Comment: What's the timeline for implementation?
 - Response: The EA will be ongoing throughout the summer and fall. A draft will be released in the fall for a round of public review and comment, and the final EA will be published in early 2016.
- Comment: Visitors travel here for a purpose. It's because they are truly interested in our history.
- Comment: [In response to: How would you like to share your story of the old village with visitors?] Good information.
- Comment: I was pleased with the meeting and that folks felt willing to contribute.
- Comment: The Park Service does a great job.

IV. Conclusion

Over a dozen Grand Portage Band members, other community members, seasonal interpreters, Park staff, and others contributed substantive comments during the public scoping phase of the East Meadow Area Cultural Landscape Rehabilitation and Development Project EA.

Recommendations were shared for what physical changes to make to the landscape as well as appropriate topics and methods for interpretation. In addition, meeting participants asked about past and ongoing archaeology in and around the project area. Park staff responded to questions and comments during the public meeting as well as responded to emailed comments. Options for the project and concerns or information about resources that the project could impact will be documented and analyzed in the final EA. The public will have an opportunity to review and comment on the draft EA before it is finalized.

Appendix 1: Meeting Attendees

Members of the Public

- Vivian Carlson
- Jaye Clearwater
- Norman Deschampe
- Curtis Gagnon
- Mary Ann Gagnon
- Melvin Gagnon
- Betty Lou Hoffman
- Rob Hull
- Karl Koster
- Shelley McIntire
- Travis Novitsky

Park Staff

- Tim Cochrane, Superintendent
- Bill Clayton, Chief of Resource Management
- Pam Neil, Chief of Interpretation
- Jessica Barr, Education and Enforcement
- Steve Veit, Museum Technician

106 Group Staff

- Anne Ketz
- Kelly Wilder

Appendix 2: Meeting Materials