You're invited!

Dear Friend of Isle Royale,

Thank you for your continued interest in the moose and wolf populations at Isle Royale National Park (Isle Royale). This predator-prey relationship has been studied for decades, has garnered national and even international attention, and is of great interest to Native American bands of the area, park visitors, researchers, and many other organizations and community groups.

Chickenbone Lake (Photo: D. Rosenbach)

The story of wolves on Isle Royale is compelling and ever changing. Their population has fluctuated over the past 65 plus years since they were first documented on the island, but has been in steep decline for the past five years. This past winter was no exception. Researchers from Michigan Technological University found three wolves on the island and documented one mortality. In addition, an ice bridge formed again this past winter for the second year in a row, and a pair of wolves crossed the ice bridge from their home range on the Grand Portage Indian Reservation and traveled about 14 miles to Isle Royale. The pair explored the island, but did not stay, returning to the mainland five days later. Furthermore, five out of the nine wolves present in 2014 are unaccounted for. They may have survived, perished, or left the island during the 2015 ice bridge events.

The moose population on the island has also fluctuated over time. Over the past few years the population has increased greatly for numerous reasons, including the fact that wolf predation rates have been low. The changes in these populations raise concern about the potential for impacts to park resources, including vegetation. As a result, the National Park Service (NPS) has published a Notice of Intent (NOI) in the Federal Register announcing the initiation of a Moose-Wolf-Vegetation Management Plan and Environmental Impact Statement (plan/EIS). The plan/EIS is meant to provide direction for the future management of the Isle Royale moose and wolf populations in light of the changes occurring on the island.

Additional information about the scope of the plan/EIS is included in this newsletter, such as the purpose and need, environmental issues to be considered in the plan, and preliminary draft alternative concepts. I encourage you to review the information herein and participate in the scoping phase of this planning process by providing your feedback to the planning team. You can provide comments on our NPS Planning, Environment, and Public Comment (PEPC) website at: http://parkplanning.nps.gov/ISROmoosewolf

A series of public open houses with identical format will be held later this summer and I invite you to attend one of them if you are able. We look forward to hearing from you!

Sincerely,

Phyllis A. Green, Superintendent
Isle Royale National Park

Locations of Public Scoping Meetings

- Grand Portage, Minnesota
- Windigo, Isle Royale
- Rock Harbor, Isle Royale
- Houghton, Michigan

Exact dates, times, and locations will be announced via press release and online at:
http://parkplanning.nps.gov/ISROmoosewolf

Each meeting will have an identical format and agenda. The meetings will begin with a brief presentation followed by an open house, during which time staff from the National Park Service will be available to answer questions.

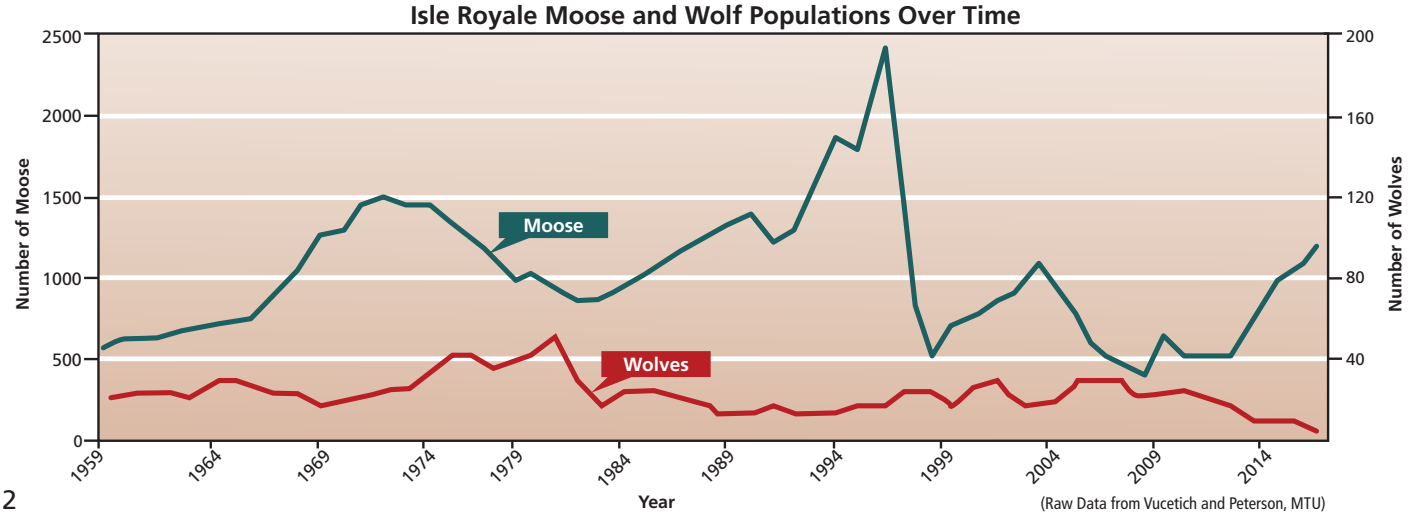
Background Information

Isle Royale National Park (Isle Royale) is an island archipelago in the northwestern portion of Lake Superior consisting almost entirely of designated wilderness. Isle Royale exhibits a unique biogeography. Organisms that live on islands have more dynamic population trends and are more often subjected to extinction events with colonization and immigration occurrences depending on island size, distance to the mainland, length of isolation (time), chance events, habitat suitability and human activity, to name a few influencing factors. In other words, things come and go from islands; local extirpation is natural, as is establishment and re-establishment of new populations.

Wolves are the only predator of moose on the island, and they affect moose abundance and distribution across the island. Wolves were first documented near Isle Royale in the 1940s when they were observed on the ice between the Sibley peninsula of Ontario and Isle Royale. It is largely accepted that wild wolves arrived on Isle Royale by crossing an ice bridge during winter between 1948 and 1950 and that they founded the Isle Royale population. However, the 1948-50 arrival of wolves was followed in 1951-52 by the release of four pen-raised wolves from the Detroit Zoo, two of which were subsequently removed from the wild. Researchers have raised questions regarding the contribution of those that potentially persisted into the population. Like many mainland wolf populations, the population at Isle Royale has fluctuated widely over time even though wolves have always been protected and never hunted or subjected to control efforts. The long-term average wolf population on the island is 22. Wolf population variation on the island has been primarily driven by the availability of older moose and calves, which are most vulnerable to predation. The vast majority of wolf mortalities on Isle Royale are due to natural processes, primarily wolves killing other wolves and starvation. Furthermore, genetic inbreeding, a natural process in small, isolated populations has led to physical deformities and has likely resulted in low productivity and survival. The future presence of wolves on the island is in doubt unless new wolves emigrate or are introduced.

Moose first arrived on Isle Royale in the early 1900s and their population has fluctuated dramatically over the past century. Moose are known to have important effects on island vegetation. For example, in the past the population has increased dramatically and then declined following severe over-browsing of island vegetation. This boom and bust cycle has occurred in both the presence and absence of wolves; however, the magnitude of the fluctuation is likely to increase without wolves. More recently, the moose population has again been on the rise and is currently estimated to be 1,250. Although the population is likely to increase in the short-term in the presence of a very low wolf population, it is unclear how sensitive moose on Isle Royale will be to the changing climate. Heat stress and the availability of preferred vegetation are issues if temperatures continue to warm. Some mainland moose populations have been in decline and it is unclear if the moose on Isle Royale will follow this same trend in the future.

Vegetation at Isle Royale is also changing. The park lies within a temperate-boreal forest transition zone where temperate tree species are near their northern range limits and boreal trees are near their southern range limits. Recent warming favors temperate over boreal species and early signs suggest a shift from boreal to temperate species in the region. Since moose favor some boreal tree species such as balsam fir for food in the winter, this change may alter the available moose forage in the future.



Purpose and Need

WHY PREPARE A MOOSE-WOLF-VEGETATION MANAGEMENT PLAN/EIS?

Moose have important effects on island vegetation, including forest cover, and wolves are the only moose predator on the island. The moose-wolf-vegetation food web is tightly coupled. Given that the wolf population at Isle Royale is very low and their long-term survival on the island is in question, the moose population is likely to increase in the short term (5-10 years), which could result in impacts to vegetation and forest cover because of over-browsing.

Arctic disjunct species *(Saxifraga tricuspidata)* (NPS Photo)

Need: A plan is needed to address environmental impacts that could occur to the moose population and vegetation from the potential extirpation of wolves.

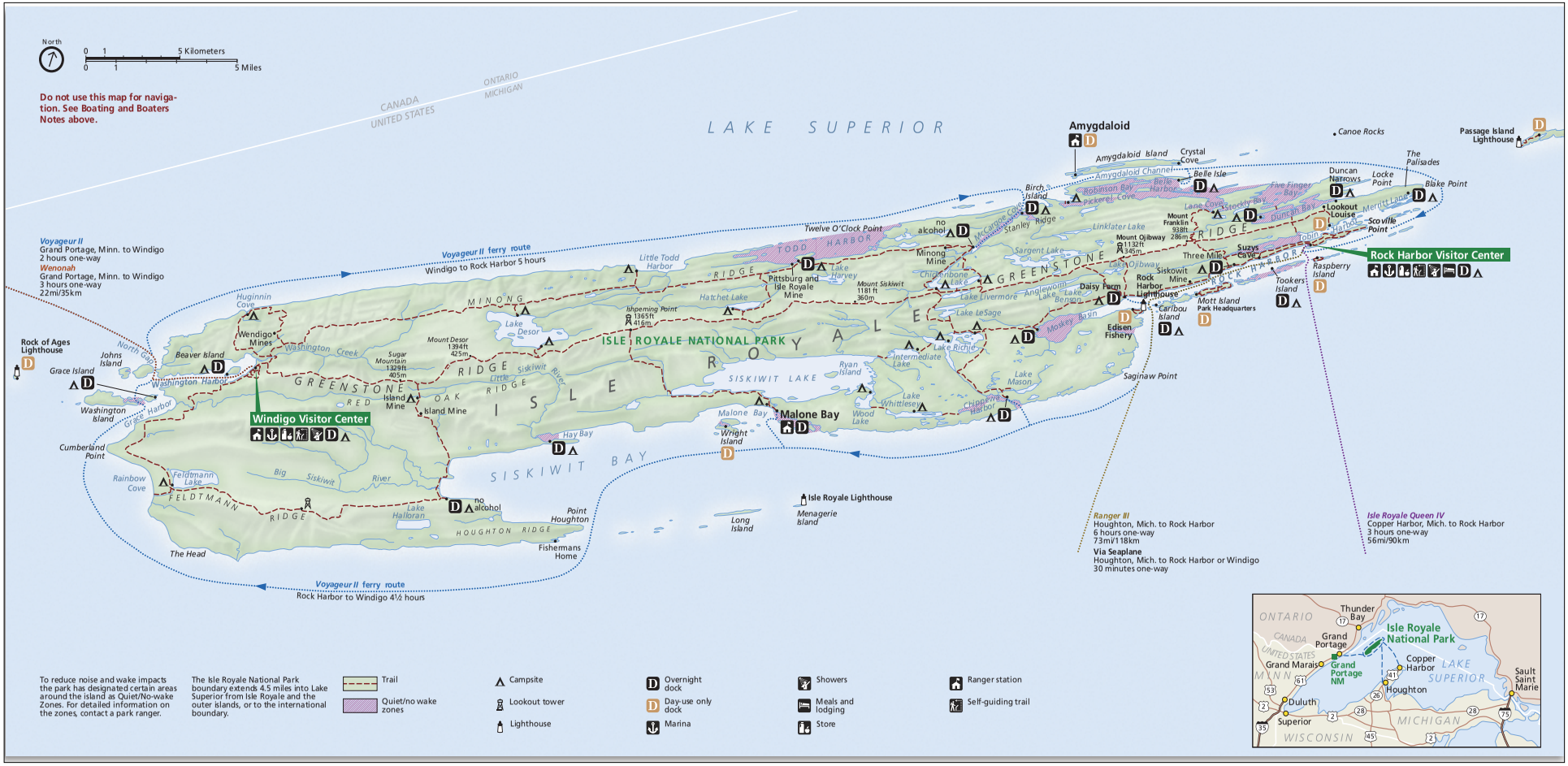
Purpose: The purpose of the plan is to provide direction for managing the Isle Royale moose and wolf populations for at least the next 20 years in light of the dynamic changes occurring on the island.

Eastern Wolf (NPS Photo)

Bull Moose (Photo: D. Rosenbach)

CHECK IT OUT ONLINE

Information on this project is available at http://parkplanning.nps.gov/ISROmoosewolf From this site, you can follow the progress of this project, download project documents, find out about meetings, and provide comments at critical points.



Fog at Isle Royale (NPS Photo)

Island Shoreline (NPS Photo)

Fall colors at Isle Royale (NPS photo)

Issues

An "issue" describes the relationship between actions and environmental resources (natural, cultural, and socioeconomic). Issues are usually problems that either the "no action" alternative (or current situation) has caused or that any of the proposed alternatives might cause, but they may be questions, concerns, problems, or other relationships, including beneficial ones.

With respect to moose, wolves, and vegetation management at Isle Royale National Park, the NPS has identified issues related to the following resources or values.

- Moose and wolf populations
- Plants and woody vegetation, due to impacts from moose browsing
- Sensitive plant species, such as orchids, that are affected by forest changes
- Other wildlife species (e.g. beaver, hare, coyote, fox, ravens, and other bird species) affected by changes in natural habitat conditions
- Streams and hydrology, due to changing streamflow conditions
- Wetlands, due to potential changes to wetland plant communities
- Visitor experience, due to changes in forest structure and populations of moose and wolves
- Wilderness character, due to the majority of the island's land area being designated wilderness and actions under consideration that could affect the quality of wilderness character
- Challenges associated with access and a short operating season on a remote island

Beaver Logging at Isle Royale (Photo: D. Rosenbach)

WILDERNESS

Ninety-nine percent of the land area of Isle Royale National Park was designated as wilderness in 1976 and therefore the plan/EIS will be developed in accordance with the Wilderness Act of 1964 and agency wilderness policy. A minimum requirements analysis will be conducted.

View from Mount Ojibway (Photo: D. Rosenbach)

Range of Preliminary Draft Alternative Concepts

As part of the planning process, various alternatives for the management of moose, wolves, and vegetation at Isle Royale will be evaluated. Preliminary draft alternative concepts being considered early in the process include the no-action alternative (continuation of current management) and multiple action alternatives that propose NPS intervention to manage moose, wolves, and vegetation in various ways. These preliminary concepts explore options for potentially perpetuating the role wolves play as natural predators, managing the moose population and resulting levels of herbivory, and directly managing vegetation. Under all of the alternative concepts, the park would continue to permit research efforts, as applicable, in accordance with law, regulation and policy. Furthermore, the NPS will consider an adaptive management framework, as appropriate, to address key uncertainties.

Alternative Concept A (no-action alternative)	Current management would continue; the park would not actively manage vegetation or the moose and wolf populations
Alternative Concept B (introduce wolves once)	Reestablish wolves on the island by bringing in new wolves one time to mimic a migration event; no moose management
Alternative Concept C (maintain both species)	Maintain populations of moose and wolves on the island, which could include wolf reintroduction or augmentation
Alternative Concept D (introduce wolves once and reduce the moose population)	Reestablish wolves on the island by bringing in new wolves one time; reduce moose density if/when the moose population is no longer impacting the moose population and moose herbivory is having a demonstrated impact on park resources
Alternative Concept E (reduce moose population)	No wolf reintroduction or augmentation; reduce moose density if/when the moose population is no longer impacting the moose population and moose herbivory is having a demonstrated impact on park resources
Alternative Concept F (intensively manage the moose population)	No wolf reintroduction or augmentation; intensively manage moose population to a low level; potential for direct vegetation restoration through seed gathering and planting on offshore islands

(NPS Photo)

TOOLS UNDER CONSIDERATION FOR MANAGING MOOSE DENSITY

- Wolf augmentation (adding wolves to an existing population)
- Wolf reintroduction (adding wolves after local wolf extirpation)
- Translocation of live moose
- Culling of moose

Effective management of moose may require the use of motorized or mechanized equipment, such as helicopters.

How to Comment

When making public comments, please consider the following questions:

1. What other alternatives, alternative elements, or management tools should be considered?
2. What issues should be considered when evaluating future management of moose, wolves, and vegetation at Isle Royale?
3. What type and intensity of management should the NPS consider given that approximately 99% of the land area of Isle Royale National Park is designated wilderness?
4. What type and intensity of management should the NPS consider in the face of a changing climate?
5. What do you like and dislike about the preliminary alternatives?

Submit comments electronically at:
http://parkplanning.nps.gov/ISROmoosewolf

Submit written comments at an in-person public meeting.

Mail or hand deliver written comments to:
Isle Royale National Park
Attention: Moose-Wolf-Vegetation Management Plan
800 East Lakeshore Drive
Houghton, Michigan 49931

Please submit ALL comments no later than 30 days after the last scheduled public meeting.

Comments will not be accepted by fax, e-mail, or any other way than those specified above. Bulk comments in any format (hard copy or electronic) submitted on behalf of others will not be accepted. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

NEPA Process

PLAN/EIS ESTIMATED SCHEDULE

The National Park Service is preparing this plan/EIS in accordance with the National Environmental Policy Act (NEPA), which requires federal agencies to analyze impacts to the human environment for any major federal action. Important steps in the NEPA process and an anticipated timeline are as follows:

June/July 2015	Notice of Intent to Prepare a Moose-Wolf-Vegetation Management Plan/EIS (Public Scoping Period Begins) **WE ARE HERE**
Summer 2015	Public Scoping Meetings
30 days after the last public scoping meeting	Public Scoping Comment Period Concludes
Fall 2015	Analyze comments and prepare Public Comment Analysis Report
Fall 2015 – Fall 2016	Gather Data, Refine Alternatives, Analyze Impacts, and Prepare the Draft Plan/EIS
Winter 2016/2017	Draft Plan/EIS Available for Public Review
Summer/Fall 2017	Final Plan/EIS Released
Fall/Winter 2017	Record of Decision