

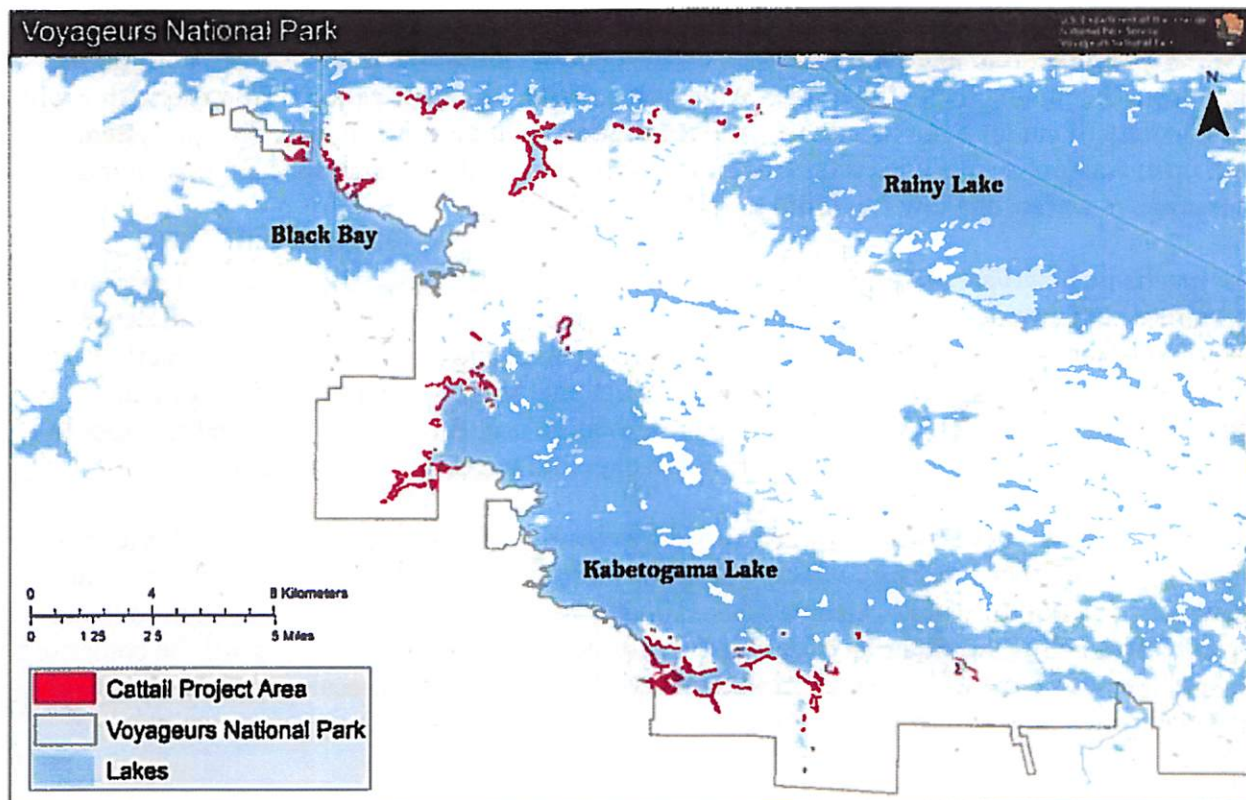
FINDING OF NO SIGNIFICANT IMPACT
Cattail Control Plan and Environmental Assessment
Voyageurs National Park
February 2017

INTRODUCTION

In accordance with the National Environmental Policy Act of 1969 (NEPA) and implementing regulations published by the Council on Environmental Quality (CEQ), the National Park Service (NPS) prepared an Environmental Assessment (EA) to evaluate the potential environmental, social, cultural and historical impacts of alternatives associated with controlling cattails and restoring degraded wetlands within Voyageurs National Park. This Finding of No Significant Impact (FONSI) documents the decision to implement the project and outlines the determination that no significant impacts on the human environment are associated with this decision. Mitigation measures and a summary of agency coordination and public comment are also provided.

Project Location

The project is located in Voyageurs National Park which is situated on the southern portion of the Canadian Shield along the United States-Canada border separating Minnesota and northwestern Ontario. The project area includes wetlands on Rainy and Kabetogama Lakes that have been invaded by hybridized cattails.



Purpose of the Proposed Action

- Decrease the impacts on wetlands by invasive plants to promote the restoration of natural and cultural resources, and increase recreational and educational opportunities in the park.
- Develop environmentally sound, cost effective invasive plant management strategies that pose the least possible risk to people and park resources.
- Protect and enhance natural wetland value.

Need for the Action

- Invasive wetland plants have replaced native vegetation in many areas within Voyageurs, causing an overall decline in species richness and diversity, adversely impacting natural and cultural resources.
- As a result of Minnesota regulations, the park is prohibited from using herbicide in aquatic applications.
- Mechanical treatment options for controlling large dense stands of invasive plants in Voyageurs are not addressed in an existing plan or compliance document.
- A comprehensive evaluation of potential impacts associated with invasive plant management is needed to educate park staff on the potential effects of various treatment methods.
- There is lack of public awareness about invasive wetland plants.

SELECTED ALTERNATIVE

The EA examined four alternatives. Based on the analysis presented in the EA and considering input from the public, the NPS selected Alternative D (the proposed action). This alternative will use a variety of cattail removal and wetland restoration techniques to create a diverse system with open water channels and patches of cattails (and other native marsh species) that would encourage muskrats and other wildlife to repopulate the area.

The mechanical harvest of non-native cattails in selected bay or bays will be conducted as an experiment to better understand the effectiveness of this treatment method. In areas of dense floating invasion, non-native hybrid cattails would be mechanically removed using plant mulching and harvesting barges. Any cattails not accessible by harvesting equipment will be removed with hand tools designed for aquatic vegetation use. Burning may be used as a tool to reduce cattail biomass prior to harvesting and to expedite the composting process.

Areas of non-floating cattail will be controlled by clearing of the biomass above the ice level in winter (by burning or scraping), which will allow increased water levels in spring and summer to drown-out and kill the cattail rhizome mats. Aquatic vegetation cutters may also be used to cut rooted cattail below the water level during the summer. The harvested biomass will be composed on-site to reduce costs of hauling. Periodic (every 10-20 years), small-scale removal of cattails may occur if cattails reinvade treated areas.

The effectiveness of reintroducing and enhancing muskrat populations will be assessed as a native biocontrol. The economic and environmental feasibility of native biocontrol will be compared to mechanical control techniques.

A combination of methods will be used to reestablish native vegetation following the removal of cattails. Removal of cattail mats will allow dormant seeds to germinate without any further effort. Propagating plants in a native plant nursery, transplanting plants from nearby sites, and directly-sowing seeds will be used to reestablish a diverse community of native species.

The NPS evaluated three other alternatives in the EA:

Alternative A (No Action) – Under the no-action alternative, the Park would not remove cattail and restore wetlands. The park would continue the current policy to push floating cattail mats to the nearest shore and temporarily secure by tying off to a tree or staking to remove the immediate hazard. Once a more appropriate location is determined (ideally back to the original colony to avoid transferring cattails to an uninvaded bay), the mat would be moved to that location and staked until it can be treated or removed.

Alternative B (Manually Treat Small Areas Only) – Under this Alternative, hand tools (powered and non-powered) would be used to cut cattails underwater. Since hand tools would be used, this Alternative would be limited to treatment of small patches of cattails and non-treatment of large areas invaded by cattails. Once canopy cover of invasive cattails is reduced or eliminated in an area, seeds or seedlings of appropriate native plants would be sowed or planted in the area providing direct competition for the cattails.

Alternative C (Mechanically Harvest Large Areas of Cattail) – Under this alternative, large mechanical equipment such as mulching and harvesting barges would be used to harvest non-native cattails in a selected bay or bays. All biomass that is mechanically cut/chopped would be removed from the water. Restoration efforts would include re-vegetating using a combination of re-seeding and planting plugs or “wildings” collected from the area.

SIGNIFICANCE CRITERIA

The selected alternative (Alternative D) will not have a significant effect on the human environment. This conclusion is based on the following examination of the significance criteria as defined in 40 CFR Section 1508.27.

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

No major long-term or permanent adverse impacts were identified. The EA shows that there would be minor negative impacts of temporary increased turbidity, oxygen demand, and potential algal blooms in locations where mulching/harvesting barges are used. The use of fire as a means of biomass reduction prior to treatment would reduce these temporary, negative impacts. There could be temporary minor impacts to small fish, minnows, and aquatic invertebrates killed where harvesters are used or by changes in turbidity, oxygen levels, and algal blooms but a long-term moderate positive impact for fish through increases in feeding and spawning habitat. The

mulching/harvesting barges could cause temporary minor negative impacts including mortality of wildlife unable to vacate areas; long-term, restoring diverse native marsh habitat parkwide should increase wildlife use. The Selected Alternative should have the largest, long-term positive impact on wetlands and overall vegetation biodiversity in the park. Navigation, fishing, and wildlife viewing should be enhanced.

(2) The degree to which the proposed action affects public health or safety.

Significant effects to public health and safety were not identified during the development of the EA.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetland, wild and scenic rivers, or ecologically critical areas.

There are 11 known archeological sites within 50 meters of identified cattail mats. Each area proposed for treatment will be evaluated by a park archeologist and a recommendation made to monitor during treatment, survey prior to treatment, or avoid treatment area. Consultation with tribes is ongoing to ensure that there are no traditional use areas within the project area.

Wetlands throughout the park's two main water bodies (Rainy Lake and Namakan Reservoir) have been inundated by hybridized cattails, reducing habitat and species diversity. The Selected Alternative should result in an overall decrease in invasive cattails parkwide, restore the diversity of wetland vegetation, and increase fish and wildlife habitat.

(4) The degree to which effects on the quality of the human environment are likely to be highly controversial.

A press release was issued and the EA was mailed or emailed to 85 government agencies, tribes, organizations, and businesses on November 4, 2016 for 30-day review. At the request of the EPA, the deadline was extended to December 19, 2016. Seven comments were received on the EA. No controversial issues were raised during the comment period.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

Mechanical removal of cattails has been successfully accomplished by American Indian and First Nations communities in the area, including the Bois Forte and Fond du Lac Bands, and the Seine River First Nations in Ontario. The efficacy on lakes in the park is unknown. Lake size and morphology, substrate, and water level management are all different amongst the various lakes. Under the Selected Alternative, mechanical harvest of non-native cattails will be conducted in a selected bay (Black Bay) as an experiment to better understand the effectiveness of this treatment method as well as potential impacts before using this technique in other areas of the park. Pre-treatment wildlife and vegetation surveys are being conducted and post-treatment wetland biodiversity monitoring will be conducted following cattail removal and restoration. There is some uncertainty about the effectiveness of mechanical removal of cattails, but the possible

effects on the human environment will not be significant. Further, mechanical harvest of non-native cattails will be conducted in a selected bay (Black Bay) as an experiment to better understand the effectiveness of this treatment method. No highly uncertain effects were identified during the planning for this project, and no effects associated with the selected alternative involve unique or unknown risks.

(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

The selected alternative does not establish a precedent for future actions with significant effects, nor does it represent a decision in principle about a future consideration.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

Under the selected alternative, there are no past, present, or reasonably foreseeable future actions whose effects, when combined with the effects of this action, result in cumulative effects.

(8) Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

The action will not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing on the National Register of Historic Places. Best Management Practices are in place to ensure that actions do not adversely affect cultural or ethnographic resources. The NPS consulted with the Minnesota Historic Preservation Office (MHPO) on the Great Lakes Integrated Pest Management Plan and the HPO concurred with the NPS finding of no adverse effect in a letter dated June 25, 2012. The MHPO concurred with the BMPs for protecting cultural resources and asked to be consulted further on implementation plans specific to each park. The NPS consulted with the MHPO on August 22, 2016 on the plans for wetlands restoration/cattail control in Voyageurs. The MHPO concurred with the NPS determination that this project will have no adverse effect on historic properties in a letter dated September 23, 2016.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

The NPS reached a finding of "No Effect" for Canada lynx, gray wolf, and northern long-eared bat for Section 7 purposes. The USFWS concurred with our determination in an email dated January 26, 2016. In addition, Best Management Practices are in place to reduce or eliminate potential impacts to federally listed, candidate, and or otherwise special status species. Treatment locations are sites with cattail monocultures and unlikely to harbor any endangered, threatened, and species of special concern.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The selected alternative does not threaten to violate any Federal, State, or local law. The NPS consulted with the MN DNR on October 21, 2015 on permit requirements. The NPS submitted an application to the MN DNR for a permit to control aquatic vegetation in November 28, 2016 and the permit was issued on February 15, 2017. Park staff will work with MN DNR staff on a Lake Vegetation Management Plan if it is required for the permit.

The NPS will consult with the MN DNR Endangered Species Review Coordinator if state-listed species are documented in the project area. Of the four state-listed bird species, breeding 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. Piping plover (*Charadrius melodus*) are a verified species for Voyageurs, but as a transient (migrant) (Grim 1986). The park is in range of rare occurrence (Sibley 2000). If active nests of any of the state-listed species are discovered during surveys, the timing of the cattail removal operations will be adjusted to avoid potential impacts.

The NPS contacted the U.S. Army Corps of Engineers (USACE) on January 5, 2016 to discuss the project and permit requirements. The USACE requested that the NPS submit a Joint Application Form for Activities Affecting Water Resources in Minnesota. This joint application is the accepted means for initiating review of proposals that may affect a water resource in the State of Minnesota under state and federal regulatory programs.

A scientific collection for research purposes permit administered by the Minnesota Department of Natural Resources Ecological and Water Resources division will be required for activities outside of NPS boundaries and is currently pending approval for capture, handling, transport, and release of muskrats.

MITIGATION MEASURES

1. **Wetland biodiversity monitoring:** Wildlife and vegetation surveys are being conducted on wetlands in bays of Rainy, Kabetogama, Namakan, Sand Point, and Crane Lakes. Monitoring sites were randomly chosen within accessible bays on the large lakes. Measurements of cattail abundance will be correlated with measurements of native plant and wildlife diversity. This will provide a better understanding how wetland ecosystems are impacted by cattails and the potential benefits of wetland restoration methods.
2. **Treatment plans:** Individual wetland evaluations will be completed by determining the abundance, density, and type (e.g. floating vs rooted) of cattail and other vegetation. This will help determine the appropriate treatment type for cattail removal. For example, a wetland with mostly floating cattail will receive mechanical harvesting barge treatment as this is likely the only viable treatment option. Wetlands with mostly rooted vegetation are not accessible by floating barges and are better candidates for winter scraping or burning. Similarly, the individual wetland evaluations will be used to determine the most appropriate means of revegetation techniques. An example of this would be wetlands

with deeper water depths will be revegetated with species likely to grow in these areas such as wild rice or rushes versus shallow areas which are more conducive to sedges or grasses.

3. **Post-treatment wetland biodiversity monitoring:** The wildlife and vegetation surveys completed before treatments will also be carried out following cattail removal and restoration. This will help determine the efficacy of treatment types and the revegetation. This will also help determine any potential impacts of the treatments and revegetation on wetland ecosystems as well as the cost efficiency of various treatment types and restoration processes.
4. **Muskrat enhancement and reintroduction:** Protocols will be developed where appropriate for the capture, handling, transport, fitting of radio transmitters or other tagging or tracking devices, and release of muskrats. All protocols will be developed to meet the guidelines recommended by the American Society of Mammalogists (Sikes et al. 2011) and will be approved by National Park Service and other appropriate Animal Care and Use Committees.

Voyageurs will also employ a suite Best Management Practices (BMPs) designed to reduce non-target impacts on other resources. A list of these is included in Appendix B.

PUBLIC INVOLVEMENT

A scoping letter was issued on June 10, 2015 and emailed or mailed to local, state, and federal governments, tribes, local and partner organizations, and all resorts in the park's gateway communities. A press release was issued to local and regional newspapers on the same day. Two written comments were received from the public. A draft EA was made available for public review and comment through the NPS's Planning, Environment and Public Comment (PEPC) website from November 4 through December 9, 2016. At the request of the U.S. EPA, the comment period was extended to December 19. The NPS received five comments from the public through PEPC and one emailed comment.

FINDING OF NO SIGNIFICANT IMPACT

Based on my consideration of the analysis of potential impacts contained in the EA, the Selected Alternative will not have a significant impact on the human environment either by itself or considering cumulative impacts. Accordingly, the requirements of the National Environmental Policy Act, regulations promulgated by the President's Council on Environmental Quality, and the provisions of National Park Service (NPS) Director's Order 12 and Handbook (Conservation Planning and Environmental Impact Analysis and Decision-Making) have been fulfilled.

I find that the selected alternative does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, in accordance with the National Environmental Policy Act of 1969, as amended, and regulations of the Council on Environmental Quality (40 CFR 26 1508.9), an environmental impact statement will not be prepared for this project.

Recommended: _____

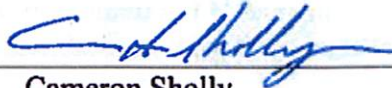


Robert J. DeGross
Superintendent, Voyageurs National Park

3-29-2017

Date

Approved: _____



Cameron Sholly
Regional Director, Midwest Region

3-29-2017

Date

Voyageurs National Park Cattail Control Plan and Environmental Assessment

Appendix A: Determination of Non-Impairment

National Park Service's *Management Policies 2006* require analysis of potential effects to determine whether or not actions would impair park resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.

However, the laws do give the National Park Service the management discretion to allow adverse impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specially provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources and values. An impact to any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- Identified in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute impairment if it is an unavoidable result of an action necessary to pursue or restore the integrity of park resources or values and it cannot be further mitigated.

Park resources and values that are subject to the non-impairment standard include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells;

water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;

- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. Impairment findings are not necessary for visitor experience because impairment findings relate back to park resources and values, and these impact areas are not generally considered park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values. This determination on impairment has been prepared for the preferred alternative described in Chapter 2 of this EA. An impairment determination is made for water quality, wetland vegetation, fish and aquatic invertebrates, and wildlife.

Water Quality

The use of fire as a means of biomass reduction prior to treatment would reduce the levels of nutrients entering the system. This should reduce the minor negative impacts described in alternative C of temporary increased turbidity, oxygen demand, and potential algal blooms. The additional cattail control methods used for the rooted cattail areas such as winter cut at ice level and cutting under water during summer do not typically disturb the sediment. Therefore, these techniques should not increase turbidity significantly. The flooding of cut cattail and subsequent mortality of the rhizomes will release nutrients into the system. This will likely have a similar effect of increased oxygen demand and algal blooms but should be temporary and minor. The use of fire as a biomass reduction tool prior to treatment should reduce these temporary negative impacts. Further, once native plant communities are re-established, these systems should return to a natural state. Therefore, the selected action will not result in impairment to the park's water quality.

Wetland Vegetation

Under the selected action, the entire cattail dominated wetland will be targeted with a variety of methods throughout the park. This would result in more botanically diverse, structurally patchy wetlands. Healthy muskrat populations will aid in the maintaining wetland biodiversity as a natural biocontrol of cattails.

There is a risk of regrowth of cattails expanding over time and eventually overtaking marsh areas again. However, the timeframe over which cattails may reinvade treated areas is likely 10-20 years or more. This would be mitigated by periodic small-scale removal efforts and maintenance of healthy muskrat populations. This alternative should have the largest long-term positive impact on wetlands and overall vegetation biodiversity in the park. Therefore, the selected action will not result in impairment to the park's wetland vegetation.

Fish

There are probably not many fish utilizing the floating cattail mat areas due to the inability of the fish to enter the mats. The most likely negative impacts to the fish populations would be to small fish and minnows that would be killed by mulching barge operations or the changes in turbidity, oxygen levels, and algal blooms. This would be a temporary minor impact as species should recolonize from neighboring areas. The additional use of fire to reduce biomass may reduce the negative impacts of the cattail control methods for fish. Further, it is possible that some shallow areas used by fish will be restored in this alternative. Overall, major long-term positive impacts for fish should be seen through increases in feeding and spawning habitat. As a result, the selected action will not result in impairment to the park's fish.

Aquatic Invertebrates

Mortality of invertebrates in the treatment areas may occur. However, these should be highly localized and temporary as the invertebrates should quickly recolonize from surrounding areas.

Overall, this alternative should result in the most diverse and structurally patchy wetlands, creating lots of habitat for invertebrates. This should give this alternative a long-term positive impact on invertebrates. Therefore, the selected action will not result in impairment to the park's aquatic invertebrates.

Wildlife

Temporary minor negative impacts may occur, including potential mortality of wildlife unable to vacate the site during treatment. Mitigation procedures could be used to reduce this temporary negative impact. Species such as Red-winged blackbirds who use cattail to a great extent will not likely be dramatically impacted as areas of cattail will still exist in a structurally diverse wetland. The capture, handling, tagging, and relocation of muskrats from surrounding areas carry a small risk of injury or loss of animals. These risks are mitigated by following approved protocols for the appropriate care and use of animals.

The additional cattail control methods employed here should create diverse wetlands providing measurably better food and lodging habitat for muskrats and other wildlife. Enhanced and reintroduced muskrat populations should further increase biodiversity of both plants and animals by creating a structurally patchy and diverse wetland habitat. Over the long-term, restoring diverse native marsh habitat parkwide should increase wildlife use. A wider range of bird species would use restored sites, amphibians would re-colonize areas from neighboring sites, and muskrat habitat would be improved. This alternative should result in the greatest long term positive impact for a diversity of wildlife. Therefore, the selected action will not result in impairment to the park's aquatic invertebrates.

**ERRATA SHEET
VOYAGEURS NATIONAL PARK
CATTAIL CONTROL PLAN AND ENVIRONMENTAL ASSESSMENT**

It is standard NPS practice to respond to substantive comments that are submitted during the public review period for EAs. A substantive comment is defined as one that does one or more of the following:

- Question, with reasonable basis, the accuracy of the information in the EA
- Question, with reasonable basis, the adequacy of the environmental analysis
- Present reasonable alternatives other than those presented in the EA
- Cause changes or revision in the proposal

Responses to Comments

The following substantive comment was received during the EA public review and response is provided below:

Comment: Fire should not be used for removal, suppression, or control because of the impairment of clean air over the park.

NPS Response:

The impacts of burning were evaluated in the Great Lakes Invasive Plant Management Plan/Environmental Assessment (2012) and dismissed from analysis in this EA because invasive plant treatment options identified in this plan would likely have negligible effects on ambient air quality (i.e., less than 50 tons per year of pollutant emissions) and would not lead to any exceedances of the National Ambient Air Quality Standards (NAAQS).

Changes/Corrections to the EA

The following changes to the document were also made in response to comments received:

1. Page 5, Section 1.1, Introduction

Per request from U.S. Environmental Protection Agency (EPA), provided more information on the location of the park, its size, and when it was founded.

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

VOYA is situated on the southern portion of the Canadian Shield along the United States-Canada border separating Minnesota and northwestern Ontario. Nearly half of VOYA's 882km² area is made up large lakes.

2. Page 5, Section 1.1, Introduction

Per request from EPA, provided additional context on the differences between species of cattail.

Narrowleaf cattail leaves are typically 4-10mm wide while broadleaf cattail leaves are 14-23mm wide. Cattails are monecious plants have unisexual flowers with the male flowers developed in a dense spike above the female flowering spike. In narrowleaf cattail, the male and female portions of the spike are separated by a 2-4cm gap while broadleaf cattail spikes are usually adjoined. Morphological characteristics of hybrid cattail span those of both narrowleaf and broadleaf cattail making field identification difficult (Figure 1). Genetic sampling is likely the only effective method of identifying the species of cattail. Results of genetic tests at VOYA showed cattails with some level of hybridization accounted for the vast majority all of the cattails in the sampling areas (Travis et al. 2010).



Figure 1. Comparison of broadleaf, narrowleaf, and hybrid cattail morphological characteristics. From Minnesota Board of Soil and Water Resources.

3. Page 6, Section 1.1 Introduction

Per request from EPA, provided a definition of “Rule Curve.”

The IJC has created specific rule curves for each basin (Rainy and Namakan). Water levels under these rule curves peak in mid-summer (July/August) followed by a slow fall and winter drawdown bottoming out in March/April (Figure 2). Dam operators are instructed to maintain water levels within the upper and lower bounds of these rule curves.

Appendix B

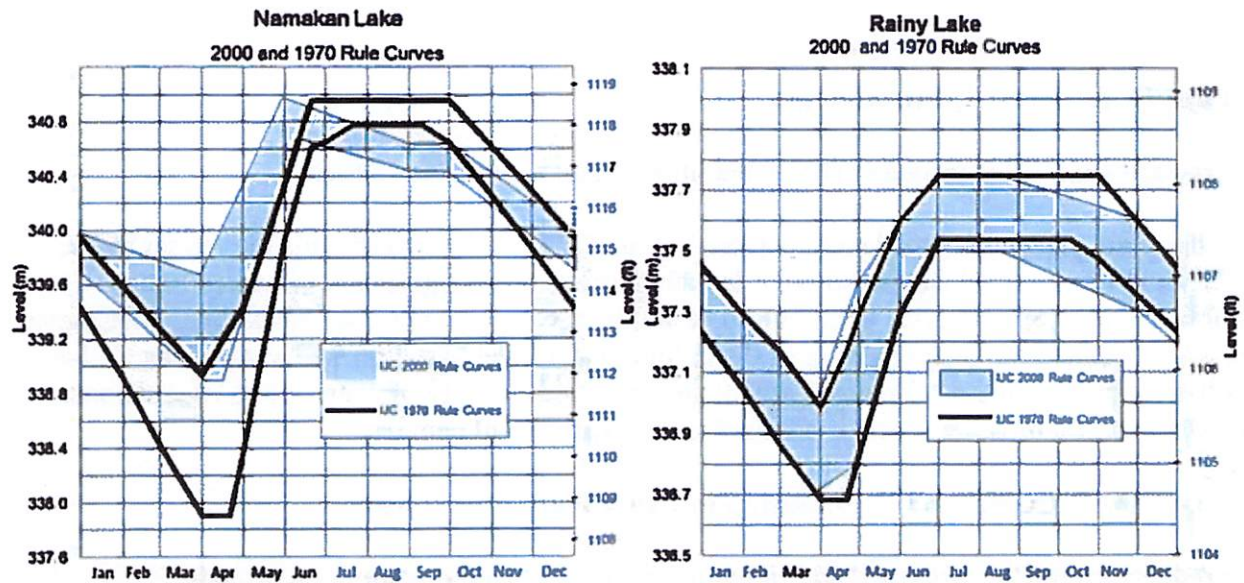


Figure 2. Water level rule curves for Rainy and Namakan Lake basins. Water levels are currently regulated under the 2000 rule curve. From IJC.

4. Page 9, Section 1.1 Introduction

Per request from EPA, provided additional location map.

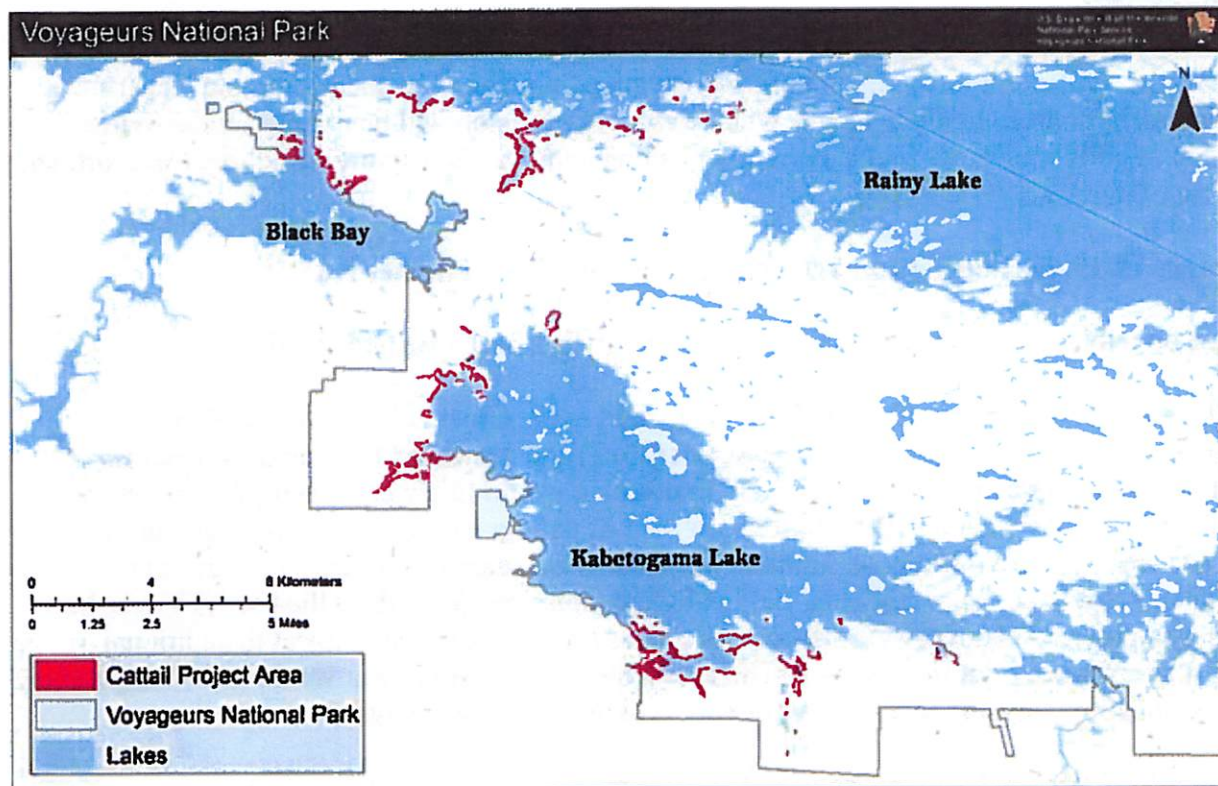


Figure 6. Project Area. Cattail marshes in VOYA addressed by this Cattail Control Plan and Environmental Assessment.

Appendix B

5. Page 11, Section 1.1, Introduction

Per request from EPA, provided additional information about Rule Curves.

The dams are privately owned and operated but must follow the specific rule curves set by the IJC. Natural water level fluctuations (or lack thereof) can be a significant influence in the establishment of species such as cattails. The water level rule curves established by the IJC have generally resulted in the dampening of the natural water level variation within a year as well as between years. Even though cattails are tolerant of a wide variety of water levels fluctuations, this stabilization of water levels is conducive to the growth of cattails.

6. Pages 16-17, Section 1.3 Relationship to Other Plans and Policies

Per request from EPA, provided additional information on authorizations, approvals, and permits.

The Aquatic Plant Management Permit Program (DNR APM Permits) gives the permitting authority for aquatic plant removal in public waters to the DNR Division of Fisheries. NPS and DNR have joint jurisdiction of waters within the park boundary. Any actions undertaken by VOYA will be in collaboration and/or consultation with the DNR Division of Fisheries. VOYA staff are currently working with MN DNR staff to develop a Lake Vegetation Management Plan for this permit.

A scientific collection for research purposes permit administered by the Minnesota Department of Natural Resources Ecological and Water Resources division will be required for activities outside of NPS boundaries and is currently pending approval for capture, handling, transport, and release of muskrats.

7. Pages 18-19, Section 1.6 Impact Topics Dismissed from Further Analysis

Based on public comment, the section on Air Quality has been clarified as follows:

Air Quality: The impacts of burning were evaluated in the Great Lakes Invasive Plant Management Plan/Environmental Assessment (2012) and dismissed from analysis because invasive plant treatment options identified in this plan would likely have negligible effects on ambient air quality (i.e., less than 50 tons per year of pollutant emissions) and would not lead to any exceedances of the National Ambient Air Quality Standards (NAAQS). Invasive plant treatments that have the potential to yield pollutant emissions (e.g., from the use ATV use, back hoes, gas-powered chain saws) within Class I areas such as VOYA as subject to additional NEPA compliance prior to treatment. The use of mechanical equipment would have a negligible impact on air quality and therefore air quality is dismissed from analysis.

8. Page 31, Chapter 3 Environmental Consequences

Appendix B

Section 3.2 Special Status Species has been added.

3.2 Special Status Species

NPS Management Policies 2006 and Director's Order 77: Natural Resources Management Guidelines require the NPS to examine the impacts on state-listed threatened, endangered, candidate, rare, declining and sensitive species. 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: Winter bentgrass (*Agrostis hyemalis*), Floating marsh marigold (*Caltha natans*), Rock stitchwort (*Minuartia dawsonensis*), Horned grebe (*Podiceps auritus*), Water awlwort (*Subularia aquatica*). There are records in the Minnesota Natural Heritage Information System from 1999 of the Water pygmyweed (*Crassula aquatica*) in the vicinity of the proposed activities.

Piping plover (*Charadrius melodus*) is a verified species for Voyageurs, but as a transient (migrant) (Grim 1986). This is a non-breeding species that is rarely seen even in migration. The park is in range or rare occurrence (Sibley 2000). If present, they are more likely to nest on sandy beaches and therefore unlikely to be in the project area. Breeding 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. If present, Common terns prefer to nest on rocky islands and would be unlikely to be in the project area.

Species listed by the State as Species of Special Concern include Common snapping turtle (*Chelydra serpentina serpentina*), and Yellow rail (*Coturnicops noveboracensis*).

Treatment locations will be sites with cattail monocultures and would be unlikely to harbor any endangered, threatened, or species of special concern. Wildlife and vegetation surveys are being conducted on wetlands in bays of Rainy, Kabetogama, Namakan, Sand Point, and Crane Lakes prior to any cattail removal. If rare species are documented, the park will consult with the MN DNR Endangered Species Review Coordinator regarding avoidance measures.

Non-target impacts from all action alternatives are expected to be localized, short-term and/or negligible based on the resource-specific BMPs defined in Appendix B. Similarly, beneficial effects of invasive plant treatment on habitats and populations of special concern are expected to be localized and minor.

9. Page 46-47, Chapter 4 Consultation and Coordination

USFWS concurrence on "No Effect finding for Section 7 and coordination/consultation with other agencies was clarified.

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

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Effect" for Canada lynx, gray wolf, and northern long-eared bat for Section 7 purposes. The USFWS concurred with our determination in an email dated January 26, 2016 (Appendix E).

The NPS notified the MN DNR during scoping (June 2015) of the plan to develop an Environmental Assessment for cattail control and notified the MN DNR of the availability of the plan / EA. on November 6, 2016. The MN DNR concurred with our determination in a letter dated February 1, 2017 (Appendix D). If any state-listed species are documented during surveys prior to cattail removal, the NPS will consult with the MN DNR on avoidance measures.

The NPS consulted with the MN DNR on October 21, 2015 on permit requirements. The NPS submitted an application to the MN DNR for a permit to control aquatic vegetation in November 28, 2016. Park staff will work with MN DNR staff on a Lake Vegetation Management Plan if it is required for the permit.

The NPS contacted the U.S. Army Corps of Engineers (USACE) on January 5, 2016 to discuss the project and permit requirements. The USACE requested that the NPS submit a Joint Application Form for Activities Affecting Water Resources in Minnesota. This joint application is the accepted means for initiating review of proposals that may affect a water resource in the State of Minnesota under state and federal regulatory programs. The NPS will contact USACE on a case-by-case basis if there are specific areas where there isn't a suitable location to deposit harvested cattail biomass above the high water mark. In these cases, the vegetation material would be deposited on the fringes of the wetland (but not in the water) where it would quickly decompose as experienced in similar projects in the region (e.g. Bois Forte and Fond du Lac wild rice restoration projects).

A scientific collection for research purposes permit administered by the Minnesota Department of Natural Resources Ecological and Water Resources division will be required for activities outside of NPS boundaries and is currently pending approval for capture, handling, transport, and release of muskrats.

10. Page 56-58 Appendix B Best Management Practices

BMPs for species listed as threatened, endangered, or special concern by the State of Minnesota were added.

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, VOYA would consult with the MNDNR 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*)**

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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 serpentine serpentine*)**
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.

11. Pages 61-62 Added Appendix D (Letter from Minnesota Department of Natural Resources)

12. Page 63 Added Appendix E (Correspondence with U.S. Fish and Wildlife Service)