



# Mukooda Lake Development Environmental Assessment

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## **Mukooda Lake Development Environmental Assessment**

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## **Mukooda Lake Development Environmental Assessment**

### **CHAPTER 1: PURPOSE AND NEED**

#### **1.1 Introduction**

This environmental assessment (EA) evaluates the potential impacts of updating a campground at Mukooda Lake and adding recreational opportunities in the eastern half of Voyageurs National Park, including hiking trails. The existing campground is poorly designed and is threatening sensitive resources and there are currently no hiking trails serving visitors at the eastern end of the park.

Voyageurs National Park was established in 1975 “...to preserve, for the inspiration and enjoyment of present and future generations, the outstanding scenery, geological conditions, and waterway system which constituted a part of the historic route of the Voyageurs who contributed significantly to the opening of the Northwestern United States.”

The park is situated along the United States-Canada border separating Minnesota and northwestern Ontario. The park is approximately 218,000 acres in size and offers 284 developed overnight and day use sites and over 50 miles of hiking trails for visitors to enjoy.

Mukooda Lake is located near the southeast end of the park north of Crane Lake (Fig. 1). A diverse fish population and clear waters make this a popular fishing lake. The small campground on the eastern shore of Mukooda was established by the State of Minnesota and pre-dates the establishment of the park, and is now managed by the National Park Service. The campground consists of five individual sites, each with a fire ring, picnic table, and bear-proof food locker. A centrally-located privy (vault toilet) and a well also serve the campground (Fig. 2).

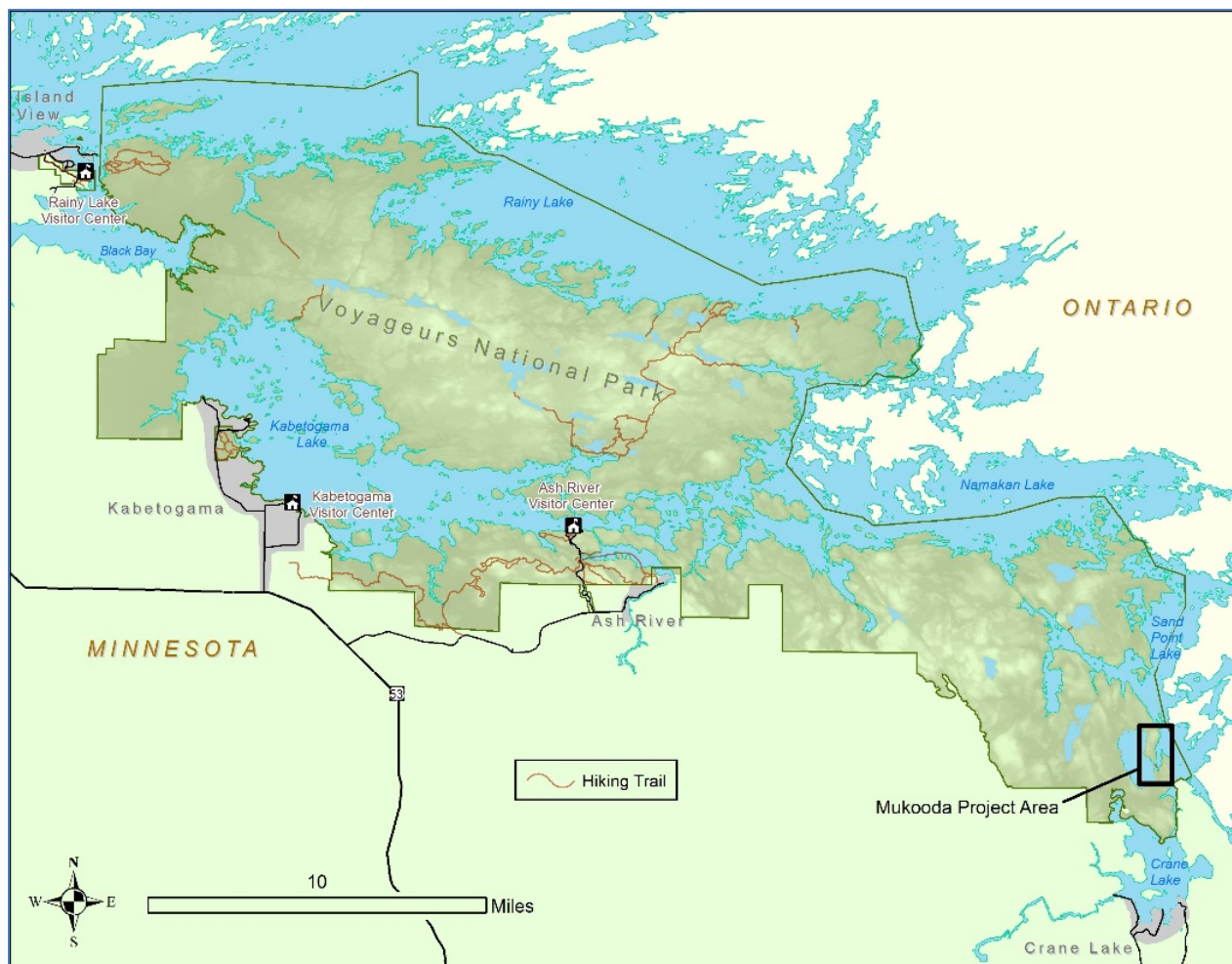


Figure 1. Project location. Mukooda Lake is located in the far southeastern end of Voyageurs National Park, just north of Crane Lake. This project is located on the isthmus between Mukooda and Sand Point lakes.

Access to the campground is via a short portage from Sand Point Lake. In the past visitors could portage their own small boats or canoes into Mukooda. Unfortunately, the invasive spiny waterflea (SWF) was discovered in the large lakes of the park in 2006-2007 and these waters, including Sand Point Lake, were subsequently listed as infested waters. Because aquatic invasive species are able to survive on wet gear carried over a short portage, this presents a considerable threat of introduction of aquatic invasive species. Any increase in visitor use will increase the threat of introducing aquatic invasive species since studies have shown that some boaters do not comply with aquatic invasive species regulations.

In response to this, park staff adopted measures to prevent the spread of aquatic invasive species such as SWF to interior lakes such as Mukooda. These measures include using only artificial bait on interior lakes, and not allowing privately owned watercraft on these lakes. Although private boats are not allowed on Mukooda, several



concessionaire-operated boats are located near the end of the portage and are available to rent.

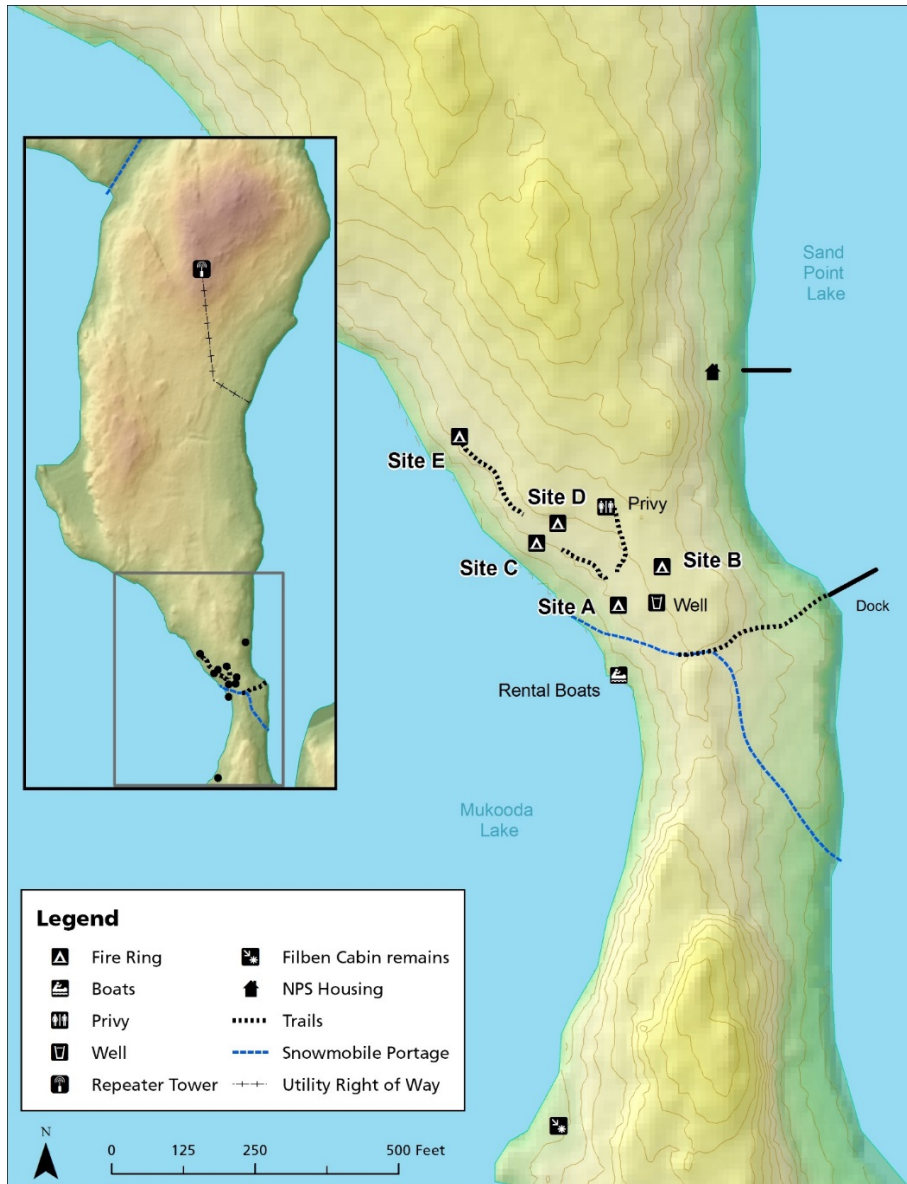


Figure 2. Existing facilities in the Mukooda Lake small campground and surrounding area.

This plan fulfills a park priority for facility asset and resource management, and visitor carrying capacity at Mukooda Lake Campground in Voyageurs National Park serves as a component of the park's planning portfolio. This follows the National Park Service's "Planning Portfolio" construct, consisting of a compilation of individual plans, studies, and inventories, which together guide park decision making. The planning portfolio enables the use of targeted planning products (such as this one) to meet a broad range of park planning needs, a change from the previous National Park Service focus on standalone general management plans. The general management plan remains a

critical piece of the planning framework and will be revised in a timely manner through the park's planning portfolio.

## 1.2 Purpose and Need for Taking Action

The underlying purpose of the proposed action is to improve upon and add to the recreational opportunities in the Sand Point Lake area of the park. Specifically, the park has the following objectives:

- Update the Mukooda Lake campground to NPS standards,
- Increase the dock capacity at Sand Point Lake, and
- Create new trails at the east end of the park.
- Maintain or improve the visitor experience.
- Protect or improve natural and cultural resource conditions.

There is a need to update the Mukooda Lake campground because it pre-dates the establishment of the park and has never been rehabilitated and brought up to current Voyageurs National Park campsite construction standards, including providing tent pads, as defined in the Lakecountry and Backcountry Site Management Plan (1988). The individual sites in the campground are poorly defined, resulting in inefficient use of the facilities and loss of vegetation. The poor design also results in conflicts between different user groups such as people walking through campsites to access Mukooda Lake and day users utilizing picnic tables at potentially reserved overnight sites.

Further, the current dock on Sand Point Lake (Fig. 2) is insufficient to serve the needs of visitors to Mukooda Lake. The dock is often full, forcing visitors to tie up on shore. This issue will almost certainly be worse with a predicted increase in day use at Mukooda.

Finally, a hiking trail in the Mukooda area was identified in the Voyageurs National Park General Management Plan (2001) but never implemented. Currently there are no hiking trails in the eastern half of the park.

## 1.3 Relationship to Other Plans and Policies

Several National Park Service or Voyageurs National Park-specific policies and plans give guidance to the planning and development of recreational facilities in the park.

**Lakecountry and Backcountry Site Management Plan (LCBC) (1988)** sets standards for constructing and determining location for campsites:

- Small Campsites can accommodate up to nine people. Standard facilities at these sites will be a picnic table, a fire ring, two tent pads, two\* bear-proof food lockers, and a vault toilet.

- Large Campsites can accommodate up to 18 people. Standard facilities at these sites will be two picnic tables, a fire ring, four tent pads, four\* bear-proof food lockers, and a vault toilet.
- Small Campgrounds can accommodate a maximum of five to seven individual groups with up to nine people per group (groups greater than nine people can occupy more than one site). Standard facilities at each individual site are similar to a small campsite except a vault toilet will be centrally located in the campground accessible from all sites.

(\*) The number of bear-proof food lockers has increased from the original plan due to food storage and animal issues at some sites.

Critical criteria are identified for selecting new construction sites. These criteria include latrine potential, island size (firewood availability), and conflicts with nesting or threatened wildlife, rare or unusual vegetation, or historical or archeological resources. These conflicts must be mitigated before the site can be developed.

**Trail Plan (1989)** proposes a 3.6 mile loop hiking trail at Mukooda Lake. The route of the 1989 proposed trail heads south from the campground and crosses lands not owned by NPS and therefore not available for development. This EA analyzes a different trail route in the same area.

**Wilderness Recommendation (1992)** plans for the same hiking loop trail as the above Trail Plan. This plan also proposes that the waters of Mukooda Lake and the land east and south of Mukooda Lake (including the area covered in this EA) be excluded from recommended wilderness.

**General Management Plan / Visitor Use and Facilities Plan (GMP) (2001)** provides for a hiking trail in the Mukooda area and identifies Mission Goals, or desired conditions, for the park. The GMP also identifies issues and concerns for park management. Relevant issues that are identified include:

- Insufficient Trails (Nonmotorized)
- Visitor Use Impacts to soils and vegetation
- Erosion due to Visitor Use and Development
- Effects of Visitor Use on archeological resources

**Foundation Document (2016)** discusses Fundamental Resources and Values Interpretive Themes, and Threats to and Opportunities for these resources.

## 1.4 Issues and Impact Topics

A wide range of potential issues were considered with respect to the proposed action, and the following issues were carried forward for analysis:



- Threats to archeological resources that exist in the vicinity of the campground – camping activity and poorly-designed sites lead to compaction and other impacts to the soils
- Poor design leading to visitor conflicts and resource damage – individual camp sites are poorly delineated and there is no trail system, this results in visitors encroaching on and walking through neighboring camp sites
- Lack of land-based recreational opportunities – there are no hiking trails and few day use or destination options in this end of the park

### 1.5 Impact Topics Retained for Further Analysis

The following impact topics were identified and address the issues above:

- Cultural Resources: Archeological information at the Mukooda Lake small campground has been determined significant to our understanding of history and prehistory at the local level, as defined under the National Historic Preservation Act. Camping activities impact the surface of the campground, and these impacts are made worse by the current lack of tent pads and the undefined circulation patterns of visitors throughout the site. Because these impacts can affect historic properties (archeological sites) in the vicinity of the campground, this topic was carried forward for analysis.
- Visitor Experience: The 1916 Organic Act directs the NPS to provide for public enjoyment of the scenery, wildlife and natural and historic resources of national parks “in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations.” Sport fishing is a primary recreational attraction and viewing scenery and wildlife are popular activities. Visitor experience may be impacted by the activities presented; therefore this topic was carried forward for analysis.
- Fisheries: Mukooda Lake receives considerable day and overnight use, and improving amenities are likely to increase visitor use. There are several fisheries-related issues in the Mukooda area associated with increased use:
  - A popular sport fishery exists in Mukooda Lake that may be impacted by increased fishing pressure associated with the activities presented. The lake supports populations of many gamefish species, including lake trout, walleye, northern pike, largemouth bass, smallmouth bass, black crappie, and bluegill. Although Mukooda is currently closed to lake trout harvest due to low population numbers, people may still catch and release lake trout (the lake remains open to harvest of other game fish) and a portion of the released fish die quickly following release.

- The current dock on Sand Point is under-sized and it is common to find boats tied up to shore because there is no room on the dock. The near-shore area adjacent to the dock is a highly productive fish spawning habitat that may be affected by installation of a larger or different dock through displacement of plant beds or lake bed fish spawning habitat.
- Some aquatic invasive species, including spiny water flea, have a negative impact on game fish. An increase in fishing pressure on Mukooda Lake will increase the threat of aquatic invasive species being introduced.

For these reasons this topic was carried forward for analysis.

## 1.6 Impact Topics Dismissed from Further Analysis

The following impact topics were determined to have no or impacts as result of the proposed action:

- Air Quality: The use of mechanical equipment for this project (e.g., from ATV use, gas-powered chain saws, gas-powered brush saws) would have a negligible impact on air quality and therefore air quality is dismissed from analysis.
- Soundscapes: Use of mechanical equipment would be temporary and localized and would have negligible impacts on the soundscape. Potential increase in visitor use could lead to more noise but it would be a minor increase over current conditions and temporary.
- Rare or Unusual Vegetation: No unusual vegetation communities exist in the project area. Area has been surveyed for rare plants and none were found. Any impacts to other vegetation (not rare or unusual) would be localized and minor in nature.
- Soils: The potential for minor soil compaction exists in localized spots from campground activities. These would be minor in nature and mostly mitigated with park campsite construction standards.
- Wilderness: In 1992 the National Park Service recommended a total of 127,436 acres of lands and waters for wilderness designation. The project area is not included in the park's recommended wilderness.
- Environmental Justice: The gateway communities and areas surrounding the park do contain relatively small low income and minority populations. None live within park boundaries. Because the proposed project area is within the boundaries of the park and impacts from the proposed actions would be localized to the project area, no impacts to disenfranchised populations are expected from the actions.

- Indian Trust Resources: Land tracts owned by the Minnesota Chippewa Tribe or individual members of the tribe are located within park boundaries. None of these tracts are located in or adjacent to the project area and would therefore be unaffected by the proposed actions.
- Threatened and Endangered Species: The NPS reached a finding that the proposed actions “may affect but are not likely to adversely affect” Canada lynx, lynx critical habitat, gray wolf, wolf critical habitat, and northern long-eared bat for Section 7 purposes.

Species listed as threatened or endangered by the State of Minnesota, also found to be present in the park, and potentially in the project area include: Piping plover (*Charadrius melodus*) does not breed within the park (Grim 1986) and is rarely seen even in migration, though the park is within its range (Sibley 2014). Breeding populations of Wilson’s phalarope (*Phalaropus tricolor*) have not been documented in the park. Common tern (*Sterna hirundo*) nested in the park at one time but do not nest here anymore.

A vegetation survey has been completed for the area and no state or federal threatened, endangered, or species of special concern were found in the project area. If any mature trees need to be removed, they will be surveyed for northern long-eared bats (and USFWS will be consulted if any are found) prior to felling.

## CHAPTER 2: ALTERNATIVES

### 2.1 Introduction

This chapter describes the alternatives analyzed and alternatives considered but dismissed from further analysis. This chapter is organized into the following sections:

- Alternative A: No Action
- Alternative B: Proposed Action
- Alternatives Considered and Dismissed

### 2.2 Alternative A: No Action

The Mukooda campground currently accommodates five groups of nine people each and includes a centrally located vault toilet, but the campground does not include tent pads (Fig. 3). The Mukooda campground also includes well water access that pre-dates the establishment of VNP. Current visitor use is typified by up to three family groups of six or nine people each, recurring throughout the summer for a total visitation of 179 individuals in 2016. The Mukooda campground is less popular than nearby King Williams campground for organized groups and events, and does not receive much, if any, group campers. Of the five sites available for reservations, the most often reserved sites are those closest to shore (Sites A, C, and E), the access trail, the privy, and the well. From available records, the campground has never been filled to its total maximum capacity of 45 people at one time.



Figure 3. Existing sites at the Mukooda lake Small Campground. Sites C and D are adjacent in an open, grassy area.

The campground construction pre-dates the establishment of the park and the facilities are mostly outdated and do not meet to current campsite construction standards at Voyageurs National Park. In particular, there are no tent pads at the sites. The layout of the campground is somewhat confusing as well with undefined areas between some of the sites, potentially resulting the decreased use. The current dock on Sand Point accommodates approximately 6 boats.

This No Action alternative means the current campground and dock would stay as is, although facilities such as picnic tables, food lockers, and fire rings could still be upgraded as needed. No hiking trail would be constructed and no day use site established under this scenario and conflicts between day users and overnight users would continue. The potential for disturbance of archeological resources and site erosion would remain.

### **2.3 Alternative B: Proposed Action (Redesigned Campground with Three Sites)**

Options for the campground redesign are constrained by terrain and existing infrastructure. The area surrounding the campground offers few opportunities for new construction on flat ground, and options are additionally constrained by the location of the vault toilet.

Alternative B maintains or improves the visitor experience within the topographical constraints of the Mukooda Lake area. Two sites with two tent pads apiece and one site with four tent pads are selectively placed in well-spaced areas along the shore, with one centrally located vault toilet and reasonable access to the well (Fig. 4). All three sites will be constructed to Voyageurs campsite standards and will include tent pads (2-4), bear-proof food lockers (2-4), fire rings, and picnic tables.

In addition, one Day Use (picnic) site provides for visitors who come to the lake to fish, picnic, or hike during the day without a reservation, reducing the potential for conflicts with campers. One campsite is more remote than currently existing sites, potentially increasing walking distance to the vault toilet (approx. 600 feet, the other two sites would be less than 400 feet from the toilet) while offering a greater variety of visitor experiences. The existing vault toilet and well will not be changed. The campground would remain open during construction but certain sites would be closed as they are being rebuilt.

The total capacity of this alternative would be 36 individuals in 3 groups, plus 18 day users (typical day use site can accommodate two groups of nine people per LCBC). This capacity would meet or exceed current camping demand and visitor use of Mukooda Lake.

The dock on the Sand Point Lake side of the portage will also be expanded to accommodate more boats. An expanded dock with five fingers would allow docking for up to ten boats. The floating dock would be attached to the existing crib to minimize impact the spawning habitat along that shore.

In addition to the campground redesign, an improved trail will be built to connect the individual sites to the vault toilet and well without intruding on the other sites. This trail would consist of hard-packed dirt or gravel paths approximately 24 inches wide with a prolonged maximum grade not exceeding 12 percent. The trail would be brushed 8 feet wide and 12 feet high.

A primitive (unimproved) hiking trail will be implemented to connect the campground with the historic Filben cabin ruin to the south (appr. 0.2 miles), additionally a looping trail to the north of the campground would be established for day hiking (Fig. 4). On the looping trail, visitors will have the option of hiking a longer loop of approximately 2.5 miles or a shorter loop of approximately 1.5 miles. Several scenic overlooks will provide views of Mukooda and Sand Point lakes. These trails will be dirt or smooth rock surfaced with paths approximately 18 inches wide and will be brushed 4 feet wide and 8 feet high. Trail signs or rock cairns will be installed along sections where the designated trail is not apparent and interpretive waysides will be installed at the day use site.

None of the trails will be handicap accessible due to extreme or numerous conditions that make it impracticable. The grade coming from the dock on Sand Point Lake up to



the trail is too steep and needs a stairway, as it currently has. All of the trails will be located to avoid any known archeological or sensitive resources.

Mitigation Measures - Additional testing will be completed by qualified archeologist to determine extent and eligibility of archeological resources and to guide development of facilities and public use. Consultation with SHPO and tribes has been initiated and will continue through archeological testing and development of any additional mitigation measures.

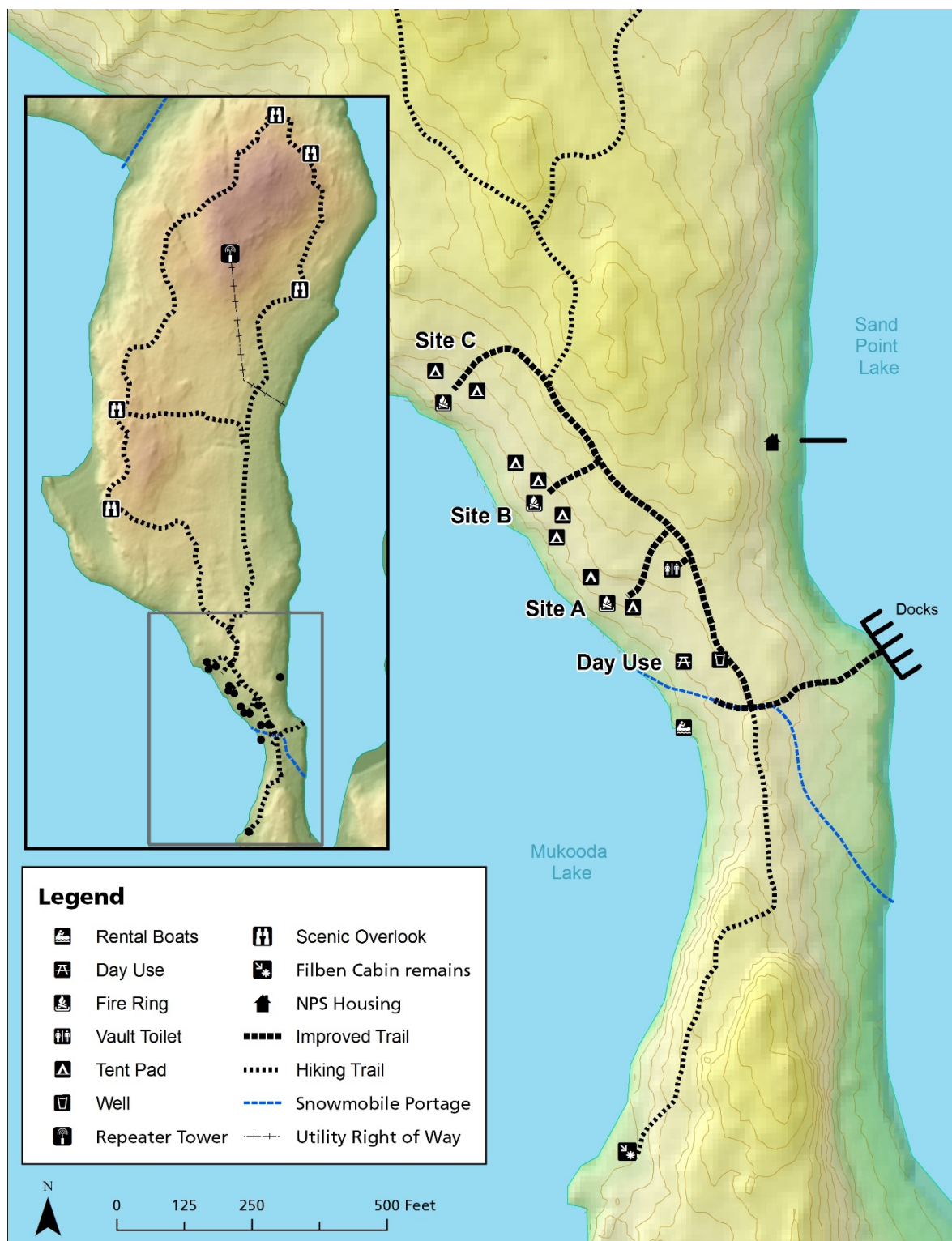


Figure 4. Proposed Action. Three campsites (one with four tent pads) would be spread along the shoreline, a day use area would be built, and a new trail system would connect the campground, the historic Filben cabin ruin and a loop hiking trail.

## **2.4 Alternatives Considered and Dismissed**

Several alternatives were considered and discussed based on the results of internal and external scoping. This section discusses those alternatives considered, but eliminated from further study. This discussion also includes an explanation of why these alternatives did not warrant additional analysis. These alternatives were eliminated from detailed study because they were either inconsistent with management policies and guidelines, did not meet the purpose or need for action, or were not feasible from a technical and/or economic standpoint.

### **2.4.1 Expanded Campground with Five Sites**

This proposed alternative involved spreading the campsite out along the lakeshore, both to the north and to the south of the existing campground. This alternative meets the standards in the LCBC Site Management Plan by placing five sites with two tent pads apiece along the shore of Mukooda Lake, with one centrally located vault toilet. Each site accommodates one group of up to nine people. In addition, one Day Use (picnic) site is included to accommodate up to 18 visitors at a time (the maximum allowed by the LCBC) who come to the lake to fish during the day without a reservation. The total capacity of this alternative would be 45 individuals in 5 groups, plus 18 day users.

The topography of the Mukooda Lake area requires sites to be close together, and to extend in either direction from the existing campground. This would result in longer walking distances to the vault toilet from most of the sites. Currently, the longest walk from camp to the vault toilet is approximately 400 feet. Under this proposal, two of the five sites would be over 600 feet from the toilet and approximately 800 feet from the well. Moving the toilet is not an option, there is a limit to how far from shore (on the Sand Point Lake side) it can be pumped (emptied).

Forcing five sites into the existing terrain while trying to protect existing resources results in some sites being located in problematic spots. Historic use numbers also suggest that a capacity of 45 individuals in 5 groups is not necessary. For these reasons, this alternative was dismissed.

### **2.4.2 Relocated Campground with Three Sites**

The goal of this alternative was to maintain or improve natural and cultural resource conditions by removing all constructed facilities from a sensitive resource area impacted by the existing campground. The topography of the Mukooda Lake area would only allow for three sites built in close proximity, all relatively far from the vault toilet (over 600 feet for the farthest). The total capacity of this alternative would be 27 individuals in 3 groups, plus 18 day users.

This alternative would result in decreased capacity and would still not be completely effective, resulting in continued impacts to sensitive resource areas unless significant

efforts are made toward stabilization and enforcement. For this reason, this alternative was dismissed.

#### **2.4.3 Close the Campground**

Permanently closing the campground would not address a goal of increasing recreational opportunities in the southeast end of the park. It also would not adequately protect the resources of the area because of the popularity of the site with day users. For these reason, this alternative was dismissed.

## CHAPTER 3: ENVIRONMENTAL CONSEQUENCES

### 3.1 Introduction

The overall impact of an alternative on the particular affected environment or resource can be positive or negative. Impacts to some resources can vary in intensity spatially and over time while impacts to other resources may be permanent. For instance, water quality can be affected by flow, temperature, wind, and many other factors. We may see differences in May versus August or in a secluded bay versus the open lake. On the other hand, an archeological site is in one specific location and soil disturbance may permanently destroy the integrity of the site.

The Council on Environmental Quality's (CEQ) regulations (40 CFR § 1500 - 1508) define cumulative effects as:

“the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR ~ 1508.7).”

Past, present, and reasonably foreseeable actions that contribute to cumulative impacts on the resources that would be affected by the Mukooda development plan were identified during internal and external scoping, as follows:

- **Land Use** – Although not a lot of development happens within park boundaries, there are some facilities, both historic and modern in the area. Overnight facilities in the area from Grassy Bay to Crane Lake include 6 individual tent campsites, two small campgrounds (including Mukooda), and four houseboat sites. There are also four day use (picnic) sites, three at Grassy Bay and one at the historic Casareto Summer Cabin. There are also plans to develop the historic Ingersoll Estate site and Mittet cabin site (as the Grassy Bay Visitor Destination) at some point. In addition to these recreational facilities there is a radio repeater tower located on the high point just north of the Mukooda campground. This facility includes a cleared power line right of way from the shoreline to the tower. An historic winter truck portage between Crane Lake and the south end of Mukooda is currently used as a snowmobile portage. There is also a snowmobile portage on the north end of Mukooda and a short portage on the east end near the campground.
- **Invasive Species** – Spiny waterflea and rusty crayfish have both been introduced into the waters of Sand Point Lake. Neither are currently in Mukooda but the potential for introduction exists. The potential for introduction of new invasive species into the waters of Voyageurs National Park through boating activities exist as well.

## 3.2 Cultural Resources

### 3.2.1 Affected Environment

Section 110 and Section 106 of the National Historic Preservation Act (NHPA) require federal agencies to identify and evaluate properties for their eligibility for listing in the National Register, and to take into account the effects of their undertakings on eligible or listed properties. This entails identifying and evaluating historic properties through consultation with stakeholders, then working together to avoid, minimize, or mitigate adverse effects.

Mukooda Lake has a long history of use by native people. In 1911, Joseph A. Gilfillan, Episcopal missionary at the White Earth Reservation recorded the Ojibwe name *Ga-namegosikag-zag* (translated as Trout Lake) for what is now known as Mukooda. It was identified as Trout Lake on maps until the late 1950s, when it was consistently identified as Mukooda Lake.

Archeological materials at Mukooda Lake small campground were first identified in the 1970s, and are routinely monitored by park staff. In 2018, the archeological site at Mukooda was determined eligible for the National Register in consultation with the Minnesota Historical Preservation Office, and the physical extent of the site was determined. Previous evaluation by the Midwest Archeological Center indicates that the archeological site is partially intact, impacts are moderate, and that the site is locally significant according to the National Register criteria for evaluation (Richner 2008).

The Mukooda Campground was constructed by the Minnesota Conservation Department Division of Lands and Forestry between 1951 and 1955 (it was known as Trout Lake Campground). It is one of eight early State of Minnesota campsites acquired by the park in 1975. In the 1950s, facilities at primitive state forest campsites were limited. By 1972, Mukooda Lake Campground had a dock, 7 fire rings, 1 campground sign, 4 site markers, 8 picnic tables, and 2 toilets.

The Filben cabin (also known as the St. Paul Club), located south of Mukooda campground, was determined eligible for the National Register in 1993 for its association with the early period of recreation in northern Minnesota and with a prominent underworld figures Tom Filben and John Dillinger. The NPS and the State Historic Preservation Office negotiated a Memorandum of Agreement in 1995 for removal of the cabin subject to stipulations. One of those stipulations is that the foundation would be left in place. Other stipulations in the MOA included: recordation to NPS Historic American Buildings Survey standards, development of standard operating procedures for monitoring of historic structures, and holding an annual meeting with the SHPO to discuss the progress of cultural resources management at the park. The proposed action is consistent with the terms of the MOA and the park's Historic Structures Management Plan (2001).

The Crane-Sand Point portage was part of the Mine Center Mail Route, a winter-only route that was established during the 1890s gold rush to Rainy Lake to haul freight,



passengers, and mail from Harding (now Crane Lake). The route traversed land on the north end of Crane Lake, entered and crossed Mukooda Lake, traversed land on the northeast end of Mukooda and exited in Grassy Bay on Sand Point. The proposed action would not impact this portage.

The short portage between Mukooda Lake and Sand Point Lake on the south side of the current campground does not appear to be part of the Mine Center Mail Route, but it provided the primary winter access for the Lac La Croix First Nations until a road was constructed in Ontario providing automobile access. The portage is now managed by the park as a snowmobile safety portage to avoid hazardous ice conditions on Sand Point Lake. The proposed action would not impact this portage.

### **3.2.2 Direct and Indirect Effects**

#### Alternative A: No Action (Continue Current Management)

Under this alternative, impacts to archeological resources would continue on their current trajectory. Soil compaction and vegetation loss would eventually lead to exposure of artifacts and the potential loss of information significant to our understanding of history and prehistory.

Resource monitoring would continue, and small-scale mitigation of impacts would occur as needed to preserve as much of the archeological site as possible.

#### Alternative B: Proposed Action (Redesigned Campground with Three Sites)

Under this alternative, campsite rehabilitation and trail development would likely invite more recreational use of the area. The addition of tent pads would reduce soil compaction and erosion, while the improved circulation pattern would help to mitigate further camping impacts. Worn areas caused by foot traffic and undirected tent camping would be revegetated and protected to the extent possible.

The Mukooda Lake Small Campground was surveyed in 1986 (Richner 1992 draft report) and again in 2018 (LaBounty and Bauermeister 2018). Archeological site 21SL176 was determined eligible for listing in the National Register of Historic Places in consultation with the Minnesota Historical Preservation Office in 2018.

In the long term, rehabilitation of the Mukooda Lake small campground would lessen the potential for archeological data loss. Long term effects to traditional use are unknown. Direct effects to data potential during construction would be mitigated through monitoring by a qualified archeologist meeting the Secretary of the Interior's Standards. Camping is a continuing use; the campground improvements would not change the location, design, setting, materials, or integrity of the campground.

Consultation with stakeholders, evaluation of the archeological site, and development of a sensitive campground design were completed in 2018. The Minnesota State Historic Preservation Office concurs with the NPS' determination that rehabilitation of the

campground would have No Adverse Effect to historic properties (Appendix (letter from SHPO)). The NPS has contacted affiliated tribal governments through letter and is in consultation with the Bois Forte Band of Chippewa related to the matter.

Pedestrian survey of the proposed hiking trail corridor was undertaken on October 4, 2016 (M. Graves and A. LaBounty). No historic properties were identified. Additionally, based on sloping topography, numerous bedrock outcrops, thin soils, and increasing distance from the lakeshore, no potential was observed for archeological or ethnographic resources within the hiking trail corridor that would warrant additional survey. Previously identified archeological resources, as well as areas of higher potential for archeological / ethnographic resources (i.e. closer to the shoreline of Mukooda Lake on the west and Sand Point Lake on the east) are avoided by the proposed trail alignment.

Archeological resources identified within the Mukooda Lake Small Campground would be avoided by the proposed hiking trail, which passes behind (east of) the limits of the archeological site.

The proposed trail extension to the Filben cabin ruin (south of the Mukooda Lake Small Campground) formalizes a well-worn path and would not introduce new impacts. Interpretation of the ruin is appropriate, confirmed through consultation with the Minnesota Historical Preservation Office.

The proposed hiking trail would not affect historic properties. The Minnesota Historic Preservation Office concurs with the NPS' determination of No Historic Properties Affected (Appendix (letters from SHPO)). The NPS has contacted affiliated tribal governments through letter and is in consultation with the Bois Forte Band of Chippewa related to the matter.

### **3.2.3 Cumulative Impacts**

#### **Alternative A: No Action (Continue Current Management)**

Under this alternative current management practices will continue and we can expect continued impacts to archeological resources.

#### **Alternative B: Proposed Action (Redesigned Campground with Three Sites)**

Although there would still be activity on or near archeological resources, this alternative would help to direct foot traffic away from certain areas and to localize potential impacts.

### **3.3 Visitor Experience**

#### **3.3.1 Affected Environment**

The campground has historically received moderate use. Since the implementation of the overnight reservation system in 2015, the Mukooda campground has been occupied about 55% of the nights during the camping season (May 15 – Sep. 15). Of those occupied nights, 62% of the time there were less than 10 people in the campground, and only 8% of the time more than 18 people. In this time the maximum number of people in the campground in one night was 34 (75% capacity).

Summer season visitor use in Voyageurs National Park has typically meant fishing, motor boating, and camping, either in tents or houseboats. More recently, canoes and kayaks have become increasingly popular as well.

Due to the mobile nature of these activities, looking at recreational opportunities in a larger area is appropriate for impact analysis. For this topic, the affected environment will extend beyond the immediate footprint of the project area to include the southeastern end of the park, including Sand Point Lake, Grassy Bay, and the north shore of Crane Lake.

#### **3.3.2 Direct and Indirect Effects**

##### Alternative A: No Action (Continue Current Management)

Under this alternative minor campground rehabilitation such as replacing picnic tables and bear-proof food lockers would occur as needed. The campsites would not be moved, however, and the hiking trail would not be built. Conflict between campers due to poorly-defined sites and trails that lead through other camp sites would continue to occur.

Land-based recreational opportunities for visitors would be limited to the three visitor destination sites and three day use sites in the area (within 3 miles of Mukooda). There would still be no hiking opportunity for visitors.

##### Alternative B: Proposed Action (Redesigned Campground with Three Sites)

During the construction phase there will be some disruption of the camping experience for visitors.

Long-term, the proposed action should have a positive impact on visitor experience. The redesigned campground would provide a better camping experience by spreading the sites out. Campers would have a greater feeling of solitude and all three sites would be located along the shoreline providing better views and fewer bugs. Additionally, the redesigned campground trail system would eliminate the chance encounters of other campers walking through a camp site.

A developed day use site that is separate from the camp sites, interpretive media, an enlarged dock at the trailhead on Sand Point Lake, and a loop trail for day hiking could make Mukooda Lake a destination site of sorts for the Sand Point Lake region of the park, something that is currently missing in the area.

### **3.3.3 Cumulative Impacts**

#### Alternative A: No Action (Continue Current Management)

Under this alternative current management practices will continue and we can expect continued conflicts in the campground between overnight and day users due to poor site design and lack of defined day use areas. The need for land-based recreational opportunities would not be addressed.

#### Alternative B: Proposed Action (Redesigned Campground with Three Sites)

Hiking and day use opportunities at Mukooda would cause minimal environmental impacts and address the request for more recreation without needing to develop other locations. This development combined with a potential future visitor center at Crane Lake could result in a significant increase in visitor activity at the southeastern end of the park.

## **3.4 Fisheries**

### **3.4.1 Affected Environment**

The nearshore areas of lakes are important areas for fish spawning and provide habitat and forage for fish. The area from the current dock to King's Cabin (NPS housing unit near Mukooda) dock on Sand Point Lake is a very productive stretch of shoreline for fish. Mukooda Lake has an historic lake trout fishery that is threatened by warming temperatures. Although a regulation is in place preventing harvest of lake trout from Mukooda, there is still catch and release mortality, especially if the lake trout are caught in the warm summer months. The popular Mukooda fishery is open to harvest of all other gamefish species. Mukooda is also currently free of invasive spiny waterflea and regulations are in place to prevent the accidental introduction of aquatic invasive species including spiny waterflea into the lake. Any increase in fishing pressure will increase the threat of the introduction of invasive species, including spiny water flea, since it has been shown that there is less than perfect compliance with regulations in place to prevent the spread of invasive species (MN DNR Statewide Aquatic Invasive Species Advisory Committee 2017 Annual Report).

### **3.4.2 Direct and Indirect Effects**

#### Alternative A: No Action (Continue Current Management)

There would be no new or additional impacts to the Mukooda Lake fishery.

#### Alternative B: Proposed Action (Redesigned Campground with Three Sites)

There are several ways that the Mukooda Lake fishery may be affected by the proposed action, including two potential effects of increased fishing pressure (increased fishing pressure could directly affect fish populations and would increase the threat of introduction of invasive species) and the possible benefit of increased interpretive media helping the visitors become more informed about protecting resources.

It is likely that there will be increased fishing pressure associated with the proposed action since there will be larger dock capacity on Sand Point Lake at the Mukooda trailhead, a day use site will be added, and the overnight facilities in Mukooda will be improved and more attractive. Increased fishing pressure could negatively impact fish populations, especially lake trout for which Mukooda is currently closed to harvest due to low numbers of lake trout detected in index netting conducted by the Minnesota Department of Natural Resources. Even an increase in catch and release fishing for lake trout may increase stress on the lake trout population through release mortality, especially if lake trout are caught and released during the summer months when conditions are not as conducive to their survival after release. This would be a consequential negative impact. The lake trout in Mukooda Lake are native and are a genetically distinct strain. Because index netting results indicate that the population may be low enough that it could become extirpated due to additional stress, the Minnesota DNR closed the lake trout fishery to harvest.

Increased visitation would also increase the potential for invasive species or fish diseases being spread to Mukooda Lake since a greater number of people would be traveling to the lake and measured compliance rates show that a portion of visitors may not comply with aquatic invasive species related regulations (MN DNR Statewide Aquatic Invasive Species Advisory Committee 2017 Annual Report). If aquatic invasive species or fish diseases were introduced to Mukooda Lake, they would have a negative impact on the aquatic ecosystem of the lake, including the fishery. It is possible that the increased signage and interpretive media included in the proposed action would help protect resources through an increase in park visitors' awareness of resource stewardship.

The dock on Sand Point Lake at the Mukooda Lake trailhead would have a minor impact on nearshore fish habitat of Sand Point Lake at the dock site. The impact will be similar to that of the existing dock structure since the portion of the new dock attached to shore will be built on the footprint of the existing dock. A redesigned, larger dock would accommodate more boats and help alleviate an ongoing problem of boats tying up to shore.

### **3.4.3 Cumulative Impacts**

#### Alternative A: No Action (Continue Current Management)

Under this alternative current management practices will continue. Fishing pressure on Mukooda would likely not increase in the foreseeable future. Dock space on Sand Point would remain inadequate, forcing visitors to tie up to shore at times, potentially impacting spawning habitat.

Alternative B: Proposed Action (Redesigned Campground with Three Sites)

It is likely that there will be increased fishing pressure associated with the proposed action since there will be larger dock capacity on Sand Point Lake at the Mukooda trailhead and since the facilities in Mukooda will be improved and more attractive. Specifically, developing a day use site, improving the camping experience, and developing a day hiking trail would likely attract more people to the area and a percentage of those people would fish Mukooda Lake, increasing fishing pressure beyond current levels and raising the probability of introducing invasive species into the lake.



## CHAPTER 4: CONSULTATION AND COORDINATION

The NPS places a high priority on public involvement in the NEPA process and on giving the public an opportunity to comment on the proposed action. Consultation and coordination with American Indian Tribes and federal, state, and local agencies are also conducted to identify issues and concerns related to natural and cultural resources within the park. This chapter provides a summary of the public and stakeholder involvement and agency and Tribal consultation that occurred in the preparation of this EA.

### **4.1 Consultation and Coordination**

#### **4.1.1 Public Involvement**

A scoping letter and press release were distributed on June 10, 2015 to 78 government, tribal and private recipients. Two written comments were received.

The NPS also received 14 public comments during scoping. Two of the comments addressed issues beyond the scope of this EA. All of the remaining comments were supportive of the project. Of these comments, eight specifically mentioned more hiking opportunities, seven mentioned the need for improved camping facilities, five mentioned the need for more dock space on Sand Point Lake, and three mentioned the need for a day use/picnic area.

#### **4.1.2 NHPA Section 106 and Tribal Consultation**

Consultation with the Minnesota Historic Preservation Office and tribes affiliated with Voyageurs has been initiated and will continue through archeological testing and development of any additional mitigation measures.

The Programmatic Agreement for Section 106 between Voyageurs National Park and the State Historic Preservation Office (renewed 2016) requires that the park prepare an annual mailing to affiliated Indian tribes describing projects that have the potential to affect historic properties. A letter sent January 12, 2017 to 16 affiliated tribes contained detailed information about proposed Mukooda trail and campground. Park staff met with the Bois Forte Tribal Historic Preservation Officer on May 4, 2017 at the Bois Forte Heritage Center. Consultation with Bois Forte is ongoing. The park received one written response from the Mille Lacs Band. No other responses were received.

Voyageurs National Park and Midwest Regional Office staff met with staff from the Minnesota Historic Preservation Office for an annual meeting on May 23, 2017. Alternatives for rehabilitation of Mukooda campground and protection of archeological resources were discussed at this meeting. Additional testing is required to determine the

extent and eligibility of archeological resources and to guide public use. Testing is scheduled for spring 2018.

#### **4.1.3 Fish and Wildlife Service - ESA Section 7**

The Endangered Species Act (ESA) of 1973 (16 USC 1531 et seq.) requires examination of impacts to all federally-listed threatened, endangered, and candidate species. Section 7 of the ESA requires all federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitats. The NPS reached a finding of "No Adverse Affect" for Canada lynx, gray wolf, and northern long-eared bat for Section 7 purposes. The USFWS concurred with our determination in an email dated September 8, 2017 (Appendix E).

The NPS notified the Minnesota Department of Natural Resources (MN DNR) during scoping (June 2017) of the plan to develop an Environmental Assessment for the Mukooda development project and requested a MN DNR Natural Heritage review on November 2, 2017. The MN DNR concurred with our determination in a letter dated January 4, 2018 (Appendix D). If any state-listed species are documented during the work at Mukooda, the NPS will consult with the MN DNR on avoidance measures.

#### **4.1.4 Environmental Protection Agency**

The NPS notified the US Environmental Protection Agency (EPA) during scoping (June 2017) of the plan to develop an EA for the Mukooda project. The EPA replied with comments in a letter dated September 14, 2017 (Appendix F). EPA had three recommendations (abbreviated here with NPS response):

- Clarify the procedures and requirements for notifying the public about potential construction in the campground – A paragraph was added in section 3.4.2 to address this.
- Include information about signs or markings that direct users away from sensitive areas and towards new facilities – The improved trail at the campground will serve just this function. The trails will connect the individual campsites with the privy, well, and hiking trail and will discourage off-trail wandering between sites.
- Describe the sustainable features of any new structures (such as solar power, permeable pavement, reuse of construction materials, etc.) – VNP offers remote boat- and hike-in camping experiences at all of the campsites, including Mukooda. There is no power on site. All campsite features and trails are constructed according to the standards in the LCBC and Trails Plan. Improved trails such as the ones around the campground are covered in permeable crusher fines and the hiking trail will be native material. Timber edging and dock material are constructed of environmentally-preferred treated wood. Old treated lumber is reused for dock cribbing, as is crib rock. Undamaged dock cleats are also reused on new dock.

## 4.2 List of Preparers

The following individuals assisted in the preparation of this Environmental Assessment:

National Park Service:

John Snyder	Biologist/GIS Specialist, Voyageurs National Park
Mary Graves	Chief, Division of Resource Management, Voyageurs National Park
Andrew LaBounty	Archeologist/Integrated Resource Technician, Voyageurs National Park
Ryan Maki	Aquatic Ecologist, Voyageurs National Park
Steve Windels	Terrestrial Ecologist, Voyageurs National Park
James Lange	Planning Portfolio Manager, Midwest Regional Office

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## APPENDICES

### Appendix A – Scoping Letter



#### United States Department of the Interior

**NATIONAL PARK SERVICE**  
Voyageurs National Park  
360 Highway 11 East  
International Falls, MN 56649



IN REPLY REFER TO:

1.A.1 (permanent)

July 25, 2017

Dear Interested Party:

Voyageurs National Park is seeking initial public comments (“scoping”) to aid us in preparing a range of alternatives for redesigning the Mukooda Lake Small Campground and constructing a new hiking trail in the vicinity of the campground.

The Mukooda Lake campground pre-dates the establishment of the park and has never been rehabilitated and brought up to current Voyageurs campsite construction standards, including providing tent pads, as defined in the Lakecountry and Backcountry Site Management Plan. The individual sites in the campground are poorly defined, resulting in inefficient use of the facilities and loss of vegetation.

In addition to updating the campground, the National Park Service seeks to add more recreational opportunities in the Sand Point Lake area of the park. Currently there are no hiking trails in the eastern half of Voyageurs. A hiking trail in the Mukooda area was identified in the 2001 Voyageurs National Park General Management Plan but never implemented. This initial scoping effort is the next step in continuing the implementation of this Mukooda area trail concept.

Written comments on the issues identified for the Mukooda project should be submitted electronically to <http://parkplanning.nps.gov/Mukooda> no later than August 30, 2017. Written comments can also be mailed (postmarked no later than August 30, 2017) and should be addressed to: Superintendent, Voyageurs National Park, 360 Highway 11 East, International Falls, MN, 56649.

The alternatives developed with public input from this scoping period will be analyzed through an Environmental Assessment (EA). Further public comment and input on this project will be sought upon development of a Draft EA.

Please indicate if you want to stay on this mailing list and receive a copy of the draft EA. Should you have any questions, contact Biologist John Snyder at 218-283-6690 or email at [john\\_s\\_snyder@nps.gov](mailto:john_s_snyder@nps.gov).

We look forward to receiving your comments on this topic.

Sincerely,

Robert DeGross  
Superintendent

## Appendix B – Best Management Practices

Regardless of which alternative is chosen, Voyageurs National Park would employ a suite of mitigation measures and Best Management Practices (BMPs) designed to reduce non-target impacts on other resources. The specific mitigation measures or BMPs to be employed would depend upon the treatment option selected, the location, and the potential impact of the selected treatment option(s). The mitigation measures and BMPs include but are not limited to the following:

**General Invasive Species BMPs:** To minimize the potential impacts from personnel and equipment, the following general BMPs would be implemented where appropriate:

- Aquatic Invasives
  - Bring a separate set of gear that is likely to contact lake water to use on the interior lakes, or before using any gear on an interior lake, make sure that all gear has been thoroughly dried for at least 5 days or washed with hot water (>140 degrees F) for at least one minute.
  - When leaving any lake, remove aquatic plants and animals, including gelatinous or cotton batting-like material from equipment, including fishing line.
- Terrestrial Invasive Plants
  - When planning projects that will disturb grasses, forbs, and shrubs and result in bare ground - even temporarily - land managers must incorporate weed prevention and control into project layout, design, and evaluation, as well as all project decisions. Consider how to rebuild or maintain healthy plant communities that will effectively compete with weeds after the disturbance.
  - Before ground-disturbing activities begin, inventory and prioritize weed infestations for treatment in the project operating areas and along access routes. Identify what weeds are on site or within the project's vicinity and do a risk assessment accordingly.
  - Restrict movement of equipment or machinery from weed-contaminated areas to non-contaminated areas.
  - Identify sites where equipment can be cleaned. Remove mud, dirt, and plant parts from project equipment (preferably with a 2,000-PSI pressure washer) before moving it into a project area. Seeds and plant parts should be collected and



incinerated. The cleaning area should be monitored for weeds for several years following.

- Prevent the introduction and spread of weeds caused by infested sand, gravel, and fill material. If sources of sand, gravel, and fill are infested, eradicate the weeds, then strip and stockpile the contaminated material for several years, if possible, to further deplete the soil seed bank. Check regularly for weed re-emergence.
- Avoid creating environmental conditions that promote weed germination and establishment. Minimize soil disturbance.

**Cultural Resources BMPs:** To ensure that management activities do not adversely affect cultural or ethnographic resources, the park would employ the following BMPs and mitigation measures where appropriate:

- Each area that would receive ground disturbance from construction or other activities will be evaluated by the park archeologist and a recommendation made to: 1) monitor during activity; 2) survey prior to activity; or 3) avoid the area. Recommendations will be based on the presence and intensity of prior archeological survey, as well as the potential for archeological resources based on soils, landform characteristics, elevation, geographical location, and other relevant factors.
- If a survey is required prior to work, an evaluation of archeological significance and data potential may lead to additional recommendations, including avoidance. Archeological survey prior to treatment and monitoring during treatment will be carried out by the park archeologist.
- If cultural resources are inadvertently discovered during sub-surface ground disturbing activities, the project manager would suspend operations at the site and immediately contact the park archeologist.

**Visual/Noise BMPs:** To minimize the impacts of management activities on visual resources and soundscapes, Voyageurs National Park would employ the following BMPs and mitigation measures where appropriate:

- Use of equipment in high visibility areas would be avoided to the extent feasible. If it cannot be avoided, activities would be timed to have the least impact on visitors.
- Use of noise-producing equipment for treatment would be limited in soundscapes and/or timed to reduce activities that impact ambient noise levels in soundscapes during peak use.

- Removed vegetation would be hauled away to avoid unsightly piles.

**Wildlife BMPs:** To minimize the impacts of management activities on general wildlife species (i.e., species that are not federally or state listed), Voyageurs National Park would employ the following BMPs and mitigation measures where appropriate:

- Physical disturbance to ground nesting birds and other animals would be avoided, to the extent possible.
- Activities would be timed to avoid prime bird nesting times.

**Threatened, Endangered, or Sensitive Species BMPs:**

Voyageurs National Park would employ the following BMPs to reduce or eliminate potential impacts to federally listed, candidate, and or otherwise special status species:

- Field personnel would be trained to recognize and avoid threatened, endangered, and candidate species in their work sites and travel routes, and would be provided information on locations of known habitats for listed or candidate species.

If any proposed activity has the potential to adversely affect listed or candidate species, NPS would formally consult with the USFWS prior to any action. The park would also implement species-specific BMPs designed to prevent non-target impacts on wildlife species listed as threatened, endangered, or candidates for listing under the ESA. Some of these measures are described below. However, as new protective measures for federally listed or candidate species are developed by the USFWS, those measures would also be implemented as appropriate. Similarly, as new species are listed under the ESA, parks would be responsible for implementing protective measures for those newly listed species prior to invasive species treatment actions as appropriate.

- **Gray Wolf (*Canis lupus*)**

It is unlikely that campsite and trail construction would affect wolves, however, if wolves are present in the area, no management activities would be conducted within the area of any dens, foraging areas, or rendezvous sites.

- **Canada Lynx (*Lynx canadensis*)**

It is unlikely that campsite and trail construction would affect lynx. If any lynx are known to be in the area, no management activities would be conducted within the area of dens or foraging areas.

- **Northern Long-eared Bat (*Myotis septentrionalis*)**

These are cave-roosting bats that may use riparian areas for foraging. Any management activities would be avoided in the area of this population. If any mature trees are targeted for removal, the area will be surveyed for roosting bats prior to tree felling.

- **Bald Eagle (*Haliaeetus leucocephalus*)**

The bald eagle continues to be protected by the Bald and Golden Eagle Protection Act even though it has been delisted under the Endangered Species Act. Park staff perform annual bald eagle nest surveys and all active nests are recorded. Any activities near these active nests would be postponed until the young have been fledged or the nest abandoned.

Species listed as threatened, endangered, or special concern by the State of Minnesota, also found to be present in the park, and potentially in the project area are listed below. If any species are found in areas proposed for management, park staff would consult with the MN DNR prior to any action. Further, any newly listed species or updated BMPs will be followed where appropriate.

- **Hairgrass (*Agrostis hyemalis*)**

Endangered. This is an upland species and unlikely to be impacted by aquatic vegetation management. However, areas will be avoided if found to be present.

- **Floating Marsh Marigold (*Caltha natans*)**

Endangered. Any management activities would be avoided in areas where found to be present.

- **Piping Plover (*Charadrius melodus*)**

Endangered. This species is only present during migratory periods. Areas will be surveyed for signs of these birds prior to any management activities and avoided if found.

- **Water Pygmyweed (*Crassula aquatica*)**

Threatened. Any management activities would be avoided in areas where found to be present.

- **Rock Stitchwort (*Minuartia dawsonensis*)**

Threatened. Any management activities would be avoided in areas where found to be present.

- **Wilson's Phalarope (*Phalaropus tricolor*)**

Threatened. This species is only present during migratory periods. Areas will be surveyed for signs of these birds prior to any management activities and avoided if found.

- **Horned Grebe (*Podiceps auritus*)**  
Endangered. This species is only present during migratory periods. Areas will be surveyed for signs of these birds prior to any management activities and avoided if found.
- **Common Tern (*Sterna hirundo*)**  
Threatened. Areas will be surveyed for signs of this species (including nests) prior to any management activities and avoided if found.
- **Water Awlwort (*Subularia aquatica*)**  
Threatened. Any management activities would be avoided in areas where found to be present.
- **Common Snapping Turtle (*Chelydra serpentina serpentina*)**  
Species of Special Concern. Areas will be surveyed for signs of this species prior to management activities. Animals will be relocated or area will be avoided if found.
- **Yellow Rail (*Coturnicops noveboracensis*)**  
Species of Special Concern. Areas will be surveyed for signs of this species prior to management activities and avoided if found.

## Appendix C – Letter from Minnesota Department of Natural Resources



Minnesota Department of Natural Resources  
Division of Ecological & Water Resources  
500 Lafayette Road, Box 25  
St. Paul, MN 55155-4025

January 4, 2018  
Correspondence # ERDB 20180249

Mr. John Snyder  
National Park Service - Voyageurs National Park  
360 Highway 11 East  
International Falls, MN 56649

RE: Natural Heritage Review of the proposed Mukooda Lake Trail & Campsite Development,  
T66N R17W Sections 25, 26, 35 & 36; St. Louis County

Dear Mr. Snyder,

As requested, the above project has been reviewed for potential effects to known occurrences of rare features. Given the project details provided with the data request form and the plant survey conducted by National Park Service staff, I do not believe the proposed project will negatively affect any known occurrences of rare features.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area. **If additional information becomes available regarding rare features in the vicinity of the project, further review may be necessary.**

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location (noted above) and the project description provided on the NHIS Data Request Form. Please contact me if project details change or for an updated review if construction has not occurred within one year.

The Natural Heritage Review does not constitute review or approval by the Department of Natural Resources as a whole. Instead, it identifies issues regarding known occurrences of rare features and potential effects to these rare features. To determine whether there are other natural resource concerns associated with the proposed project, please contact your DNR Regional Environmental Assessment Ecologist (contact information available at [http://www.dnr.state.mn.us/eco/ereview/erp\\_regioncontacts.html](http://www.dnr.state.mn.us/eco/ereview/erp_regioncontacts.html)). Please be aware that additional site assessments or review may be required.

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources. Please include a copy of this letter in any state or local license or permit application. An invoice will be mailed to you under separate cover.

Sincerely,

A handwritten signature in black ink that reads "Samantha Bump". The signature is written in a cursive, flowing style.

Samantha Bump  
Natural Heritage Review Specialist  
[Samantha.Bump@state.mn.us](mailto:Samantha.Bump@state.mn.us)

## Appendix D – Correspondence from US Fish and Wildlife Service



United States Department of the Interior  
FISH AND WILDLIFE SERVICE  
Ecological Services  
Minnesota-Wisconsin Field Office  
4101 American Boulevard East  
Bloomington, Minnesota 55425-1665  
Phone: (952) 252-0092 Fax: (952) 646-2873



September 8, 2017

Mr. Steve Windels  
National Park Service  
Voyageurs National Park  
360 Highway 11 East  
International Falls, Minnesota 56649

FWS No. 03E19000-2017-I-0922

Mr. Windels:

The U.S. Fish and Wildlife Service (Service) received your request for concurrence that proposed actions associated with the Mukooda Lake Development may affect, but are not likely to adversely affect Canada lynx (*Lynx canadensis*), lynx critical habitat, gray wolf (*Canis lupus*), wolf critical habitat, and northern long-eared bat (*Myotis septentrionalis*), in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

The Mukooda Lake Development (Project) is located within Voyageurs National Park, St. Louis County, MN and includes construction of a 2.5 mile trail on Mukooda Lake, rehabilitation of the Mukooda campground, and building of a short 0.4 mile connecting trail from the campground to the historic Filben site on Mukooda Lake.

### Canada lynx and lynx critical habitat

We concur with your determination that the proposed project may affect but will not likely adversely affect the Canada lynx. Impacts to the species resulting from the loss of approximately 1.4 acres (4-foot trail width X 2.9 miles) of available habitat are anticipated to be insignificant or discountable within the action area, based on the reasons that follow.

- Approximately 1.4-acres of suitable habitat will be cleared; however, the habitat is not limiting and the project area is already partly influenced by human disturbance at the existing campground.

- Canada lynx are rarely observed in the area and the proposed project is not anticipated to reduce habitat connectivity or impact existing lynx travel corridors.

Further, we concur that the proposed project will not adversely affect lynx critical habitat. Critical habitat for lynx is defined as boreal forest landscapes supporting a mosaic of differing successional forest stages and containing the following Physical and Biological Features (PBF):

- a. Presence of snowshoe hares and their preferred habitat conditions, including dense understories of young trees or shrubs tall enough to protrude above the snow;
- b. Winter snow conditions that are generally deep and fluffy for extended periods of time;
- c. Sites for denning having abundant coarse, woody debris, such as downed trees and root wads; and
- d. Matrix habitat (e.g. hardwood forest, dry forest, non-forest, or other habitat types that do not support snowshoe hares) that occurs between patches of boreal forest in close juxtaposition (at the scale of a lynx home range) such that lynx are likely to travel through such habitat while accessing patches of boreal forest within a home range.

Specifically, the relatively small takings of forest stands when compared with the available habitat will not appreciably change the amount of foraging habitat (PBF a and b) and suitable denning habitat (PBF c). Within the approximate 1.4 acres project area, the understory is not anticipated to be appreciably reduced and should continue to provide suitable habitat for lynx prey species (PBF a) or movement (PBF d).

#### **Gray wolf and gray wolf critical habitat**

We concur with your determination that the proposed project may affect but will not likely adversely affect the gray wolf. Impacts to the species from loss of available suitable habitat are anticipated to be insignificant or discountable within the action area based on the reasons that follow.

- Approximately 1.4-acres of suitable habitat will be cleared; however, the habitat is not limiting and the project area is already partly influenced by human disturbance at the existing campground.

Further, we concur that the proposed project will not adversely affect gray wolf critical habitat. The project lies within contiguous boreal forest. Because the resulting trail will be a narrow corridor through otherwise intact habitat, it will not interfere with travel by gray wolf or result in the loss of a significant amount of available habitat. Rehabilitation and slight enlargement of the existing campground is not anticipated to appreciably reduce available critical habitat as the surrounding areas are already subject to human disturbance.



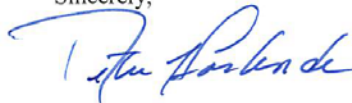
**Northern long-eared bat**

We concur with your determination that the proposed project may affect but will not likely adversely affect the northern long-eared bat. Impacts to the species resulting from the loss of approximately 1.4 acres of available habitat are anticipated to be insignificant or discountable within the action area, based on the reasons that follow.

- Forested habitat within the approximate 1.4-acres project area may be cleared; however, forested habitat is not limiting.
- As stated in your letter, no clearing or removal of trees greater than 3 inches DBH may occur between June 1 and July 31 to avoid the northern long-eared bat pupping season. The removal of trees may still occur at a time when bats are present on the landscape and utilizing forested habitat and this action could result in direct effects to the species. Although possible, the probability that a northern long-eared bat will be present in any of the trees along this corridor when they are felled is likely to be extremely low based on what we know about bat populations in the area.

This concludes consultation under section 7 of the ESA. Please contact the Service if the project changes or new information reveals effects of the proposed action to proposed or listed species or critical habitat to an extent not covered in your BA. If you have questions, please contact Mr. Andrew Horton, Fish and Wildlife Biologist, at 952-252-0092 ext. 208.

Sincerely,



Peter Fasbender  
Field Supervisor

## Appendix E – Letter from US Environmental Protection Agency

received 9/18/17



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

SEP 14 2017

Robert DeGross  
Superintendent  
Voyageurs National Park  
360 Highway 11 East  
International Falls, Minnesota 56649

REPLY TO THE ATTENTION OF:

**Re: Scoping for the Environmental Assessment for the Mukooda Lake Small Campground, Voyageurs National Park St. Louis County, Minnesota**

Dear Mr. DeGross:

The U.S. Environmental Protection Agency has reviewed the scoping request provided by the National Park Service (NPS) for the Mukooda Lake Small Campground project at Voyageurs National Park in St. Louis County, Minnesota. Our comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.


NPS proposes redesigning the Mukooda Lake Small Campground and constructing a new hiking trail in the vicinity of the campground. The campground pre-dates establishment of the park and has never been brought up to current campsite standards (including tent pads and clearly designated spaces). In addition, NPS aims to add additional recreational activities in the eastern part of the Park, which are currently lacking.

Based on the information provided, we have the following recommendations to aid in the development of the Draft Environmental Assessment (EA):

- Clarify the procedures and requirements for notifying the public about potential construction and modification of the campgrounds. In particular, EPA expects that users of the campground and area expect a degree of solitude. We recommend NPS ensure visitors are made aware of potential impacts as a result of construction, including noise and emissions.
- Include information about signs or markings that direct users away from vegetation and other sensitive areas and towards new facilities, such as campsites and appropriate trails. Signage (covering the different phases of construction, maintenance activities, and anticipated final results, among others) at the campsite and any restoration areas is strongly encouraged and should be tailored to the different types of users (snowmobilers, boaters, campers, etc.) who use the area.
- We remind NPS to describe the sustainable features of any new structures (such as solar power, permeable pavement, beneficial reuse of construction waste materials, etc.).

Thank you in advance for your consideration of our comments. We look forward to reviewing the Draft EA. If you have any questions, please feel free to contact me or Elizabeth Poole of my staff at (312) 353-2087 or [poole.elizabeth@epa.gov](mailto:poole.elizabeth@epa.gov).

Sincerely,



Kenneth A. Westlake  
Chief, NEPA Implementation Section  
Office of Enforcement and Compliance Assurance

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cc: John Snyder, National Park Service  
Scott Blackburn, National Park Service

## Appendix F – Letter from State Historic Preservation Office



November 28, 2018

Robert J. DeGross, Superintendent  
National Park Service  
Voyageurs National Park  
360 Highway 11 East  
International Falls, MN 56649-8802

Re: Develop Recreational Facilities at Mukooda Lake – Voyageurs National Park  
Construction of a new loop trail near Mukooda Lake, rehabilitation of NPS Small Campground S12, and construction of a new spur trail to the Filbin Cabin ruins  
Saint Louis County  
SHPO No. 2019-0253

Dear Mr. DeGross,

Thank you for initiating consultation on the above project. Information received in our office on 29 October 2018 has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by Section 106 of the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800 and pursuant to the terms of the 2016 Programmatic Agreement between the National Park Service (Voyageurs National Park) and the Minnesota State Historic Preservation Office.

We have reviewed the documentation included with your October 23, 2018 submittal. The comments provided below are based upon the documentation included with your current submittal and David Mather's field visit to Mukooda Lake with Drew LaBounty on September 27, 2018.

### Trail Construction near Mukooda Lake

As we understand it, three archaeological sites have been identified within the general project area, closer to the shoreline of Mukooda Lake, archaeological sites 21SL84, 21SL174 and 21SL1034. According to the information included with your submittal, these sites are located outside the area of potential effects (APE) for the loop trail project. A Phase I archaeological survey was conducted for the trail route and no archaeological sites were identified. Therefore, we agree with your agency's determination that **no historic properties will be affected** by the construction of this loop trail.

### Rehabilitation of Small Campground S12

One archaeological site has been identified within the APE for the campground rehabilitation project, archaeological site 21SL176. We agree that site 21SL176 is **eligible** for listing in the National Register of Historic Places (NRHP). We also agree that the proposed redevelopment of the campground will result in better long-term preservation of the site by limiting soil erosion. Revegetation of the currently exposed mineral soil within the site will also improve the site's historical integrity. Therefore, we agree with your agency's determination that this project will have **no adverse effect** on historic properties.

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MINNESOTA STATE HISTORIC PRESERVATION OFFICE

50 Sherburne Avenue ■ Administration Building 203 ■ Saint Paul, Minnesota 55155 ■ 651-201-3287

[mn.gov/admin/shpo/](http://mn.gov/admin/shpo/) ■ [mnshpo@state.mn.us](mailto:mnshpo@state.mn.us)

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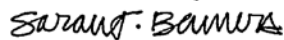
**Spur Trail Construction to the Filbin Cabin and Vegetation Management**

We agree that it is appropriate to clear woody vegetation from within the Filbin Cabin foundation ruins and in the immediate vicinity, to protect the site from future damage by growing trees. It is also appropriate to interpret the site from the hiking trail. This is a compelling site, and it may still be eligible for the listing in the NRHP despite the removal of the structure in the 1990s. The site retains excellent integrity and, given the unique historical context of the site, it is possible that it would be eligible under all four National Register criteria. However, a Phase II evaluation would be needed to confirm the site's eligibility. Based upon information provided to our office regarding the proposed undertaking, we agree with your agency's determination that construction of the spur trail and vegetation clearing will have **no adverse effect** on historic properties.

Implementation of the undertakings in accordance with this finding, as documented, fulfills your agency's responsibilities under Section 106. If your agency does not construct the undertakings as proposed, including, but not limited to, a situation where design changes to the currently proposed projects divert substantially from what was presented at the time of this review, or design changes involving undisturbed ground are made for the undertakings following completion of this review, then your agency will need to reopen Section 106 consultation with our office pursuant to 36 CFR 800.5(d)(1).

Please feel free to contact Kelly Gragg-Johnson, Environmental Review Specialist, at (651) 201-3285 or [kelly.graggjohnson@state.mn.us](mailto:kelly.graggjohnson@state.mn.us) if you have any questions regarding our review of this project.

Sincerely,



Sarah J. Beimers  
Environmental Review Program Manager