



Welcome!

Thank you for coming to discuss the DEIS to Address the Presence of Wolves at Isle Royale National Park





Purpose & Need

Why Prepare a Draft Environmental Impact Statement to Address the Presence of Wolves?

Wolves play an ecological role as apex predators on the island in managing the abundance and spatial distribution of moose and, to a certain degree, the distribution, type, and abundance of island vegetation. Relationships among wolf, moose, and vegetation trophic levels are characterized by fluctuating population numbers, moose browse effects, wolf inbreeding depression, disease, vegetation dynamics, and ongoing climate change trends.



NPS Photo



NPS Photo

Purpose: The purpose of this draft plan/EIS is to determine whether and how to bring wolves to Isle Royale to function as the apex predator in the near term within a changing and dynamic island ecosystem.

Need: A plan is needed because the expected extirpation of wolves and the decreasing potential for immigration raises concerns about possible effects to the current Isle Royale ecosystem, including effects to both the moose population and forest/vegetation communities.





Issues

An issue describes the relationship between actions and environmental resources (natural, cultural, and socioeconomic). Issues addressed in the Draft EIS include:

Island Ecosystem

The presence or absence of wolves could directly and indirectly affect a number of ecological processes on the island and contribute to effects to other resources. These processes include predation, competition, disturbance, and succession.

Wilderness

The vast majority (99% of the land mass or 132,018 acres) of Isle Royale is designated wilderness. The primary issues associated with wilderness are considerations about the natural quality, untrammeled quality, and undeveloped quality.

Moose

Bringing wolves to Isle Royale could reduce the moose population directly through predation and may affect plant species' composition, distribution, and abundance. Conversely, in the absence of predation, an overabundance of moose could result in more dramatic swings in the moose population and change moose population demographics, and alter forest/vegetation community successional trajectories.

Wolves

The loss of wolves may impact the predator-prey relationship and other components of the ecosystem. Without intervention, wolves could be extirpated from the island.

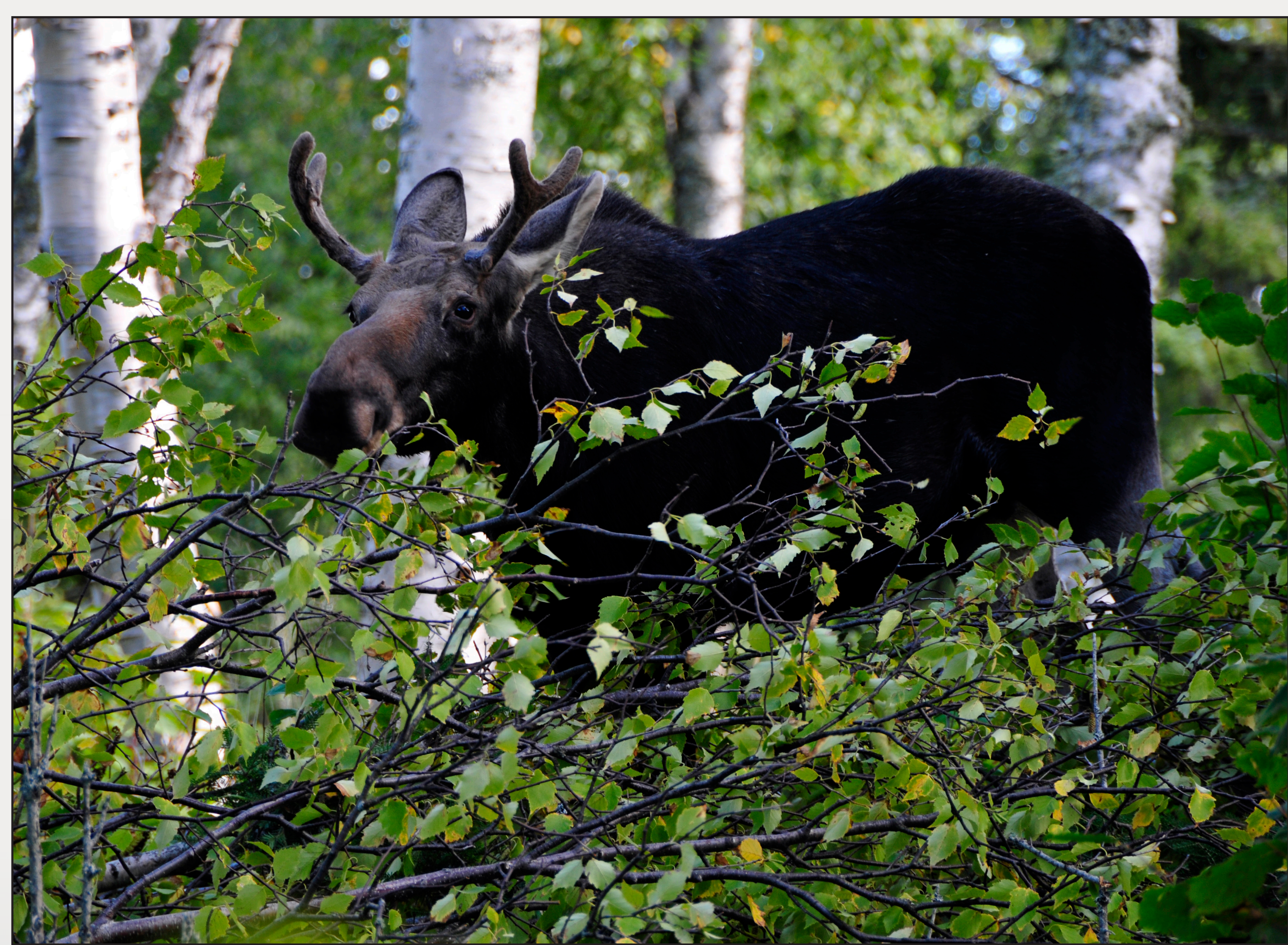




Island Ecosystem

The Functional Role of Wolves

- Wolves are the only predator of moose on the island.
- Wolves influence the abundance and spatial distribution of moose.
- To a certain degree, wolves influence the distribution, type, and abundance of island vegetation.
- Moose depend on some plant species, such as balsam fir for winter forage, and fluctuating moose populations have resulted in changes to vegetation structure and composition.
- The dynamic relationship between moose and wolves also impacts other wildlife species on Isle Royale.

*NPS Photo**NPS Photo**NPS Photo*



Alternative A

No Action:

- No introduction of wolves would occur; however, wolves would not be prevented from immigrating to or emigrating from the island on their own.
- The park would continue to research and monitor a wide variety of natural resources including the effects of climate change on the island.
- The park would continue to study moose impacts on vegetation, abundance of moose, and the health of the Isle Royale ecosystem.
- Other species research, including beaver and snowshoe hare demographics, could continue.
- Wolves that immigrate to the island would be radio collared on a case-by-case basis.





Alternatives

Elements Common to All Action Alternatives

Capture Tools

Wolves selected for introduction would be captured using available tools ranging from helicopter net-gunning, modified padded foot-traps, darting from a helicopter, or modified snares with appropriate stops. Human and wolf interactions would be minimized.

Capture Location and Logistics

NPS would seek wolves, that: (1) feed on moose as one of their prey sources; (2) exhibit good health; (3) are not habituated to humans; and (4) possess appropriate genetic diversity and mixture of age and sex. The NPS would aim to capture family groups that are separated by at least 40 miles to maximize genetic variation.

Time of Capture and Relocation

Capture and release periods to bring wolves to Isle Royale would occur primarily between late fall and late winter.

Vaccinations/Health Evaluations

Captured wolves would be evaluated by a certified wildlife veterinarian, which could include collection of samples for health and genetic testing. Any injuries sustained during capture would be addressed prior to introduction and individual animals may be vaccinated, as deemed appropriate.

Transportation

Wolves would be transported via boat, plane, or helicopter to the island.

Release

To reduce the risk of wolf injury or habituation in holding pens, introduction would occur by “hard release” methods, entailing release of individuals or groups of wolves onto the island with no time to acclimate in holding pens prior to release and without intensive support provided following release.

Carcass Provisioning

To ensure the success of initial establishment, carcass provisioning of natural prey may be implemented.

Monitoring of Released Wolves

Monitoring would be conducted to allow for assessment of program success and provide for enhanced understanding of the role of the introduced wolves in restoring Isle Royale ecosystem function.





Alternative B

Immediate Limited Introduction (Preferred Alternative):

Timing: Starting immediately, completed within five years.

Number/Duration of Releases: Multiple release events, lasting up to five years.

Number of Founding Wolves: 20–30 within the first three years.

Supplementation of Wolf Population: After the third year, if an unforeseen event occurs, such as disease or mass mortality, that impacts the wolf population and the goals of the alternative are not being met due to this event, wolves may be supplemented for an additional two years. No additional supplementation after year 5.

Radio Collaring: Wolves immigrating to the island would be radio collared on a case-by-case basis, plus up to all wolves introduced to the island would be monitored via radio collar.





Alternative C

Immediate Introduction, with Potential Supplemental Introductions:

Timing: Starting immediately, supplemented as needed.

Number/Duration of Releases: Multiple release events could take place.

Number of Founding Wolves: 6–15 wolves during the initial release event.

Supplementation of Wolf Population: Supplemental introduction would occur as needed over the 20-year life of the plan, based on consideration of a variety of metrics:

- Predation rates of moose are less than 5% over a three-year moving average.
- The overall ratio of moose to wolves is greater than 75 to 1.
- No documented wolf reproduction occurs for three consecutive years.
- Wolf emigration off the island is greater than 33% of the total population, or greater than 33% of the existing breeding females leave the island.
- The number of packs with at least one breeding female and four individual wolves having an equal sex ratio falls below two.
- The genetic coefficient of inbreeding measures greater than 0.1 and measures of heterozygosity are below 0.6.
- There are multiyear (e.g., greater than five years) negative trends in wolf population growth rates,

Radio Collaring: Wolves immigrating to the island would be radio collared on a case-by-case basis, plus the minimum number of wolves necessary to meet monitoring goals would be monitored via radio collar.





Alternative D

No Immediate Action, with Allowance for Future Action:

Timing: Not starting immediately, but may occur.

Number/Duration of Releases: Multiple release events could take place.

Number of Founding Wolves: 6–15 wolves.

Supplementation of Wolf Population: Supplemental introduction would occur as needed over the 20-year life of the plan. One or more of the following metrics must be met before taking initial action to bring wolves to the island:

- The moose population exceeds 1,500–1,800 animals.
- The three-year moving average moose population has a growth rate of greater than 15%.
- A moose calf recruitment rate over a three-year moving average is greater than 15%.
- The number of calf twins observed exceeds five total counted pairs.
- No natural emigration of wolves via ice bridges has been documented.

Radio Collaring: Wolves immigrating to the island would be radio collared on a case-by-case basis, plus the minimum number of wolves necessary to meet monitoring goals would be monitored via radio collar.





Summary of Alternatives

	Alternative A	Alternative B	Alternative C	Alternative D
Wolf Introduction	No	Yes	Yes	Yes
Timing of Release	The existing population would not be supplemented.	Starting immediately, completed within five years.	Starting immediately, supplemented as needed.	Not starting immediately, but may occur.
Number/ Duration of Releases		Multiple release events, lasting up to five years.	Multiple release events could take place.	Same as alternative C.
Number of Founding Wolves		20–30 wolves within the first three years.	6–15 wolves.	Same as alternative C.
Supplementation of Wolf Population		After year 3, wolves may be supplemented for an additional two years. No additional supplementation after year 5.	Supplemental introduction would occur as needed over the 20-year life of the plan.	Same as alternative C.
Location of Release		Packs and individuals would be released at different locations to provide spatial distribution across the island.	Same as alternative B, plus additional wolves would be released at locations away from established packs.	Same as alternative C.
Radio Collaring	Wolves that immigrate to the island would be radio collared on a case-by-case basis.	Same as alternative A, plus up to all wolves introduced to the island would be monitored via radio collar.	Same as alternative A, plus the minimum number of wolves necessary to meet monitoring goals would be monitored via radio collar.	Same as alternative C.





Schedule

February 2017	
Public Meetings	WE ARE HERE
March 15, 2017	
Public Comment Period Closes	
Spring/Summer 2017	
Analyze Comments	
Prepare Final Environmental Impact Statement (FEIS)	
Fall 2017	
Final EIS Released	
Fall/Winter 2017	
Record of Decision	
Spring 2018	
Plan Implementation	



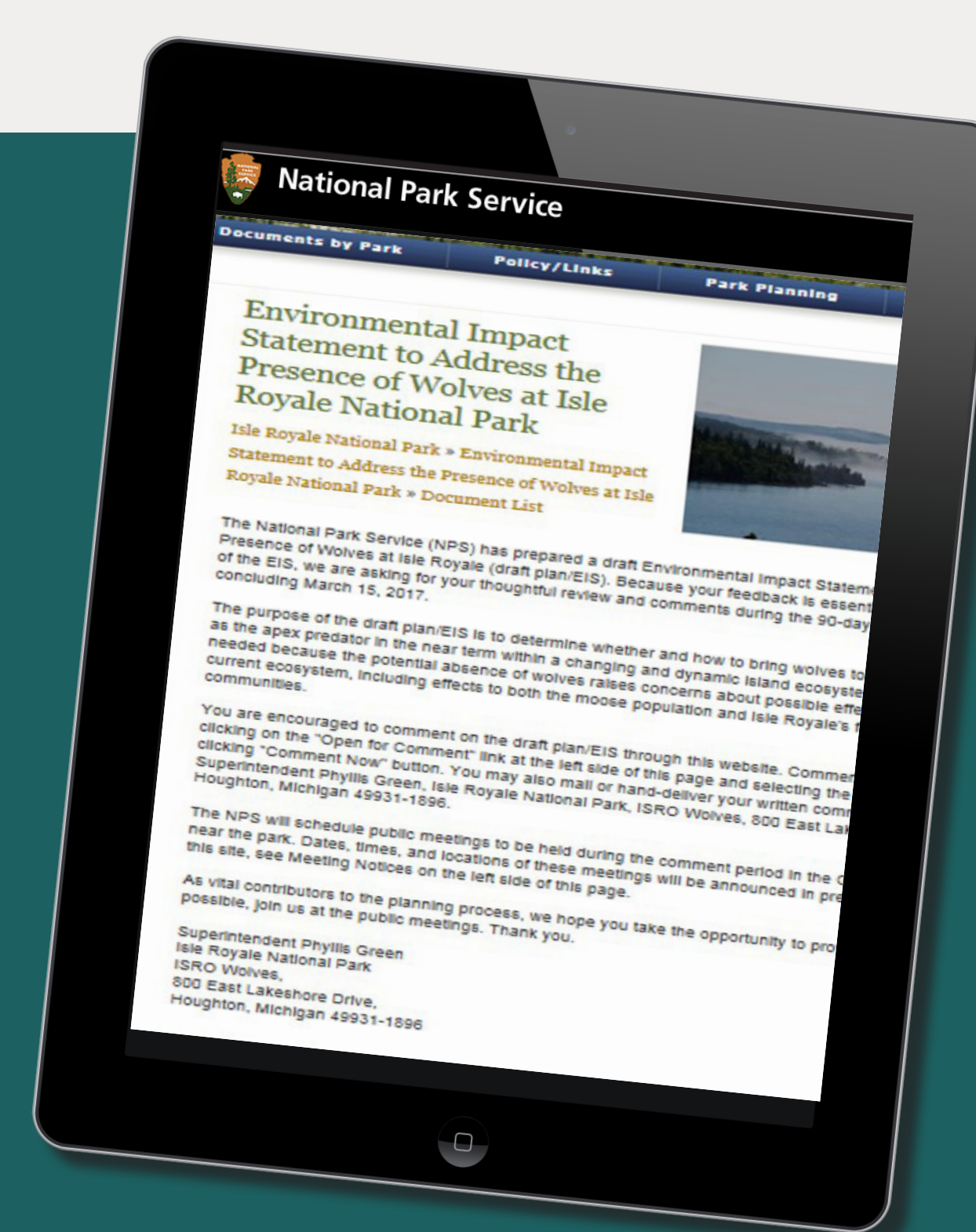


How to Comment

There are several ways to
provide input:

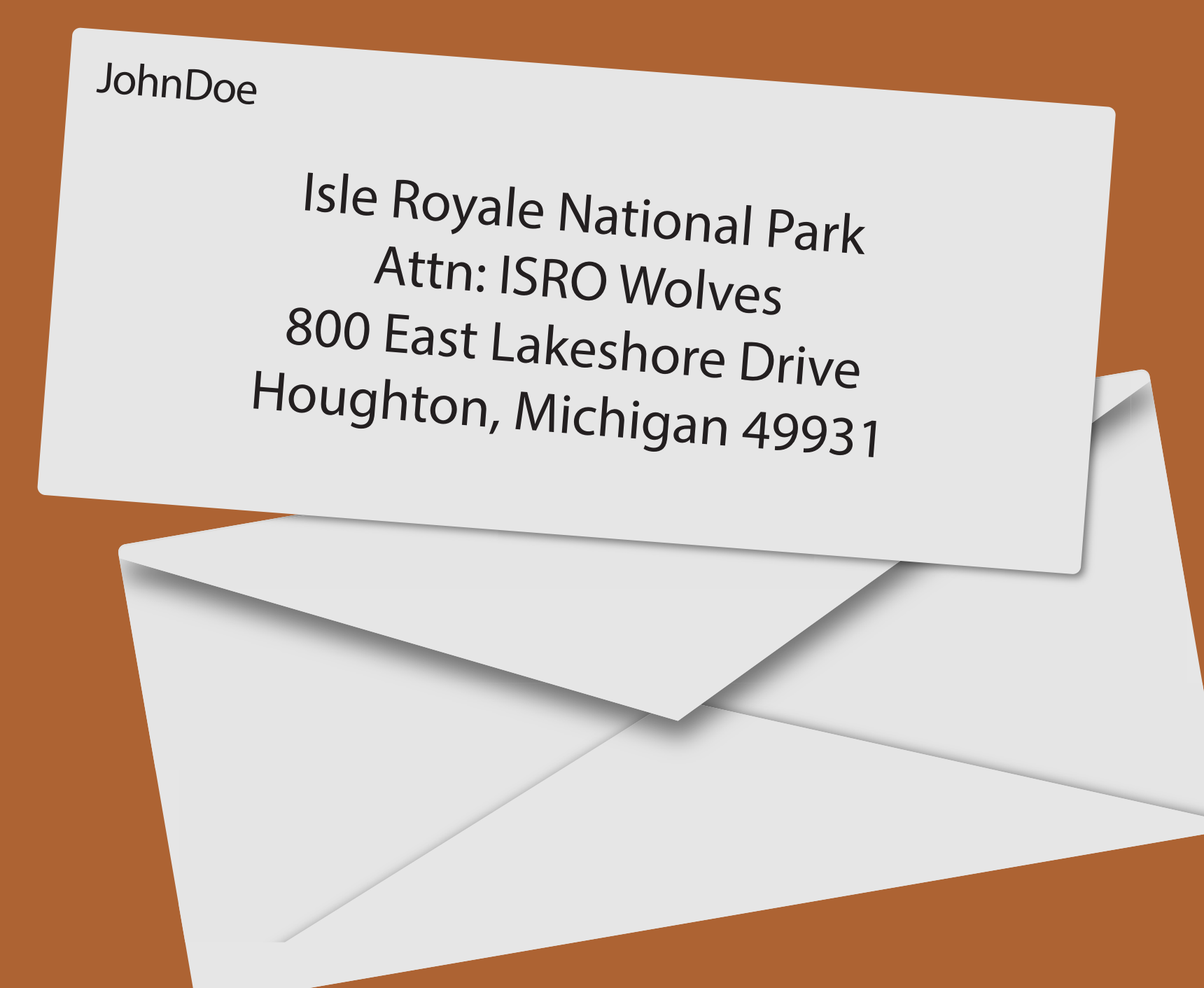
1.
Submit comments
electronically at:

<http://parkplanning.nps.gov/isrowolves>



2.
Mail or hand deliver
comments to:

Isle Royale National Park
Attention: ISRO Wolves
800 East Lakeshore Drive
Houghton, Michigan 49931



3.
Submit written comments
in person at this meeting

