

UNITED STATES FISH AND WILDLIFE SERVICE

ENVIRONMENTAL ACTION STATEMENT

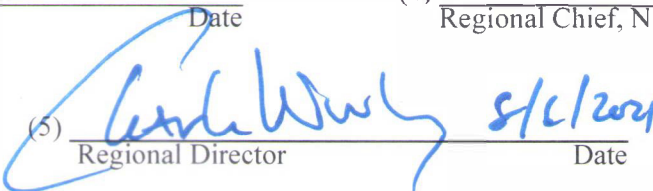
Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, executive orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the action of opening Harbor Island National Wildlife Refuge to hunting and fishing in full alignment with State of Michigan regulations and as described in the 2021-2022 Hunt and Fish Plan.

- ☐ is a categorical exclusion as provided by 43 CFR §46.210 and/or 516 DM 8.5 and 43 CFR §46.215. No further NEPA documentation will therefore be made. The proposed action falls under categorical exclusion _____.
- ☒ is found not to have significant environmental effects as determined by the attached Environmental Assessment and Finding of No Significant Impact.
- ☐ is found to have significant effects, and therefore, further consideration of this action will require a notice of intent to be published in the Federal Register announcing the decision to prepare an environmental impact statement.
- ☐ is not approved because of unacceptable environmental damage, or violation of Fish and Wildlife Service mandates, policy, regulations, or procedures.
- ☐ is an emergency action within the context of 40 CFR §1506.11. Only those actions necessary to control the immediate impacts of the emergency will be taken. Other related actions remain subject to NEPA review.

Other supporting document (list):

- ☒ Project Map(s) - REQUIRED
- ☒ Intra-Service Section 7 Evaluation Form (Endangered Species Act Compliance) - REQUIRED
- ☒ Regional National Historic Preservation Act (NHPA) Clearance - REQUIRED
- ☒ Compatibility Determination and Finding of Appropriateness
- ☒ NEPA Document (if CatEx attach CatEx Checklist, EA/FONSI, or EIS/ROD) - REQUIRED
- ☒ Public Comments
- ☒ CCP (date) _____
- ☐ Other _____

Signature Approval:

(1) <u>NATHAN CARLE</u> <small>Digitally signed by NATHAN CARLE Date: 2021.07.21 13:34:09 -04'00'</small>	(2) <u>Not Applicable</u>
Refuge Manager	Project Leader
	Date
(3) <u>CATHERINE NIGG</u> <small>Digitally signed by CATHERINE NIGG Date: 2021.08.05 20:49:23 -05'00'</small>	(4) <u>SUZANNE BAIRD</u> <small>Digitally signed by SUZANNE BAIRD Date: 2021.08.06 09:32:50 -05'00'</small>
Refuge Supervisor	Regional Chief, NWRS
	Date
(5) <u></u>	
Regional Director	Date

**Finding of No Significant Impact
and Decision to Open for Upland Game, Big Game, and
Migratory Game Bird Hunting and Sport Fishing
Harbor Island National Wildlife Refuge
SENEY, MICHIGAN**

The U.S. Fish and Wildlife Service (Service) is opening hunting and fishing opportunities for migratory game birds, upland game and big game hunting. All refuge lands would be opened to sport fishing so that anglers can stand on the shoreline and fish into Lake Huron on the Harbor Island National Wildlife Refuge in accordance with the refuge's 2021 Harbor Island Hunt and Fish Plan. Harbor Island National Wildlife Refuge currently consists of two islands, Harbor Island and Standerson. These islands are in the state of Michigan in Potagannissing Bay, Lake Huron near Drummond Island at the eastern end of the Upper Peninsula. Harbor Island is 695-acres and Standerson Island is 25-acres.

Selected Action

Alternative B—Preferred Action Alternative

Under the "Preferred Action Alternative", the refuge would provide new hunting opportunities for migratory bird hunting (crows, ducks, mergansers, coots, geese, snipe, Virginia and sora rails, moorhens and woodcock), upland game (red and gray foxes, rabbit, hare, coyote, ruffed grouse, squirrels (ground, red, fox and gray), opossums, porcupines, weasels, house sparrows, skunks, woodchucks, feral pigeons, starlings, turkeys, bobcats and raccoons) and big game (Russian boar). Big game hunting (white-tailed deer and black bear) hunting opportunities would be expanded to new refuge land acquisitions and continue to stay open on Harbor Island. All refuge lands would be opened to sport fishing so that anglers can stand on the shoreline and fish into Lake Huron. Fishing already occurs in Lake Huron that is not under the jurisdiction of the U.S. Fish and Wildlife Service.

Not all species we plan to open to hunting and fishing may occur on the refuge, however all species listed in this plan are currently huntable/fishable in the state of Michigan. Hunting/fishing seasons would reflect the state of Michigan seasons. Hunters and anglers will need to follow all applicable federal, state, tribal and refuge regulations. Under this alternative trapping and falconry are not considered

methods of take for hunting purposes on the refuge. Refuge-specific hunting and fishing regulations can be more restrictive (but not more liberal) than state regulations to help meet specific refuge objectives. For additional information please reference the Code of Federal Regulations, the state of Michigan's annual hunting and fishing digests and refuge specific regulations in the 2021 Harbor Island National Wildlife Refuge Hunt and Fish Plan (Conduct of the Hunting and Fishing Programs section) found in the Environmental Assessment Appendix A.

This alternative was selected over the other alternatives because:

- The preferred alternative would allow the refuge to manage wildlife populations, allow the public to harvest a renewable resource, promote a wildlife-oriented recreational opportunity, increase awareness of Harbor Island National Wildlife Refuge and the National Wildlife Refuge System and meet public demand.
- The preferred alternative best aligns hunting regulations with surrounding lands and waters to the extent legally practicable and meets additional requirements outlined in [Secretarial Order 3356](#).
- The preferred alternative best increases the access for recreational opportunities related to hunting and in doing so meets the requirements of [Secretarial Order 3366](#).
- The preferred alternative is compatible with the general Service policy regarding the establishment of hunting on National Wildlife Refuges. Specifically the Administration Act, as amended, states, “when the Secretary [of the Interior] determines that a proposed wildlife-dependent recreational use is a compatible use within a refuge, that activity should be facilitated, subject to such restrictions or regulations as may be necessary, reasonable, and appropriate” (16 U.S.C. 668dd(a)(3)(D)), and “[r]egulations permitting hunting or fishing of fish and resident wildlife within the [Refuge] System shall be, to the extent practicable, consistent with State fish and wildlife laws, regulations, and management plans” (16 U.S.C. 668dd(m)).
- The preferred alternative is compatible with the purpose for which Harbor Island National Wildlife Refuge was established.
- The preferred alternative allows the refuge manager to establish specific regulations for individual species or portions of the refuge depending on conflicts with other wildlife dependent recreation priorities. Permanent or periodic hunting closures for specific species or closures of portions of the refuge may be necessary if the refuge manager determines that there are specific habitat, wildlife protection and/or public safety requirements.

- This alternative helps meet the purpose and needs of the Service as described in the environmental assessment, because it provides additional wildlife-dependent recreation opportunities on the refuge meeting the Service's priorities and mandates.
- This proposal does not initiate widespread controversy or litigation.
- There are no conflicts with local, state, regional or federal plans or policies.

This alternative is the Service's proposed and preferred action because it offers the best opportunity for public hunting that would result in a minimal impact on physical and biological resources, while meeting the Service's mandates under the National Wildlife Refuge System's Administration Act and Secretarial Order 3356.

Other Alternatives Considered and Analyzed

Alternative A— No Action Alternative

White-tailed deer and black bear hunting within state seasons are currently allowed on 695-acre Harbor Island. Newly acquired refuge lands would remain closed to all hunting. All refuge lands would remain closed to fishing.

Under the "No Action Alternative", the current hunting regulations would not change. The refuge would continue to serve as habitat for fish and wildlife as well as provide outdoor recreational opportunities for wildlife observation and photography, environmental education and interpretation, hunting and mushroom and berry picking.

Opportunities to create additional outdoor recreation experiences by adding additional species and hunting related habitat management capabilities would be unavailable on Harbor Island and newly acquired lands. Under this alternative, fewer user conflicts may occur during summer months. Other public uses would not change.

This alternative was not selected because opportunities to create additional outdoor recreation experiences by adding additional species and open new acres would be lost. In addition, the refuge's ability to connect with certain segments of the public would potentially be diminished since hunting for some popular game species would not be permitted. Furthermore, the implementation of the hunting program as described in the hunting objective of the Comprehensive Conservation Plan would not be fulfilled by selecting this alternative. This alternative does not meet the purpose and need as described in the environmental assessment.

Alternative C— Open to Additional State Hunting and Fishing Opportunities with Reduced Seasons

Under this alternative the refuge would open new hunting opportunities for the same migratory bird hunting, upland game and big game hunting as outlined in Alternative B. White-tailed deer and black bear hunting opportunities would be expanded to new refuge land acquisitions. All refuge lands would be opened to sport fishing.

Not all species we plan to open to hunting and fishing may occur on the refuge, however all species listed in this plan are currently huntable/fishable in the state of Michigan. Hunting/fishing seasons would reflect the state of Michigan seasons with the exception of June, July and August when the refuge would be closed to hunting. This would reduce the hunting seasons of all species open to year-round hunting, as well as crow and squirrel seasons. Fishing would remain open during these months. Hunters and anglers will need to follow all applicable federal, state and refuge regulations.

This alternative was not selected because this would reduce opportunities and make regulations for complicated for hunters and anglers by reducing the hunting and fishing seasons of all species open to year-round hunting. It also does not meet the need to align with state regulations to the extent practicable as described by the Refuge Administration Act, as amended.

Summary of Effects of the Selected Action

An Environmental Assessment, further referred to as EA, was prepared in compliance with the National Environmental Policy Act, further referred to as NEPA, to provide decision-making framework that 1) explored a reasonable range of alternatives to meet project objectives, 2) evaluated potential issues and impacts to the refuge, resources and values, and 3) identified mitigation measures to lessen the degree or extent of these impacts. The EA analyzed the potentially affected environment and evaluated the degree of the effects associated with opening bank fishing and hunting opportunities for crows, ducks, mergansers, coots, geese, snipe, Virginia and sora rails, moorhens, woodcock, red and gray foxes, rabbit, hare, coyote, ruffed grouse, squirrels (ground, red, fox and gray), opossum, porcupine, weasel, house sparrow, skunk, woodchuck, feral pigeon, starling, turkey, bobcat, raccoon, deer, bear, and Russian boar and expanding hunting opportunities for white-tailed deer and black bear on 736 geospatial acres of the refuge, a no action

alternative, and alternative that would limit hunting seasons by closing them during June, July and Augusts. The EA is incorporated as part of this finding.

Implementation of the agency's decision would be expected to result in the following environmental, social, and economic effects:

Additional opportunities created from this decision may attract limited additional hunters and anglers. At this time, we believe hunting use will not conflict with other visitor uses as additional hunting opportunities will occur in the fall after most non-hunting users have stopped recreating on the islands during the summer months, and in the future if there is the impact it will be mitigated.

There is not likely to be an adverse effect on endangered or threatened species and in some instances no effects. A consultation pursuant to Section 7 of the Endangered Species Act was formerly conducted as part of the Environmental Assessment and the updated Hunt and Fish Plan. A determination of "No Effect on species/critical habitat list species/critical habitat" was made for the Canada lynx, northern long-eared bat, dwarf lake iris, Houghton's goldenrod, Pitcher's thistle or American Hart's-tongue fern. A determination of "Not Likely to Adversely Affect species/critical habitat list species/critical habitat" was made for the red knot and piping plover. A determination of "Not Likely to Jeopardize candidate or proposed species/critical habitat list species/critical habitat" was made for the monarch butterfly. The proposed plan is not likely to adversely affect individuals and/or designated critical habitat. Effects on hunted and other wildlife and habitat would be negligible.

Additional opportunities are likely to attract more hunters and anglers, potentially impacting and leading to conflicts with other users. At this time, we believe opening to sport fishing use from shore will not conflict with other visitor uses. Hunting use will likely not conflict with non-consumptive wildlife users as they typically utilize the refuge at different times of the year. If hunting and fishing use conflict with other visitor uses, then we will work to mitigate it at that time. There will be an increase in visitation from increasing hunting and fishing on the refuge, although impacts to the local economy and regional economy are likely to have a negligible impact.

Measures to mitigate and/or minimize adverse effects have been incorporated into the selected action. These measures include:

The refuge manager may establish specific regulations for individual species or portions of the refuge depending on conflicts with other wildlife dependent recreation priorities. Permanent or periodic hunting closures for specific species or closures of portions of the refuge may be necessary if the refuge manager determines that there are specific habitat, wildlife protection and/or public safety requirements. The need to implement mitigation measures will be evaluated annually; at this time there are no perceived conflicts or need for mitigation measures. Coordination with the public and refuge stakeholders, including the Michigan Department of Natural Resources, will promote continuity and understanding of refuge and service resource goals and objectives and will help assure that the decision-making process considers all interests.

While refuges, by their nature, are unique areas protected for conservation of fish, wildlife and habitat, the proposed action will not have a significant impact on refuge resources and uses for several reasons:

- In the context of state hunting and fishing programs, the proposed action will only result in a small additional number of individuals of harvested species that will not impact local, state or regional populations. The Service works closely with the state to ensure that additional species harvested on a refuge are within the limits set by the state to ensure healthy populations of the species for present and future generations of Americans.
- The action will result in beneficial impacts to the human environment, including the biodiversity and ecological integrity of the refuge, as well as the wildlife-dependent recreational opportunities and socioeconomics of the local economy, with only negligible adverse impacts to the human environment as discussed above.
- The adverse effects of the proposed action on air, water, soil, habitat, wildlife, aesthetic/visual resources, and wilderness values are expected to be negligible and short-term. The benefits to long-term ecosystem health that these efforts will accomplish far outweigh any of the short-term adverse impacts discussed in this document.
- The National Wildlife Refuge System uses an adaptive management approach to all wildlife management on refuges, monitoring and re-evaluating the hunting and fishing opportunities on the refuge on an annual basis to ensure that the hunting and fishing programs continue to contribute to the biodiversity and ecosystem health of the refuge and that the impacts from these opportunities do not add up to significant impacts in combination with the environmental trends and planned actions on and near the refuge.

- The action, along with proposed mitigation measures, will ensure that there is low danger to the health and safety of refuge staff, visitors and the hunters/fishers themselves.
- The action allows the refuge manager to establish specific regulations or closures for individual species or portions of the refuge depending on conflicts with other wildlife dependent recreation priorities.
- The action is not in an ecologically sensitive area.
- The action will not impact any threatened or endangered species; or any federally-designated critical habitat.
- The action will not impact any cultural or historical resources.
- The action will not impact any wilderness areas.
- There is no scientific controversy over the impacts of this action and the impacts of the proposed action are relatively certain.
- The proposal is not expected to have any significant adverse effects on wetlands and floodplains, pursuant to Executive Orders 11990 and 11988.

Public Review

The proposal has been thoroughly coordinated with all interested and/or affected parties. On April 15, 2021 the Service released the draft Environmental Assessment, draft Compatibility Determinations and draft Hunt and Fish Plan for public review. Members of the public were notified of the availability of the draft documents through a press release sent through statewide media and posted on the refuge website. Following the release of the draft documents, the Service opened a 60-day local public comment period that was extended through the Federal Register Public Comment Period for the 2020/2021 Proposed Hunt and Fish Rule that ended July 6, 2021. The national notice in the Federal Register (Volume 85, Number 69; FWS-HQ-NWRS-2021-0027 FXRS12610900000-212-FF09R20000) published on May 5, 2021. The public was encouraged to submit comments regarding the draft documents via email or through the mail. A formal letter dated September 23, 2020 was sent to Michigan Department of Natural Resources requesting review of the formal documents. A letter of support was received in response. The refuge will continue to coordinate with Michigan Department of Natural Resources to address annual implementation of hunting activities and ensure safe and enjoyable hunting opportunities. A formal letter dated September 23, 2020 was sent to Michigan state Tribes requesting review of the formal documents. No comment letters were received in response. The refuge received two comments during the public

comment period concerned about safety of users, noise disturbance, hounding practices. Because of comments the refuge developed safety protocols in case of emergency and clarified that hounding for furbearer hunting is not considered to have dogs under immediate control of owners and thus is not allowed.

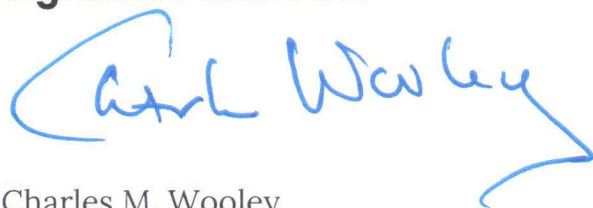
Finding of No Significant Impact

Based upon a review and evaluation of the information contained in the EA as well as other documents and actions of record affiliated with this proposal, the Service has determined that the proposal to implement opening upland game, migratory game bird, and big game hunting and sport fishing on the Harbor Island National Wildlife Refuge does not constitute a major federal action significantly affecting the quality of the human environment under the meaning of section 102 (2) (c) of the National Environmental Policy Act of 1969 (as amended). As such, an environmental impact statement is not required.

Decision

The Service has decided to open hunting opportunities for crows, ducks, mergansers, coots, geese, snipe, Virginia and sora rails, moorhens, woodcock, red and gray foxes, rabbit, hare, coyote, ruffed grouse, squirrels (ground, red, fox, gray), opossum, porcupine, weasel, house sparrow, skunk, woodchuck, feral pigeon, starling, turkey, bobcat, raccoon, deer, bear, and Russian boar. All refuge lands would also be opened to sport fishing so that anglers can stand on the shoreline and fish into Lake Huron on the Harbor Island National Wildlife Refuge in accordance with the refuge's Harbor Island Hunt and Fish Plan 2021. This action is compatible with the purposed of the refuge and the mission of the National Wildlife Refuge System. See attached Compatibility Determinations in the EA, Appendix A. This action will not be implemented until the date of public inspection by the Federal Register and regulations are finalized. The action is consistent with applicable laws and policies.

Signature and Date



8/6/2021

Charles M. Wooley
Regional Director

**Environmental Assessment for 2021–2022
Harbor Island National Wildlife Refuge
Upland Game, Migratory Game Bird, and
Big Game Hunting and Sport Fishing Plan**

August 2021

Prepared by
Harbor Island National Wildlife Refuge
Seney, Michigan

Table of Contents

Environmental Assessment for 2021-2022 Harbor Island National Wildlife Refuge Upland Game, Migratory Game Bird, and Big Game Hunting and Sport Fishing Plan 1	
Environmental Assessment for Harbor Island National Wildlife Refuge Hunt and Sport Fish Plan.....	4
Proposed Action.....	4
Background	5
Purpose and Need for the Action.....	6
Alternatives	7
Alternative A – Continue Current Hunting Opportunities – No Action Alternative	7
Alternative B – Open to additional state hunting and fishing opportunities and seasons – Preferred Action Alternative	8
Alternative C – Open to additional state hunting and fishing opportunities with reduced seasons.....	9
Alternatives Considered, But Dismissed from Further Consideration.....	10
Affected Environment and Environmental Consequences	11
Natural Resources	13
Visitor Use and Experience	45
Refuge Management and Operations.....	46
Socioeconomics	48
Monitoring.....	50
Summary of Analysis	50
Alternative A – Continue Current Hunting Opportunities – No Action Alternative	50
Alternative B – Open the refuge to state hunting and fishing opportunities and seasons – Preferred Action Alternative	51
Alternative C – Open the refuge to state hunting and fishing opportunities with reduced seasons.....	52

List of Sources, Agencies and Persons Consulted.....	52
List of Preparers.....	52
State Coordination	53
Tribal Consultation.....	53
Public Outreach	54
Determination	55
Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, executive orders, and policies that protect fish and wildlife resources, it has been determined that:.....	55
References.....	56
Appendix A	61
Harbor Island National Wildlife Refuge Hunt and Sport Fish Plan (2021).....	61
Appendix B	62
Intra-service section 7 biological evaluation form	62
Appendix C	63
Letters and Correspondence with State and Tribes	63
Appendix D.....	64
Public comment analysis report and response to comment.....	64
References.....	71

Environmental Assessment for Harbor Island National Wildlife Refuge Hunt and Sport Fish Plan

This Environmental Assessment was prepared to evaluate the effects associated with the proposed action and complies with the National Environmental Policy Act in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and U.S. Fish and Wildlife Service (550 FW 3) regulations and policies. The National Environmental Policy Act requires examination of the effects of proposed actions on the natural and human environment.

Proposed Action

As part of the effort to expand hunting and fishing opportunities on national wildlife refuges, the U.S. Fish and Wildlife Service is proposing to expand hunting opportunities on Harbor Island and open newly acquired lands in Harbor Island National Wildlife Refuge to all applicable state hunting seasons. This includes opening to migratory bird hunting (crows, ducks, mergansers, coots, geese, snipe, Virginia and sora rails, moorhens and woodcock), upland game (foxes (gray and red), rabbit and hare, coyote, ruffed grouse, squirrels (ground, red, fox and gray), opossums, porcupines, weasels, house sparrows, skunks, woodchucks, feral pigeons, starlings, turkeys, bobcats and raccoons) and big game (Russian boar). It would also expand deer and bear big game hunting to newly acquired lands.

The refuge is currently closed to fishing. Although the islands have no inland fishable waters, we would like to consider opening the islands to sport fishing so anglers can stand on the shoreline and fish into Lake Huron.

The hunting and fishing opportunities on the refuge would take place in accordance with the state of Michigan's hunting and fishing regulations and the refuge's Hunt and Fish Sport Plan (Appendix A).

The proposed changes to hunting and fishing opportunities on the refuge lands are in accordance with the refuge's Comprehensive Conservation Plan and Habitat Management Plan and no minor amendment to the Comprehensive Conservation Plan is required for any alternatives proposed.

A proposed action may evolve during the NEPA process as the agency refines its proposal and gathers feedback from the public, tribes and other agencies.

Therefore, the final proposed action may be different from the original. The final decision on the proposed action will be made at the conclusion of the public comment period for the Environmental Assessment and the 2021-2022 Refuge-Specific Hunting and Sport Fishing Regulations. The Service cannot open a refuge to hunting or fishing until a final rule has been published in the Federal Register formally opening the refuge to hunting or fishing.

Background

National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System, the purposes of an individual refuge, agency policy and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962 and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual.

Harbor Island National Wildlife Refuge was purchased in 1983 under authority of the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j) as part of the Unique Ecosystem's Program.

The primary purpose of the refuge is *"...(for the) conservation, management and restoration of the fish, wildlife and plant resources and their habitats for the benefit of present and future generations of Americans.."* National Wildlife Refuge System Administration Act, 16 U.S.C. n 668dd(a)(2)

The mission of the refuge system, as outlined by the National Wildlife Refuge System Administration Act, as amended by the National Wildlife Refuge System Improvement Act, 16 U.S.C. 668dd et seq., is *"...to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans."*

Additionally, the National Wildlife Refuge System Administration Act, as amended mandates the Secretary of the Interior in administering the National Wildlife Refuge System (16 U.S.C. 668dd(a)(4)) to

- Provide for the conservation of fish, wildlife, plants and their habitats within the Refuge System;

- Ensure that the biological integrity, diversity and environmental health of the refuge system are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the refuge system described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;
- Ensure effective coordination, interaction and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the states in which the units of the Refuge System are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the Refuge System and the purposes of each refuge.
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the Refuge System through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses;
- Monitor the status and trends of fish, wildlife and plants on each refuge.

Therefore, it is a priority of the Service to provide for wildlife-dependent recreation opportunities, including hunting and fishing, when those opportunities are compatible with the purposes for which the refuge was established and the mission of the National Wildlife Refuge System.

Harbor Island National Wildlife Refuge currently consists of two islands, Harbor Island and Standerson. These islands are in the state of Michigan in Potagannissing Bay, Lake Huron near Drummond Island at the eastern end of the Upper Peninsula just 3.5 miles south of the Canada border. In 1983, the agency purchased the 695-acre Harbor Island from The Nature Conservancy as part of the Unique Ecosystems program effectively starting the refuge. In December of 2019, the agency purchased the 25-acre Standerson Island located just to the northwest of Harbor Island expanding the refuge's size to 736 acres. Additional lands may be added in the future.

Purpose and Need for the Action

The purpose of this proposed action is to provide compatible wildlife-dependent recreational, specifically hunting and fishing, opportunities on Harbor Island National Wildlife Refuge in accordance with the Gravel Island, Green Bay, Harbor Island, Huron and Michigan Islands National Wildlife Refuges Comprehensive Conservation Plan's people goal, objective and specific community outreach

strategy number four aim's, "...to make Harbor Island more accessible to visitors". The need of the preferred action is to meet the agency's priorities and mandates as outlined by the Refuge System Administration Act, as amended to "recognize compatible wildlife-dependent recreational uses as the priority general uses of the refuge system" and "ensure that opportunities are provided within the refuge system for compatible wildlife-dependent recreational uses" (16 U.S.C. 668dd(a)(4)). Furthermore, when considering opening to hunting and fishing uses, the Administration Act, as amended further provides that regulations permitting hunting or fishing of fish and resident wildlife within the Refuge System shall be, to the extent practicable, consistent with State fish and wildlife laws, regulations and management plans (16 U.S.C. 668dd(m)) and thus the action should meet this need. The need of the proposed action also meets the agency's implementation of Secretarial Order (S.O.) 3347 Conservation Stewardship and Outdoor Recreation and S.O. 3356 Hunting, Fishing, Recreational Shooting and Wildlife Conservation Opportunities and Coordination with States, Tribes and Territories by expanding hunting opportunities and aligning agency regulations with state regulations. Increasing deer hunting also meets habitat preservation needs by reducing deer browse on the refuge's islands in accordance with the 2015 Habitat Management Plan. The plan's wildlife goal states, "protect, restore and maintain a natural diversity of fish and wildlife native to the Great Lakes" and the wildlife objective 1 specifically states to "liberalize hunting of white-tailed deer." As far back as 1978, deer browse has been recognized as causing adverse effects on the islands' forests. A reduction in the size of the population of deer that use the island has been identified as an effective tool in reducing the negative habitat impacts. Hunting is a tool for population management of white-tailed deer on the island but is not a management tool for other species.

Alternatives

Alternative A – Continue Current Hunting Opportunities – No Action Alternative

Under the "No Action Alternative", the current hunting regulations would not change. White-tailed deer and black bear hunting within state seasons are currently allowed on 695-acre Harbor Island. Newly acquired refuge lands would remain closed to all hunting. Opportunities to create additional outdoor recreation

experiences by adding additional species and hunting related habitat management capabilities would not be unavailable on newly acquired lands. All refuge lands would remain closed to fishing. Other public uses would not change. The refuge would continue to serve as habitat for fish and wildlife as well as provide outdoor recreational opportunities for wildlife observation and photography, environmental education and interpretation, hunting and mushroom and berry picking.

Alternative B – Open to additional state hunting and fishing opportunities and seasons – Preferred Action Alternative

The refuge has prepared a hunt and sport fish plan, Harbor Island National Wildlife Refuge Hunt and Sport Fish Plan (Appendix A), which is presented in this document as the preferred Action Alternative.

Under the “Preferred Action Alternative,” the refuge would provide new hunting opportunities for migratory game bird hunting (crows, ducks, mergansers, coots, geese, snipe, Virginia and sora rails, moorhens and woodcock), upland game (foxes (red and gray), rabbit and hare, coyote, ruffed grouse, squirrels (ground, red, fox and gray), opossums, porcupines, weasels, house sparrows, skunks, woodchucks, feral pigeons, starlings, turkeys, bobcats and raccoons) and big game (Russian boar). Big game hunting (white-tailed deer and black bear) hunting opportunities would be expanded to new refuge land acquisitions. All refuge lands would be opened to sport fishing so that anglers can stand on the shoreline and fish into Lake Huron.

Not all species we hope to open to hunting and fishing may occur on the refuge, however all species listed in this plan are currently huntable/fishable in the state of Michigan. Hunting/fishing seasons would reflect the state of Michigan seasons. Full alignment with state regulations is being proposed in order to meet the Administration Act, as amended, mandate that regulations allowing hunting or fishing of fish and resident wildlife within the Refuge System shall be, to the extent practicable, consistent with State fish and wildlife laws, regulations, and management plans (16 U.S.C. 668dd(m)). Hunters and anglers will need to follow all applicable federal, state, tribal and refuge specific regulations. Under this alternative trapping and falconry are not considered methods of take for hunting purposes on the refuge. Refuge-specific hunting and fishing regulations can be more restrictive (but not more liberal) than state regulations to help meet specific refuge objectives. For additional information please reference the Code of Federal Regulations, the state of Michigan’s annual hunting and fishing digests and refuge

specific regulations in the 2021 Harbor Island National Wildlife Refuge Hunt and Fish Plan (Appendix A, Conduct of the Hunting and Fishing Programs section).

Measures to Avoid Conflicts

The refuge manager may establish specific regulations for individual species or portions of the refuge depending on conflicts with other wildlife dependent recreation priorities. Permanent or periodic hunting closures for specific species or closures of portions of the refuge may be necessary if the refuge manager determines that there are specific habitat, wildlife protection and/or public safety requirements. The need to implement mitigation measures will be evaluated annually; at this time there are no perceived conflicts or need for mitigation measures. Coordination with the public and refuge stakeholders, including the Michigan Department of Natural Resources, will promote continuity and understanding of refuge and service resource goals and objectives and will help assure that the decision-making process considers all interests.

This alternative offers increased opportunities for public hunting/fishing and fulfills the Service's mandate under the National Wildlife Refuge System Administration Act. The agency has determined that the hunt and fish plan is compatible with the purposes of Harbor Island National Wildlife Refuge and the mission of the refuge system. The compatibility determinations can be found in Attachment B and C of the Hunt and Fish Plan found in Appendix A of this document.

Alternative C – Open to additional state hunting and fishing opportunities with reduced seasons

Under this alternative the refuge would open new hunting opportunities for the same migratory game bird hunting, upland game and big game hunting as outlined in Alternative B. White-tailed deer and black bear hunting opportunities would be expanded to new refuge land acquisitions. All refuge lands would be opened to sport fishing.

Not all species we hope to open to hunting and fishing may occur on the refuge, however all species listed in this plan are currently huntable/fishable in the state of Michigan. Hunting/fishing seasons would reflect the state of Michigan seasons with the exception of June, July and August when the refuge would be closed to hunting. This would reduce the hunting seasons of all species open to year-round

hunting, and crow, squirrel seasons. Hunters and anglers will need to follow all applicable federal, state and refuge regulations. For additional information, please reference the Code of Federal Regulations, the state of Michigan's annual hunting and fishing digests and refuge specific regulations in Appendix B the 2020 Harbor Island National Wildlife Refuge Hunt and Fish Sport Plan (Conduct of the Hunting and Fishing Programs section).

Measures to Avoid Conflicts

To minimize conflicts with the priority non-hunting recreational users, outlined in the Improvement Act, and potentially for public safety, the refuge will close for hunting in June, July and August. This alternative would shorten crow hunting by one month. Species that have year-round hunting seasons would have their seasons shortened by three months. Species hunted year-round in Michigan include coyote, red squirrels, opossums, porcupines, house sparrows, feral pigeons, starlings, skunks, ground squirrels, woodchuck, weasel and Russian boar. Of these species only red squirrel and crow have been documented on the refuge. Shortening the hunting season for these animals is unlikely to affect hunters but would allow the non-hunting recreational users to use the islands without needing to consider disturbing hunters or worrying about their safety if there are hunters using the island when they are for crow and squirrel hunting.

This alternative also offers increased opportunities for public hunting and fishing and fulfills the Service's mandate under the National Wildlife Refuge System Administration Act, as amended. However, this alternative does not provide as much alignment with state regulations as possible. The agency has determined that this alternative would also be compatible as it is open to the same species as described in the hunt and fish plan, which is compatible with the purposes of Harbor Island National Wildlife Refuge and the mission of the refuge system.

Alternatives Considered, But Dismissed from Further Consideration

Potential alternatives were considered but not carried forward for detailed analysis because it would not enable the refuge to fulfill the purposes for which it was established nor the purpose of this environmental assessment. A no hunting alternative would require existing hunting to cease on the refuge and was not considered for further analysis. The Improvement Act identifies hunting as one of six priority uses of lands within the refuge system. To eliminate hunting on refuge

lands where it has already been determined to be compatible with refuge purposes and the mission of the agency would not meet the intent of the Refuge Administration Act, as amended as the Refuge Improvement Act.

Affected Environment and Environmental Consequences

This section is organized by affected resource categories and for each affected resource discusses both (1) the existing environmental and socioeconomic baseline in the action area for each resource and (2) the effects and impacts of the proposed action and any alternatives on each resource. The effects and impacts of the proposed action considered here are changes to the human environment, whether adverse or beneficial, that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives. This Environmental Assessment includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an “affected resource.” Any resources that will not be more than negligibly impacted by the action have been dismissed from further analyses.

The refuge consists of approximately 736-acres in Chippewa County, Michigan. It should be noted that per the documented acres as described in the deed documents the refuge is described as 719.5 acres, geospatial acres are reported as 735.66. It is common for these acres to not match perfectly. As acres associated with this action are described geospatially, through use of maps made available to the public, the GIS calculated acres are used for describing the number of acres associated with this proposed action.

Harbor Island National Wildlife Refuge’s primary habitat types include balsam and cedar lowlands and oak, beech and maple uplands. The proposed action is to take place throughout the refuge. (See map of the general area and proposed project site on the refuge at Appendix A, Attachment A).

For more information regarding the general characteristics of the refuge’s environment, please see Chapter 3 of the refuge’s Comprehensive Conservation Plan or the “Current Habitat Types” section of the Habitat Management Plan. Link to the Comprehensive Conservation Plan:

https://www.fws.gov/midwest/planning/GreatLakesIslands/CCP/FINAL_GLI_CCP-08Feb2013-web.pdf. Link to the Habitat Management Plan can be found here: https://www.fws.gov/uploadedFiles/Islands_Habitat_Management_Plan_SeneyNWR_Final_Apr_2015.pdf

The following resources either (1) do not exist within the project area or (2) would either not be affected or only negligibly affected by the proposed action:

- Geology and soils – The refuge’s geology is considered resistant rock which is made up of basalt and granite. The soils support forests, meadows and wetlands with gravel, rock and sand beaches. These habitats are not considered fragile. Recreation already occurs on the islands and hunting and fishing activities are not expected to increase visitation substantially.
- Air quality – No effects to air quality are expected to occur. The effects of shooting a gun would produce a small puff of gun smoke, which would rapidly disperse leaving no lasting impacts. No other air quality impacts are expected.
- Water quality – The refuge has no inland open water or streams. It consists of small islands in Lake Huron. The increase in boat traffic from an increase in hunting access will be negligible in consideration of all boat usage on Lake Huron. Furthermore, non-toxic shot is required when hunting small game and migratory game birds on the refuge. Therefore, no effects to water resources related to water quality are expected because of increasing hunting opportunities and expanding access.
- Floodplains – No modifications will be made that will increase the floodplain elevation or negatively affect its function and value. Therefore, no effects to floodplains are expected because of increasing hunting opportunities and expanding access, and the proposed action complies with Executive Order 11988 – Floodplain management – Fed. Reg. 26951 (1977).
- Wilderness – The refuge does not have any designated wilderness areas per the Wilderness Act, 16 U.S.C. 1131 et seq. nor does the refuge have any waterways that fall under the Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq. Given this, no effect to wilderness is expected because of increasing hunting opportunities and expanding access.
- Cultural resources – Harbor Island has four known archeological sites. None of the alternatives will have any impacts to cultural resources. No buildings or structures exist on-site that are listed on the National Register of Historic Places. Hunters and anglers are not expected to dig, causing ground disturbance that could negatively impact cultural resources. Any activity that might cause an effect to a historic property would be subject to a case-by-case Section 106 review. The proposed action meets all cultural resource law requirements.

As such, these resources are not further analyzed in this Environmental Assessment. Cumulative impacts of all opening and expansion of hunting and fishing opportunities for the 2021 – 2022 proposed and final rule have been evaluated through the rule making process. The 2021–2022 cumulative impacts report concluded, after analyzing the impacts, collectively, of all environmental assessments and categorical exclusions, that the rule will not have significant impacts at the local, regional or national level.

Natural Resources

Crows

Affected Environment

Description of Affected Environment for the Affected Resource

Crows are primarily found within the upland habitats of the refuge. This habitat ranges from forest openings to mixed forest and boreal forest, which cover the majority of the refuge's 736-acres. Given that crows need open areas for foraging and scattered trees for nesting and roosting, habitat is available refuge wide. The refuge woodlands and forest types consist of various species of trees including northern white cedar, balsam fir, red oak, sugar maple, trembling aspen, white ash and paper birch. Some crows travel the short distance from the mainland or Drummond Island, but others may be residents.

Description of Relevant Environmental Trends and Planned Actions

Since the 1950s crows have been one of the primary small game species hunted in Michigan. Crows have been documented on the refuge and their population in Michigan is healthy (Frawley, 2019b). In Michigan, crow hunts are regulated by the Department of Natural Resources, which provides the hunting regulation, season dates and bag limits in an annual Michigan Hunting Digest.

According to the “2017 Small Game Harvest Survey” developed by the Michigan Department of Natural Resources, crow hunting is on the decline. They estimated that in the Upper Peninsula of Michigan up to 651 hunters spent as many as 4,053 days hunting crow in the field. They harvested a maximum of 13,186 crows (Frawley, 2019b). This means the average crow hunter spent 4.9 days in the field and harvested 14.7 birds.

According to the small game report most crows are harvested on private property. Because crows are not a popular game species it is unlikely people will visit the

refuge to specifically hunt crows. It is more likely that they may be on the refuge hunting other animals, and if they decide to take a crow it would be opportunistic.

Impacts on Affected Resources

Alternative A

Under this alternative, there would be no impact to crows beyond temporary disturbance from current hunting activities. Crow hunting would not be allowed.

Alternative B

Estimated hunter numbers: 0

Estimated number of days spends on the refuge: 0

Estimated take: up to 2 on an annual basis, zero most likely

The addition of 736-acres for hunting crow is estimated to have negligible impacts on the crow population. It is unlikely people would travel to the islands with crow hunting as their main purpose, but they may take a crow while hunting other species. Raccoons are the only proposed species whose season would not coincide with crow hunting. Under this alternative there may be temporary disturbance to crow species from other hunters. Impacts to crows would be negligible under this alternative.

Alternative C

Estimated hunter numbers: 0

Estimated days hunting in the field: 0

Estimated take: 0

Alternative C calls for the refuge to be closed to hunting in June, July and August. Crow hunters would not be allowed to hunt on the refuge from August 1 – 31. Coyote, red squirrel, opossums, porcupines, weasels, house sparrows, skunks, ground squirrels, woodchucks, feral pigeons, starlings or Russian boars are the only other species that would be allowed to be hunted on the refuge in August. Of those species, only Coyote, red squirrel and starlings are known to use the refuge. Since crow, coyote, red squirrel and starling hunting are unlikely to draw hunters to the refuge we do not believe closing hunting for the month of August would affect hunters. Impacts to crows during the other part of the season would be comparable to those described in Alternative B, negligible.

Waterfowl: Ducks, Coots, Mergansers and Geese

Affected Environment

Description of Affected Environment for the Affected Resource

Migratory game bird management in the United States is a cooperative effort of state and federal governments. In Michigan ducks, coots, mergansers and geese are considered waterfowl. The Michigan Department of Natural Resources provides waterfowl hunting regulation, season dates and bag limits in an annual Waterfowl Hunter's Digest. These dates are set based on federal hunting season frameworks that are developed annually. The purpose of annual hunting regulations is to keep harvests at levels, so populations are able to maintain. The regulatory tools that exist to do this are framework regulations and special regulations. Framework regulations are the foundation of annual regulations and consist of the outside dates for opening and closing seasons, season length, daily bag and possession limits and shooting hours. Special regulations consist of framework regulations that are applied on a small scale. These consist of split seasons, zones and special seasons.

Waterfowl utilize many habitats to support their lifecycle. The refuge contains a large harbor, several small wetlands that dot the edges of the islands where the uplands meet Lake Huron and open water between islands which could provide suitable habitat for migratory waterfowl. Lake Huron is managed by the state of Michigan and it is possible that waterfowl hunters have taken advantage of the harbor and adjacent waters for hunting in the past. However, hunters have not been able to set up blinds or other hunting equipment on the refuge.

Description of Relevant Environmental Trends and Planned Actions

Harbor Island National Wildlife Refuge is located within the Mississippi Flyway for waterfowl. Total duck and goose harvest in the United States from the 2019 hunting season was estimated between 9,234,760 and 10,206,840 ducks and 2,557,305 and 2,826,495 geese. In 2019, the annual duck harvests for the Mississippi Flyway averaged between 3,796,611 and 4,547,589 ducks and 931,112 and 1,115,288 geese harvested (Raftovich, et al 2020).

The state of Michigan is divided into three waterfowl hunting zones. The refuge is in the north zone, which includes the Upper Peninsula. The "2018 Waterfowl Harvest Survey" filed by the Michigan Department of Natural Resources estimates that between 4,659 and 6,025 duck hunters spent 28,975 to 43,483 days hunting in

the field. They harvested between 34,562 and 58,092 ducks, coots and mergansers. On average, a duck hunter spent 6.8 days in the field and harvested 8.7 ducks in a season (Frawley, 2020c). We estimated the daily success rate of duck hunters in the Upper Peninsula by taking the average number of ducks harvested per hunter in a season (8.7 ducks) divided by the estimated number of days they spent in the field (6.8 days) for a success rate of 1.28 birds per day. Mergansers are included in the total harvest limits in the Raftovich, et al harvest report. Therefore, the harvest success rate also includes estimating merganser harvest even though mergansers have their own bag limit in Michigan.

Geese were estimated to have between 3,399 and 5,053 hunters who spent 18,010 to 32,400 days hunting in the field. They harvested between 12,661 and 28,675 geese. On average, a goose hunter spent 6 days in the field and harvested 4.9 birds in a season. We estimated the daily success rate of goose hunters in the Upper Peninsula by taking the average number of geese harvested per hunter in a season (4.9 geese) divided by the estimated number of days they spent in the field (6 days) for a success rate of 0.82 birds per day.

In 2019, up to 5825 coot hunters in Michigan spent 51,042 days hunting and harvested 7104 coots, averaging between zero and 3 coots in the entire season. Michigan represents only 2 percent of the harvest at the Mississippi flyway level; up to 322,600 coots were estimated to be harvested (Raftovich, et al 2020). We estimated the daily success rate of coot hunters in the Upper Peninsula by taking the average number of coots harvested per hunter in a season (3 coots) divided by the estimated number of days they spent in the field (8.76 days) for a success rate of 0.34 birds per day.

Impacts on Affected Resources

Alternative A

Under this alternative, there would be no impact to waterfowl beyond temporary disturbance from current hunting activities. Waterfowl hunting would not be allowed on refuge lands. However, waterfowl hunting would continue to occur in Lake Huron waters.

Alternative B and C

Alternative B states that waterfowl seasons will take place during the Michigan state seasons. Alternative C provides an option where hunting does not take place in June, July or August. Waterfowl season falls outside of this timeframe; therefore,

alternatives B and C would have the same estimated impact and will be considered together.

Estimated hunter numbers: 14

Estimated days hunting in the field: 48

Estimated take: Ducks and Mergansers 61/Geese 39/Coots 2

Opening the refuge to waterfowl hunting could provide several choice hunting locations. For our calculations, we estimated that 4 to 5 hunting parties would use the refuge. Waterfowl hunting parties often have 2 to 4 people. We estimated an average of 14 hunters would use the refuge and spend 3.4 days (or half of their annual hunting time) on the refuge hunting and have an average success rate of 1.28 birds per day. Therefore, we estimated a harvest of up to 61 ducks annually. This is less than 0.1% of the ducks and mergansers harvested in the state of Michigan or 0.001% of the ducks and geese harvested in the Mississippi Flyway.

Assuming the same hunters are also pursuing geese on the refuge and have a success rate of 0.82 geese per day, we estimated a harvest of up to 39 geese annually from the refuge. This is less than 0.3% of the total geese harvested in the state of Michigan or 0.004% of geese harvested in the Mississippi Flyway.

As most duck and geese hunters will opportunistically harvest coots, we assume the same hunters are also pursuing coots on the refuge. We estimated an average of 14 hunters would use the refuge and spend 4.48 days (or half of their annual hunting time) on the refuge hunting and have an average success rate of .34 coots per day. Therefore, we estimated a harvest of up to two coots annually. This is less than 0.03% of the coots harvested in the state of Michigan or 0.006% of the coots harvested in the Mississippi Flyway. Coots typically like water reed-ringed lakes and ponds, open marshes and sluggish rivers and would likely only fly over the refuge as that habitat is not readily available at the refuge. This would not provide a lot of opportunity for hunting on the refuge specifically for coot.

Considering hunters are likely already using the harbor and waters surrounding the refuge to hunt for ducks and geese the actual increase of ducks and geese harvested by opening refuge lands is likely zero. However, we may be increasing hunter satisfaction by allowing them to pull their blinds onto refuge lands.

Snipe, Virginia and Sora Rails and Moorhens

Affected Environment

Description of Affected Environment for the Affected Resource

The refuge contains several small wetlands, which could provide habitat to snipe, rails and moorhen. To date snipe, Virginia rail and moorhen have not been documented on refuge lands. Snipe and Virginia rail are common on the mainland and islands surrounding the refuge so they may be using the lands undetected. Sora have been documented nesting on the refuge. Moorhens are not found in the area.

Description of Relevant Environmental Trends and Planned Actions

In Michigan snipe, rails and moorhen are placed with waterfowl for hunting purposes. The Michigan Department of Natural Resources provides their hunting regulation, season dates and bag limits in an annual Waterfowl Hunter's Digest.

The "Migratory Bird Hunting Activity and Harvest During the 2018 – 2019 and 2019 – 2020 Hunting Seasons" report filed by the U.S. Fish and Wildlife Service estimates that up to 3,752 people hunted snipe in Michigan in 2019. Those hunters spent up to 21,791 days hunting in the field and harvested up to 7,967 birds. The average snipe hunter spent 5.5 days in the field and harvested 2.2 birds in a season. We estimated the daily success rate of snipe hunters in Michigan by taking the average number of snipes harvested per hunter in a season (2.2 birds) divided by the estimated number of days they spent in the field (5.5 days) for a success rate of 0.40 birds per day. The report also found that no rails and moorhens were reported harvested in Michigan in 2019 and surveyed hunters did not pursue these birds (Raftovich, et al 2020).

Impacts on Affected Resources

Alternative A

Under this alternative, there would be no impact to snipe, rails or moorhen using the refuge beyond temporary disturbance from current hunting activities. No snipe, rail or moorhen hunting would be allowed.

Alternative B and C

Alternative B states that snipe, rails and moorhen hunting will take place during the Michigan state seasons. Alternative C provides an option where hunting does not take place in June, July or August. The snipe, rail and moorhen seasons fall outside of this period; therefore alternatives B and C would have the same estimated impact and will be considered together.

Estimated hunter numbers: 0

Estimated days hunting in the field: 0

Estimated take: 0 for all species

The addition of 736-acres for hunting snipe, rails and moorhen is estimated to have negligible impacts on their populations. We conclude hunters would not likely be interested in hunting the refuge because habitat is minimal and limited by lake levels, low snipe occurrence, the required logistics associated with hunting on the island. Snipe hunting success on the refuge is expected to be much lower than the state average of 0.40 birds per hunter. As there were no reported harvest of rails and moorhens in Michigan during the 2019 season, it is assumed that these species would not be hunted on the refuge. Therefore, we found that there will likely be no take of any of these species on the refuge. Opening hunting to these species would allow opportunistic take while hunting other game species such as grouse or waterfowl, however that is still estimated to be negligible and not likely to occur.

Woodcock

Affected Environment

Description of Affected Environment for the Affected Resource

Woodcocks occur on the refuge from spring to fall and are known to breed on the refuge. Their habitat includes moist forest soils near slow moving water, lakes and wetlands. The majority of the 736-acre refuge would qualify as good habitat for woodcock.

Description of Relevant Environmental Trends and Planned Actions

The Michigan Department of Natural Resources provides woodcock hunting regulation, season dates and bag limits in the annual Michigan Hunting Digest.

The “2017 Small Game Harvest Survey” report filed by the Michigan Department of Natural Resources estimates that between 7,217 and 10,447 hunters pursued woodcock in the Upper Peninsula of Michigan in 2017 and they spent between 40,462- and 73,994-days hunting in the field. They harvested between 14,934 and 32,890 birds. The average woodcock hunter spent 6.5 days in the field and harvested 2.7 birds in a season (Frawley, 2019b). We estimated the daily success rate of woodcock hunters in the Upper Peninsula by taking the average number of woodcocks harvested per hunter in a season (2.7 birds) divided by the estimated

number of days they spent in the field (6.5 days) for a success rate of 0.41 birds per day.

Impacts on Affected Resources

Alternative A

Under this alternative, there would be no impact to woodcock beyond temporary disturbance from current hunting activities. Woodcock hunting would not be allowed.

Alternative B and C

Alternative B states that woodcock hunting will take place during the Michigan state seasons. Alternative C provides an option where hunting does not take place in June, July or August. Woodcock season falls outside of this period therefore alternatives B and C would have the same estimated impact and will be considered together.

Estimated hunter numbers: 1

Estimated days hunting in the field: 1

Estimated take: 1

To get our estimate of woodcock hunters using the refuge we took the total size of the Upper Peninsula (10.5 million acres) and compared it to the size of the refuge (736-acres). We then used the average of the total number of Upper Peninsula woodcock hunters (8,832) to estimate how many hunters would use the refuge (1). Due to the size of the island it is unlikely hunters would spend more than one day hunting there. With a daily success rate of 0.41 woodcock, we rounded up and estimated a harvest of one woodcock annually. The removal of an individual from the refuge would have negligible impacts to the woodcock population on the refuge and in the state. The difference between the number of hunters currently using the refuge and the increase in the estimated use and take is negligible. Opening hunting to these species would also allow opportunistic take while hunting other game species like grouse or waterfowl.

Ruffed Grouse

Affected Environment

Description of Affected Environment for the Affected Resource

Ruffed grouse are known to use the refuge and even nest on the islands. Their habitat includes mixed hardwood and coniferous forest with scattered openings. Most of the 736-acre refuge could provide good habitat for ruffed grouse.

Description of Relevant Environmental Trends and Planned Actions

The Michigan Department of Natural Resources provides ruffed grouse hunting regulations, season dates and bag limits in the annual Michigan Hunting Digest. The “2017 Small Game Harvest Report” report filed by the Michigan Department of Natural Resources estimates that in 2017 between 26,792 and 34,479 ruffed grouse hunters spent 190,122- and 281,896-days hunting in the field. They harvested between 82,240 and 117,114 birds. The average ruffed grouse hunter spent 7.7 days in the field and harvested 3.3 birds in a season (Frawley, 2019b). We estimated the daily success rate of ruffed grouse hunters in the Upper Peninsula by taking the average number of grouse harvested per hunter in a season (3.3 birds) divided by the estimated number of days they spent in the field (7.7 days) for a success rate of 0.43 birds per day.

Impacts on Affected Resources

Alternative A

Under this alternative, there would be no impact to ruffed grouse beyond temporary disturbance from current hunting activities. Grouse hunting would not be allowed.

Alternative B and C

Alternative B states that ruffed grouse hunting will take place during the Michigan state seasons. Alternative C provides an option where hunting does not take place in June, July or August. Ruffed grouse season falls outside this period therefore alternatives B and C would have the same estimated impact and will be considered together.

Estimated hunter numbers: 2

Estimated days hunting in the field: 2

Estimated take: 1

To get an estimate of ruffed grouse hunters using the refuge we took the total size of the Upper Peninsula (10.5 million acres) and compared it to the size of the refuge (736-acres). Then we used the average number of ruffed grouse hunters (30,635) to estimate how many hunters would use the refuge (2). Due to the size and remote location of the island it is unlikely hunters would spend more than one day hunting there. With a daily success rate of 0.43 birds, we rounded up and estimated a harvest of one ruffed grouse annually. The difference between the number of hunters currently using the refuge and the increase in the estimated use and take is negligible. The removal of an individual on an annual basis because of hunting would not affect the ruffed grouse population statewide or on the refuge, as populations do not hinge on every single individual reproducing to maintain healthy populations.

Cottontail Rabbit and Snowshoe Hare

Affected Environment

Description of Affected Environment for the Affected Resource

Cottontail rabbits have not been documented on the refuge and the refuge is outside of their natural home range. This species is being considered because the state of Michigan has a statewide hunting season which covers rabbit, and as described in the purpose of this assessment we hope to align with state regulations wherever possible.

Snowshoe hare are considered abundant on the refuge. They prefer forested habitat with an understory, swamps and thickets. The majority of the 736-acres of the refuge would provide good habitat for the snowshoe hare.

Description of Relevant Environmental Trends and Planned Actions

The Michigan Department of Natural Resources regulates rabbit and hare hunting including regulations, season dates and bag limits in an annual Michigan Hunting Digest. According to the “2017 Small Game Harvest Survey” developed by the Michigan Department of Natural Resources rabbit and hare hunting are one of the more popular small game hunts. They estimated that the Upper Peninsula of Michigan had between 1,444 and 4,634 cottontail hunters who spent between 11,964- and 40,354-days hunting in the field. They harvested between 911 and 12,645 cottontail rabbits. The average cottontail hunter spent 8.6 days in the field and harvested 2.2 animals. In contrast, there were an estimated 4,698 and 8,310 snowshoe hare hunters who spent between 23,978- and 63,766-days hunting in the

field. They harvested between 13,007 and 16,983 hares (Frawley, 2019b). This means the average hare hunter spent 6.7 days in the field and harvested 2.3 animals. We estimated the daily success rate of hare hunters in the Upper Peninsula by taking the average number of hares harvested per hunter in a season (2.3) divided by the estimated number of days they spent in the field (6.7 days) for a success rate of 0.34 animals per day (Frawley, 2019b).

Impacts on Affected Resources

Alternative A

Under this alternative, there would be no impact to rabbits and hares beyond temporary disturbance from current hunting activities. Rabbit and hare hunting would not be allowed.

Alternative B and C

Alternative B states that rabbit and hare hunting will take place during the Michigan state seasons. Alternative C provides an option where hunting does not take place in June, July or August. Rabbit and hare season fall outside of this period therefore alternatives B and C would have the same estimated impact and will be considered together.

Estimated Hunter Numbers: Rabbit: 0; Hare: 1

Estimated days hunting in the field: 2

Estimated Take: 1

To get an estimate of hare hunters using the refuge we took the total size of the Upper Peninsula (10.5 million acres) and compared it to the size of the refuge (736-acres). We then used the average number of hare hunters (6,504) to estimate how many hunters would use the refuge (1). Due to the size of the island it is unlikely hunters would spend more than one day hunting the island. With a success rate of 0.34 hare we rounded up and estimated the harvest of one hare per year. The difference between the number of hunters currently using the refuge and the increase in the estimated use and take is negligible. Hares reproduce rapidly and the removal of one hare from the island would not negatively affect the overall population on the island, nor at the state level. During the winter months, hares may also move over the ice from one island to another providing another way hare can repopulate the island. We estimated no hunters would be hunting cottontail

rabbit on the island because it falls out of the normal range of cottontails. Any cottontail take on the island would be opportunistic if it were to occur at all.

Squirrels

Affected Environment

Description of Affected Environment for the Affected Resource

Fox and gray squirrels have not been documented on the refuge; however, the refuge does fall within their natural home ranges. There currently is habitat on the refuge that would support these species; however, their ability to cross the large body of water, even in winter months, might prevent them from occupying the refuge. These species are being considered because the state of Michigan has a statewide hunting season, which covers fox and gray squirrel, and we propose to align with state regulations wherever possible. Red squirrels are found in upland environments, are considered abundant on the refuge and are prolific animals.

Description of Relevant Environmental Trends and Planned Actions

The Michigan Department of Natural Resources regulates squirrel hunting including regulations, season dates and bag limits in an annual Michigan Hunting Digest. According to the “2017 Small Game Harvest Survey” by the Michigan Department of Natural Resources it was estimated that in the Upper Peninsula of Michigan had between 2,318 and 4,274 squirrel hunters who spent between 17,793 and 44,113 days hunting all squirrel species in the field. They harvested between 11,464 and 31,364 animals (Frawley, 2019b). The average squirrel hunter spent 9.4 days in the field and harvested 6.5 animals. We estimated the daily success rate of squirrel hunters in the Upper Peninsula by taking the average number of squirrels harvested per hunter in a season (6.5) divided by the estimated number of days they spent in the field (9.4 days) for a success rate of 0.69 animals per day. According to the report, 86% of squirrel hunting occurs in Sept. and Oct.

Impacts on Affected Resources

Alternative A

Under this alternative, there would be no impact to squirrels beyond temporary disturbance from current hunting activities on the refuge. Squirrel hunting would not be allowed.

Alternative B and C

Estimated Hunter Numbers: 3

Estimated days hunting in the field: 6

Estimated Take: 4

The addition of 736-acres for squirrel hunting is estimated to have negligible impacts to squirrel populations. Squirrels are abundant on the refuge and are prolific. They may have two to four pups per litter and two litters per season. The take of four squirrels will not affect the overall refuge population. Opening to squirrel would allow opportunistic take while hunting other game species, such as deer. It is unlikely people would travel to the islands with squirrel hunting as their primary intent, but they may decide to participate in squirrel hunting if they are already on the island pursuing or scouting other species.

We estimated the number of hunters to be approximately one-third of the number of deer hunters we hope to attract to the island. Deer hunters may decide to combine squirrel hunting with deer scouting. Squirrel hunting success rate is estimated at 0.69 per day. This means that in the six hunting days hunters will bag an estimated four squirrels. Red squirrels are the most likely squirrel species to occur on the island, gray and fox squirrels would be incidental encounters and harvest is unlikely. Although squirrels are one of the more popular small game species it is unlikely people will visit the refuge to specifically hunt for them. It is more likely that they may be on the refuge hunting other animals and if they decide to take a squirrel, it would be opportunistic.

Alternative C calls for the refuge to be closed to hunting in June, July and August. This would close the red squirrel season through the summer months. It is unlikely to affect squirrel hunters because most squirrel hunting occurs in Sept. and Oct. and most take is likely to occur by deer hunters scouting the refuge in the fall. Although squirrels are one of the more popular small game species it is unlikely people will visit the refuge to specifically hunt for them. Most hunters prefer to harvest gray and fox squirrels, not red squirrels. It is more likely that they may be on the refuge hunting other animals and if they decide to take a squirrel, it would be opportunistic.

Russian Boar, Starlings, House Sparrows, Feral Pigeons, Opossum, Porcupine, Skunks, Ground Squirrels, Woodchucks and Weasels

Affected Environment

Description of Affected Environment for the Affected Resource

House sparrows, feral pigeons, porcupines, skunks, ground squirrels, woodchucks and weasels are not known to use the refuge, but they can be found in the area and could be present on the refuge. Russian boar and opossums are not known to use the refuge or be found in the area. Starlings can be found on the refuge. These species are being considered because the state of Michigan has a statewide hunting season, which covers them, and we propose to align with state regulations wherever possible.

Russian boar are not known to use the refuge, nor are they known to be in the area. They are an invasive species and we included it in our hunting program in case their range expands in the future and they begin using the refuge. If this were to occur, we would encourage hunters to participate in a boar hunt. Boars have a home range of about 4,000 acres. Due to the refuge's small size, boar would not solely reside on the islands, instead they would be considered transient. House sparrows and feral pigeons are not known to use the refuge, but they can be found in the area. Starlings have been documented on the refuge. They are considered an exotic species and are not protected by any laws.

Opossums occur in the Lower Peninsula of Michigan. The nearest record of them in the Upper Peninsula are near Escanaba, Michigan nearly 200 miles away.

Porcupines occur in the area, and theoretically could be found on the island. No porcupines have been documented on the islands, but they have a 6- to 14-acre home range of coniferous and mixed forests and so the refuge could sustain a small population. Any porcupines encountered would be incidental. Skunks are present in the area and could possibly make it out to the islands. They require a 500- to 1,000-acre home range and are generally solitary animals. It is unlikely a population of skunks would inhabit the islands. Any skunks encountered on the islands would be incidental and likely transient. Ground squirrels (including chipmunks) are present in the area and could possibly make it out to the islands. They tend to have a home range of less than an acre and could, if present, sustain a large population on the islands. Woodchucks are present in the area and could possibly make it out to the islands. They tend to have a home range of less than an acre and could, if present,

sustain populations on the islands. Weasels are present in the area and could make it out to the islands. In general, weasels have a 3- to 40-acre home range and their prey (hare, mice and birds) are present on the islands. It is possible that the islands could have an undetected weasel population.

Description of Relevant Environmental Trends and Planned Actions

The Michigan Department of Natural Resources provides the hunting regulation, season dates and bag limits in the annual Michigan Hunting Digest. In the 2020 – 2021 season, all species listed in this section may be hunted statewide year-round. There is no bag limit. The state of Michigan states that opossums can be hunted at night, however the refuge is closed at night, therefore nighttime hunting of this species would not be allowed. No data has been shared publicly on their harvest by hunters. Some of these species are considered non-native or nuisance and are open for hunting specifically to reduce their populations.

Impacts on Affected Resources

Alternative A

Under this alternative, there would be no impact to any of the listed species in this section beyond temporary disturbance from current hunting activities to any that may be present on the refuge. Hunting of these species would not be allowed.

Alternatives B and C

Estimated Hunter Numbers: 0 for all species

Estimated Take: 0 for all species

The addition of 736-acres for hunting Russian boar, starling, house sparrow, feral pigeon, opossum, porcupine, skunk, ground squirrel, woodchuck and weasel is estimated to have no impacts to overall populations. With exception of starlings, none of the species are known to use the refuge and because of that they will not be hunted. As hunting activity for these species will not occur and they are not present there would be no impact. Starling hunting is not a popular sport and most starling harvest is done at personal residences to control nuisance birds. There would likely be no hunting or harvest of starlings on the refuge due to these factors.

Alternative C calls for the refuge to be closed to hunting in June, July and August. This would truncate the hunting season of all of these species throughout the

summer months. However, as there is no expected hunting or harvest of these species there would no impacts to these species.

Turkeys

Affected Environment

Description of Affected Environment for the Affected Resource

Turkeys have not been documented on the refuge, but the refuge is within their territory. A turkey's home range is between 350 to 60,000 acres, so the refuge could have a small population of birds or birds may visit the refuge by crossing the ice or flying. However, this is very unlikely due to limited number of acres of the refuge that could support a turkey population. This species is being considered because the state of Michigan has turkey hunting seasons, and as described in the purpose of this assessment we hope to align with state regulations wherever possible.

Description of Relevant Environmental Trends and Planned Actions

The Michigan Department of Natural Resources regulates turkey hunting including regulations, season dates and bag limits in its annual Spring and Fall Turkey Hunting Digests.

According to the "2019 Fall Turkey Harvest Report" and the "2019 Spring Turkey Harvest Reports", by the Michigan Department of Natural Resources, Chippewa County Michigan has between 129 and 425 turkey hunters. They spent between 387- and 1,933-days hunting turkey in the field. They harvested a between 12 and 188 turkeys (Frawley, 2020e) (Frawley, 2019a). This means the average turkey hunter spent 4.2 days in the field and harvested 0.4 birds.

Impacts on Affected Resources

Alternative A

Under this alternative, there would be no impact to turkeys beyond temporary disturbance from current hunting activities if they were present on the refuge as there would be no turkey hunting allowed.

Alternative B and C

Alternative B states that turkey hunting will take place during the Michigan state seasons in the fall and spring. Alternative C provides an option where hunting does not take place in June, July or August. Turkey season falls outside of the June, July

and August period therefore alternatives B and C would have the same estimated impact and will be considered together.

Estimated Hunter Numbers: 0

Estimated Take: 0

To get an estimate of turkey hunters that may use the refuge we took the total size of the state (1.7 million acres) and compared it to the size of the refuge (736-acres). We then used the average number of turkey hunters in Chippewa County (277) to estimate how many hunters would use the refuge (0). Since it is very unlikely a hunter would encounter a turkey on the refuge, this supports the idea that turkey hunting would be unlikely on the refuge. There would be no impacts to turkey under either alternative due to turkey not being present on the refuge for hunting to occur.

Bobcats, Red and Gray Foxes and Raccoons

Affected Environment

Description of Affected Environment for the Affected Resource

Bobcats have not been documented on the refuge; however, they have been seen on nearby islands and as the refuge falls within their territory, they may visit the refuge. A bobcat's normal home range can cover 6 to 60 mi², much larger than the size of the refuge. Therefore, the refuge cannot support bobcats on its own; they would be considered transient visitors.

Gray foxes have not been documented on the refuge; however, the refuge does fall within their territory. Red fox have been recorded on nearby islands and are assumed to use the refuge. Red fox home ranges are 1,280 to 2,000 acres while gray fox home range is smaller at 640 acres. The refuge is unlikely to support more than a transient population of either fox species.

Raccoons have not been documented on the refuge, but they have been seen on nearby islands and the refuge is within their territory. Raccoon home ranges can range in size from 15- to 12,000-acres, so the refuge could have a small population of animals or animals may visit the refuge by crossing the ice or swimming.

Description of Relevant Environmental Trends and Planned Actions

These species are being considered because the state of Michigan has a statewide hunting season which covers them, and we propose to align with state regulations

wherever possible. The Michigan Department of Natural Resources regulates furbearer hunting including regulations, season dates and bag limits in an annual Fur Harvester Digest. The state of Michigan states that foxes and raccoons can be hunted at night, however the refuge is closed at night therefore nighttime hunting of these species would not be allowed.

According to the “2018 Bobcat Hunter and Trapper Harvest in Michigan”, by the Michigan Department of Natural Resources, more people applied for bobcat licenses in 2018 than 2017. They estimated that in the Chippewa County Michigan between 31 and 83 bobcat hunters spent between 148- and 486-days hunting in the field. They harvested up to 18 bobcats (Frawley, 2020a). This means the average bobcat hunter spent 5.6 days in the field and harvested 0.1 animals in a season.

According to the “2018 Michigan Furbearer Harvest Survey”, by the Michigan Department of Natural Resources, an estimated 1,567 to 2,034 hunters spent between 18,730 and 30,348 days hunting red fox in Michigan. They harvested between 743 and 1,521 red fox (Frawley, 2020b). The average red fox hunter spent 13.6 days in the field and harvested 0.6 animals in a season. In contrast, there were an estimated 594 to 902 gray fox hunters who spent between 6,279- and 12,729-days hunting in the field. They harvested between 20 and 168 gray fox (Frawley, 2020b). The average gray fox hunter spent 12.7 days in the field and harvested 0.1 animals in a season.

The furbearer harvest survey also shows raccoons are commonly hunted. It is estimated that statewide Michigan had between 1,718 and 2,202 raccoon hunters who spent between 22,333- and 35,879-days hunting in the field. They harvested a between 14,819 and 26,047 raccoons (Frawley, 2020b). The average raccoon hunter spent 14.9 days in the field and harvested 10.4 animals in a season.

Impacts on Affected Resources

Alternative A

Under this alternative, there would be no impact to foxes, bobcats or raccoons beyond temporary disturbance if they were present on the refuge from current hunting activities on the refuge as there would be no hunting of these species allowed.

Alternative B and C

Alternative B states that fox, bobcat and raccoon hunting will take place during the Michigan state seasons. Alternative C provides an option where hunting does not take place in June, July or August. The bobcat, fox and raccoon seasons fall outside of the June, July and August period therefore alternatives B and C would have the same estimated impact and will be considered together.

Estimated number of hunters: 0 for all species

Estimated Take/Harvest: 0 for all species

The addition of 736-acres for fox, bobcat and raccoon hunting is estimated to have negligible impacts on either population in the region. Opening to these species would allow opportunistic take while hunting other game species, such as deer. It is unlikely people would travel to the refuge to specifically hunt these species as their main purpose, but they may decide to participate in the hunt if they are already on the island pursuing or scouting for other species. Even if they were to partake in these hunting opportunities it is unlikely any of these species would be harvested given their transient nature and the scouter having to be in the right place at the right time.

Coyote

Affected Environment

Description of Affected Environment for the Affected Resource

The refuge falls within the coyote natural home range, but none have been officially documented on the refuge. Coyotes have been documented on islands near the refuge. It is possible that they may visit the refuge from time to time by swimming or walking across the ice. A coyote's normal home range can cover 12 to 40 square miles, much larger than the size of the refuge. Coyotes would only be considered transient visitors because the refuge cannot support coyotes on its own.

Description of Relevant Environmental Trends and Planned Actions

The Michigan Department of Natural Resources regulates coyote hunting including regulations, season dates and bag limits in an annual Michigan Hunting Digest. The following bag limits and seasons apply for the 2020 – 2021 season. Coyote may be hunted statewide year-round. There is no bag limit for coyote. The state of Michigan states that coyotes can be hunted at night, however the refuge is closed at night therefore nighttime hunting of this species would not be allowed.

According to the “2017 Small Game Harvest Survey”, by the Michigan Department of Natural Resources, coyote is one of the regularly hunted furbearer species. They estimated that in the Upper Peninsula of Michigan there had between 2,445 and 6,799 coyote hunters who spent between 9,529- and 34,097-days hunting in the field. They harvested between 1,021 and 3,563 coyotes (Frawley, 2019b). This means the average coyote hunter spent 4.7 days in the field and harvested 0.5 animals.

Impacts on Affected Resources

Alternative A

Under this alternative, there would be no impact to coyote beyond temporary disturbance from current hunting activities on the refuge as there would be no hunting of coyote allowed.

Alternative B

Estimated Hunter Numbers: 0

Estimated Take: 0

The addition of 736-acres for coyote hunting is estimated to have negligible impacts to their populations. Opening to coyote would allow opportunistic take while hunting other game species, such as deer. Although coyotes are one of the more popular furbearer species people hunt it is unlikely people will visit the refuge to specifically hunt for coyote since the refuge is too small to sustain a population of coyote and night hunting is prohibited on the refuge. Hunters may decide to participate in coyote hunting if they are already on the island pursuing or scouting for other species. Even if they were to partake in these hunting opportunities it is unlikely any of these species would be harvested given their transient nature and the scouter having to be in the right place at the right time.

Alternative C calls for the refuge to be closed to hunting in June, July and August. This would truncate the coyote season through the summer months. This is unlikely to affect coyote hunters because most coyote hunting occurs in the winter when their pelts are more desirable. Furthermore, the refuge is not a draw for coyote hunters in particular and any hunters that would also harvest coyotes opportunistically (likely deer hunters) would not be hunting during this time.

White-tailed deer

Affected Environment

Description of Affected Environment for the Affected Resource and Relevant Environmental Trends and Planned Actions

White-tailed deer are considered abundant on the refuge. The home range of deer is approximately 15 to 25 acres per deer so the refuge may support a small herd. In addition, the islands are close together in this area and it is possible for deer to swim or cross the ice in winter to gain access to the refuge. A 1978 pre-acquisition survey indicated a year-round deer population and island vegetation was showing the stress imposed by overabundant deer. This is still the case today, as recent visual inspections of the refuge have shown signs of stress due to the number of deer browsing on the refuge. The refuge's habitat management plan calls for an increase in deer hunting on the island to reduce adverse effects to forest composition and structure (Corace, 2015).

The Michigan Department of Natural Resources regulates deer hunting including regulations, season dates and bag limits in an annual Michigan Hunting Digest. The refuge is in the eastern Upper Peninsula hunting zone Deer Management Unit 117 which includes Drummond Island and its surrounding islands. In 2019, the state of Michigan issued 1,139 deer hunting licenses for the unit. Hunters in the unit spent an estimated 8,622 days (7.6 days per hunter) hunting and harvested an estimated 295 deer (Frawley, 2020f). This gives the hunters a 0.26 success rate for the 2019 season in the Deer Management Unit 117.

Impacts on Affected Resources

Alternative A

Under this alternative, deer hunting via all methods as described by the state would still be allowed on Harbor Island but would not expand to recently acquired lands. No additional recreational pressure would result from the alternative.

Estimated number of hunters: 9

Estimated days hunting in the field: 27

Estimated take: 2

Direct harvest is not monitored on the refuge. To get our estimate of deer hunters currently using the refuge we took the total size of the state deer hunting unit

(86,000-acres) and compared it to the size of Harbor Island (695-acres). We then used the total number of Deer Management Unit 117's deer hunters (1,139) to estimate how many hunters would use the refuge (9) and used the success rate of hunters in the unit (0.26) within the unit to arrive at the estimated harvest of two deer. Impacts to deer under this alternative are negligible as it is recommended in the Habitat Management Step down Plan that additional hunting of these species occurs to manage the population.

Alternative B and C

Alternative B states that deer hunting will take place during the Michigan state seasons. Alternative C provides an option where hunting does not take place in June, July or August. The deer season falls outside of the June, July and August period therefore alternatives B and C would have the same estimated impact and will be considered together.

Estimated number of hunters: 10

Estimated days hunting in the field: 30

Estimated take: 3

To get our estimate of deer hunters using the refuge we took the total size of the unit (86,000-acres) and compared it to the size of the refuge (736-acres). We then used the total number of Deer Management Unit 117's deer hunters (1,139) to estimate how many hunters would use the refuge (10) and used the success rate of hunters in the unit (0.26) within the unit to arrive at the estimated harvest of three deer. The difference between the number of hunters currently using the refuge and the increase in the estimated use and take is negligible. It would not affect the deer population statewide but may help reduce the deer population using the refuge in turn reducing forest stress. We would consider promoting hunting on the island to draw more hunters to increase the harvest of deer on the island, which may allow the forests to regenerate. This promotion may result in additional deer hunters using the refuge and lead to an increase in harvest greater than what is estimated. Islands in this region are close together and allow for the deer to travel easily from one island to the next during the winter and possibly year-round. Even if all deer were harvested from the island one season a new population of deer could easily repopulate the island. Therefore, we are not concerned with the removal of too many deer from the island. Impacts will still be negligible to the deer using the refuge as habitat.

Black bear

Affected Environment

Description of Affected Environment for the Affected Resource

Black bear hunting has been allowed on the Harbor Island National Wildlife Refuge since 1986. Considering the average size of male black bear territory is 100 square miles and females 10 to 20 square miles the islands will not support a population of black bears on their own. Hunters would be unlikely to encounter a black bear on the island. Any bears encountered on the island would be transient and happenstance.

Description of Relevant Environmental Trends and Planned Actions

According to the “2019 Bear Harvest Survey Report”, the state of Michigan had five bear hunting licenses available for the Drummond bear management unit, which includes the refuge. Only four hunters applied for a license. All hunters received a license and all four reported success. Of the four bears harvested in the unit all were harvested on public lands using bait (Frawley, 2020d). Hunting using bait or dogs will not be allowed on the refuge. Statewide only 1% of hunters hunt bear using a hunting method that does not include dogs or bait (Frawley, 2020d). Therefore, it does not appear hunters will take advantage of bear hunting on the refuge given the restrictions on bait and dogs and the transient nature of bears not potentially being present on the island at time of hunting.

Impacts on Affected Resources

Alternative A, B and C

Alternative A states that bear hunting would still be allowed on Harbor Island but would not expand to recently acquired lands. No additional recreational pressure would result from the alternative. Alternative B states that bear hunting will take place during the Michigan state seasons. Alternative C provides an option where hunting does not take place in June, July or August. Bear season falls outside of that time frame. All alternatives have the same estimated impact and will be considered together.

Estimated number of hunters: 0

Estimated Take/Harvest: 0

It is unlikely that bear hunting occurs on the refuge due to the size of the islands and the restrictions on dogs and bait. There are no impacts to bears because of hunting and any disturbance to bears from other hunting is temporary in nature and likely to not occur given the transient nature of bears using the refuge. Other hunters and bears would have to be on the refuge at the same time and place for disturbance to occur.

Sport Fishing

Affected Environment

Description of Affected Environment for the Affected Resource and Relevant Environmental Trends and Planned Actions

We would allow bank fishing into Lake Huron, which is managed by the Michigan Department of Natural Resources. The refuge does not contain any interior open waters or streams. Lake Huron is one of five Great Lakes of North America and is a freshwater lake. Lake Huron supports diverse fisheries. Atlantic salmon, lake trout, rainbow trout, chinook salmon, Coho salmon, pink salmon and walleye can be found in the northern part of the lake. Northern pike, yellow perch, smallmouth bass and cisco can be found in nearshore areas (Michigan Sea Grant, 2021).

Sport fishing that occurs in the waters of Lake Huron surrounding the refuge is regulated by the state of Michigan. Rules and regulations can be found in the annual Michigan Fishing Guide. The waters of Lake Huron surrounding the refuge are not within the jurisdiction of the refuge to control. The refuge can only manage access for fishing on places where the refuge has jurisdiction.

Impacts on Affected Resources

Alternative A

Under this alternative, fishing would not be allowed from the island's beaches. No additional recreational pressure would result from the alternative. Fishing occurs within Lake Huron surrounding the refuge from boats. There would be no additional impact to the fishery because no additional fishing would occur from refuge land.

Alternative B and C

Fishing may occur year-round during daylight hours and would not pose a safety threat or conflict between user groups. Therefore, alternatives B and C may be considered together as they are the same action for opening to fishing.

There would be no direct effects from sport fishing on the refuge because there are no fish present on the refuge, we are considering fishing from the bank into Lake Huron which is managed by the state of Michigan. To remain consistent with state regulations as there are no inland waters and all anglers will be fishing Lake Huron, use of all tackle include those that contain lead can be used. The state of Michigan encourages anglers to use lead free tackle through their fishing regulations, and the refuge will do the same; however, it is not required. It is estimated that there will be an additional 100 sport fishing visits because of opening the shores to fishing. In 2020, there were 1,112,109 paid fishing license holders in the state of Michigan (USFWS 2020). Although fishing days are not equal to the amount of fishing licenses sold in the state, this information provides a context to the scale at which fishing occurs in the state. People already frequently fish from boats surrounding the refuge in Lake Huron itself. Although allowing fishing from shore will result in the take of individual fish, it will not affect the overall population of fish in the area. Fishing is already occurring around the islands from private recreational boats. Some anglers may decide to try fishing from shore, but it is unlikely to increase the number of people fishing in the area, they may simply enjoy an expanded opportunity and increased satisfaction of being allowed to fish from the shore. Anglers may leave litter behind including fishing line, tackle, bait containers and other garbage, which could negatively affect wildlife and the experience of other refuge visitors. In most areas, the shoreline consists of rock, gravel and sand. Shoreline erosion from fishing is not expected to be a concern. The additional fishing that could occur because of this opening would result in a negligible impact to the amount of lead in the environment based on derelict fishing tackle being left behind by anglers who snag their lines or lose lures.

Non-Target Wildlife and Aquatic Species

Description of Affected Environment for the Affected Resource and Relevant Environmental Trends and Planned Actions

The Harbor Island National Wildlife Refuge is part of a series of islands in Lake Huron near Canada. These islands are unique ecosystems consisting of oak-maple, aspen-ash-birch and cedar-balsam fir forests with scattered wet meadows and forest openings.

In total, 125 plant, 126 bird, seven mammal and six reptile and amphibian species have been officially documented on the refuge. Ducks, geese and other water birds

utilize the harbor. Hawks, bald eagles, sandpipers, gulls, turns, owls, woodpeckers, swallows, warblers and other birds of prey and songbirds frequent the islands. Non-hunted mammals include bats, voles, mice, beaver, mink and otter. A variety of reptiles and amphibians live on the islands including several species of snakes, frogs and salamanders. Hundreds of species of invertebrates including insects, spiders and mollusks also call the islands their home. Additional information about specific species found on the refuge can be found in the 2015 Habitat Management Plan Appendix (Corace 2015).

Impacts on Affected Resources

Alternative A

Under this alternative, deer and bear hunting would still be allowed on Harbor Island but would not expand to recently acquired refuge lands. For reporting purposes we estimate 620 people visit the refuge annually to participate in wildlife observation and photography. The current estimate of 30 hunters is a small percentage of the total visitation. No additional recreational pressure would result from the alternative. Impacts from existing hunting activities are negligible to non-target wildlife.

Alternatives B and C

The proposed action of opening the refuge to the hunting of additional game species is expected to increase hunting traffic annually by an estimated 62 hunting visits on both islands. Increased hunting may result in additional short-term disturbance to wildlife. This disturbance may include temporary displacement of migratory and resident wildlife from foot traffic moving through the two areas.

Migratory birds of prey (eagles, hawks, etc.) are present on the refuge during most hunting seasons, but disturbance is minimal. As hunting would not occur during nesting period for eagles there would be no impact because of this activity on nesting and rearing abilities. Disturbance to the daily wintering activities, such as feeding and resting, of residential birds might occur but are likely unsubstantial because such interactions are infrequent and of short duration when they do occur. Additionally, there is a possibility of conflict with birds of prey feeding on gut piles that may contain lead fragments. Research has indicated that lead is present in gut piles. To mitigate this, the refuge has a voluntary non-lead ammunition outreach program to encourage all hunters to use non-toxic ammunition. A mandatory non-toxic shot requirement exists for turkey, upland game and migratory game bird

hunting on the refuge. Additional information about lead impacts can be found in the lead section of this Environmental Assessment.

Small mammals, such as mice, are generally nocturnal or secretive. These qualities make hunter interactions with small mammals very rare. Hibernation, or torpor, of cold-blooded reptiles and amphibians also limits their activity during most of the hunting season when temperatures are low. Hunters would rarely encounter reptiles and amphibians during the fall and winter hunting seasons when the majority of hunters would be present on the islands. Resident invertebrates are not active during cold weather and would have few interactions with hunters during the hunting season. Impacts to these species due to habitat disturbance related to hunting are negligible at the local and larger population levels.

Overall, hunting impacts to other wildlife and their habitats and impacts to the biological diversity of the refuge will likely not be substantial. Any impacts to non-hunted wildlife and aquatic species will be negligible.

Lead Ammunition and Tackle

Description of Affected Environment for the Affected Resource and Relevant Environmental Trends and Planned Actions

The paper, “An ecological risk assessment of lead shot exposure in non-waterfowl avian species: upland game birds and raptors”, studied the effects of high densities of lead shot in wetland sediments (Kendal et al. 1996). Historically this has been the principal cause of lead poisoning in waterfowl. Birds do not have teeth. Instead, they use an organ called a gizzard, which is a muscular pouch they fill by swallowing small stones, which grinds up their food for them. When lead shot is mistakenly swallowed, it gets ground up in the gizzard and lead enters the bird’s bloodstream causing lead poisoning. In 1991, because of high bird mortality, the agency instituted a nationwide ban on the use of lead shot for hunting waterfowl and coots (50 CFR 32.2(k)). The Service requires any new shot types for waterfowl and coot hunting to undergo rigorous testing in a three-tier approval process that involves an ecological risk assessment and an evaluation of the candidate shot’s physical and chemical characteristics, short- and long-term impacts on reproduction in water birds, and potential toxic impacts on invertebrates (50 CFR 20.134). Because of this rigorous testing, the shot toxicity issue of the past is substantially less of an ecological concern.

There is a concern about how much spent lead ammunition (bullets) and sinkers are available for birds and other wildlife to find in the environment. Threatened and endangered species, birds (especially raptors), mammals and humans or other fish and wildlife are susceptible to biomagnification. Biomagnification occurs when a carnivore gets poisoned by toxins the animals it eats has consumed. Lead shot and bullet fragments found in animal carcasses and gut piles are the most likely source of lead exposure. Many hunters do not realize that the carcass or gut pile they leave in the field usually contains lead bullet fragments. Research continues on the effects of lead ammunition and the fragments it can deposit in killed game. Predatory birds and scavengers can be susceptible to lead poisoning when they ingest lead fragments or pellets in the tissues of animals killed or wounded by lead ammunition. Lead poison may weaken raptors and increase mortality rate by leaving them unable to hunt or more susceptible to vehicles or power line accidents. In the study “Lead poisoning of bald and golden eagles in the U.S. inland Pacific Northwest- An 18-year retrospective study: 1991-2008”, it was found that 48% of bald eagles and 62% of golden eagles tested had blood lead levels considered toxic by current standards. Of the bald and golden eagles with toxic lead levels, 91% of bald and 58% of golden eagles respectively, were admitted to the rehabilitation facility after the end of the general deer and elk hunting seasons in December (Kelley et al. 2011).

The paper “Lead Bullet Fragments in Venison from Rifle-Killed Deer: Potential for Human Dietary Exposure” found that wildlife hunted with lead ammunition can increase risks to human health due to the ingestion of lead (Hunt et al. 2009). While no lead poisoning of humans has been documented from ingestion of wild game, some experts, including the Center for Disease Control, have recommended the use of non-toxic bullets when hunting to avoid lead exposure and that pregnant women and children under six should not consume wild game shot with lead ammunition. This recommendation comes after the study “Hunting with lead: association between blood lead levels and wild game consumption” was conducted in North Dakota. It found that those who ate wild game had significantly higher levels of lead in their blood than those who did not (Iqbal et al. 2009).

This is also a concern related to fishing and the use of lead sinkers and jigs for fishing. “Sinkers” are weights of various sizes and shapes used to sink a fishing line below the surface of the water; “jigs” are weighted hooks, often brightly painted or otherwise decorated, used as lures in angling. Because sinkers and jigs are generally

much larger than shot pellets, a single lead sinker may induce acute lead poisoning. In North America, lead poisoning from sinker ingestion has been documented in common loons, trumpeter, tundra and mute swans and sandhill cranes. Many other species of waterbirds have feeding habits like those in which sinker ingestion has been documented (e.g., diving ducks, grebes, herons, osprey, bald eagles). These species could also be at risk for lead poisoning from sinker ingestion.

Harbor Island National Wildlife Refuge will allow the use of lead tackle for fishing. Some forms of lead ammunition (i.e. slugs and other single projectiles) for hunting of big game and some upland game such as furbearers is permitted. However, we encourage hunters to use non-toxic ammunition for all hunting activities. Refuges throughout the Great Lakes Region have been educating hunters about the risk to wildlife from lead ammunition. Refuge staff provide information on websites, signage and through other means to ensure hunters have relevant information to voluntarily switch to lead free ammunition. Nontoxic shot is required for all migratory game bird hunting, and hunters may only possess approved nontoxic shot shells (scattershot).

Impacts on Affected Resources

Alternative A, B and C

The refuge encourages all hunters to use nontoxic ammunition, but it is not required for deer or bear hunting on the refuge. Currently no bears are harvested on the refuge and it is estimated that two deer are harvested annually from the refuge with a potential to increase to 3 for the proposed expansion. The refuge represents a small portion of hunting that would allow the use of lead ammunition (deer and furbearers). It was estimated that very few hunters would hunt furbearers on the refuge. For species that could be hunted using lead ammunition such as white-tailed deer the estimated annual harvest on the refuge is two to three animals which is substantially less than one percent of the county take for deer. Alternative methods of take exist and are likely used to harvest these species. In the case of deer, hunters could harvest deer using archery and squirrel and hares could be harvested using a shotgun, which requires nontoxic shot. We will continue to encourage all hunters to use nontoxic ammunition. Fishing that occurs within Lake Huron from boats (not on refuge land) currently allows lead tackle to be used. Additional fishing allowed from shore is estimated to add approximately 100 fishing visits to the refuge, and likely these anglers are already fishing from boats adjacent

to the refuge. Michigan Department of Natural Resources encourages and educates anglers on the impacts of lead tackle. Not every angler will be using lead tackle for fishing. Lead that would enter the environment from fishing would be from lead fishing tackle left behind by anglers. Most anglers try and refrain from snagging lines and losing tackle. It is estimated that any lead tackle left behind from fishing activities from shore is a very small amount. There would be negligible impact on the accumulation of lead in the environment under this alternative from the additional hunting and fishing that would occur on and from the refuge.

Threatened and Endangered Species, and Other Special Status Species

Description of Affected Environment for the Affected Resource and Relevant Environmental Trends and Planned Actions

The refuge follows recovery plan guidelines for the management of federally threatened and endangered species found on the refuge. Species that could occur on the refuge or where critical habitat is designated in Chippewa county Michigan based on both the Information for Planning and Consultation (IPaC) and Environmental Conservation Online System (ECOS) databases include:

- Mammals: Canada lynx and northern long-eared bat
- Birds: Piping plover and red knot
- Plants: Dwarf lake iris, Houghton's goldenrod, pitcher's thistle and American Hart's-tongue fern
- Candidate species: Monarch Butterfly
- Critical habitat: None
- Delisted species that are not further evaluated: Kirtland's warbler and gray wolf

A full description of these species home ranges and habitat needs can be found in the Intra-Service Section 7 Biological Consultation (Appendix C). It should be noted, that during the time of writing this environmental assessment the gray wolf was delisted, effective January 4, 2021. As such, gray wolves were not evaluated under the intra-service section 7 consultation. State and tribal wildlife management agency professionals will resume responsibility for sustainable management and protection of delisted gray wolves in states with gray wolf populations, while the U.S. Fish and Wildlife Service (Service) monitors the species for five years to ensure the continued success of the species. Gray wolves live in packs and their pack home ranges can range in size from 25 to 1,500 square miles. The entire island refuge

currently consists of two islands totaling 736-acres which is just over one square mile. Wolves do occur on Drummond Island, less than 1 mile away, and it is possible they may visit the refuge to hunt during the winter months. However, the refuge area is a relatively small component of a necessary larger home range.

Impacts on Affected Resources

Alternatives A, B and C

A consultation pursuant to Section 7 of the Endangered Species Act was formerly conducted as part of this environmental assessment. A determination of “no effect” was made for the Canada lynx, northern long-eared bat, dwarf lake iris, Houghton’s goldenrod, Pitcher’s thistle and American Hart’s-tongue fern under all alternatives. A determination of “not likely to adversely affect” was made for piping plover and red knot. For the monarch butterfly a determination of “not likely to jeopardize candidate or proposes species” was made. Even though wolves are no longer listed impacts can be described as negligible. The disturbance or harvest from hunters or anglers is not likely to adversely impact gray wolves. Furthermore, wolves (or any indications of) have not been observed on Huron or Standerson Islands. The potential for accidental taking of a wolf on the refuge is unlikely. Although wolves resemble coyotes, each has unique diagnostic features and coyote hunting is not expected to occur on the refuge. See Appendix C for full analysis.

Habitat and Vegetation (including vegetation of special management concern)

Description of Affected Environment for the Affected Resource and Relevant Environmental Trends and Planned Actions

To date, 126 species of flora have been observed. Four major habitat types are found on the island. Areas containing northern white cedar and balsam fir are most common. The next most prevalent habitat is a mixed upland forest of red oak, sugar maple, trembling aspen, white ash and paper birch. Marshy habitat is found around the interior bay and along the northeast side of the island. Open fields can be found intermixed just inland from the bay. A full list of cataloged plants is available in the refuge’s comprehensive conservation plan. Additional details about the habitats found on Harbor Island National Wildlife Refuge can be found in the refuge’s 2015 Habitat Management Plan.

Climate change whether it results from anthropogenic or natural sources, is expected to affect a variety of natural processes and associated resources. Like the rest of the world, much of the midwest is already experiencing changes in temperature and precipitation. If these predictions are accurate, average temperatures and precipitation could continue to increase, resulting in longer growing seasons and changing water levels on the Great Lakes. The refuge would use an adaptive management approach for its hunt and fish programs, reviewing them annually and revising if necessary. The refuge's hunt program can be adjusted to ensure that it does not contribute further to the impacts of climate change on migratory waterfowl, upland game and big game.

Impacts on Affected Resources

Alternative A

Under this alternative, deer and bear hunting would still be allowed on Harbor Island but would not expand to recently acquired lands. No additional recreational pressure would result from the alternative. Some light trampling of plants may occur, and the refuge is monitored for invasive species. An invasive phragmites was detected on the island, whose sources is unknown, and is currently being treated. Other invasive plants have been detected on the island and are being monitored. Deer currently are impacting the health of the forest ecology from over browsing. Deer are hunted under this alternative but are not being managed through this activity because of the need to improve forest health.

Alternatives B and C

Alternatives B and C would increase hunting from approximately 30 hunter visits to 62 visits across both islands. The vegetation on the islands consists of hardy plants unlikely to permanently be damaged from trampling. Most hunting visits will occur after vegetation is dormant during the fall and winter. There is a possibility that people could transport invasive species seeds to the island on clothes, shoes or equipment. However, the number of hunters visiting the island are a very small portion of the total visitation the island receives. Deer hunting could have a net positive impact on the islands habitats as it would reduce deer browse and help the understory regenerate. Forest health could improve slightly over time especially if the refuge increases awareness of deer hunting opportunities and additional harvest of deer occurs. In most areas, the shoreline consists of rock, gravel and

sand and fishing will not result in an impact to any sensitive vegetation. Impacts to vegetation and habitats will be temporary in nature and considered negligible.

Visitor Use and Experience

Description of Affected Environment for the Affected Resource and Relevant Environmental Trends and Planned Actions

The refuge is open to wildlife observation, photography, hunting, mushroom and berry picking, environmental education and interpretation. In 2020, we reported 650 visits to the refuge in the “Refuge Annual Performance Report”. This estimate is likely very low. The true numbers could be 2,500 visits or more. The estimate was created by extrapolating the number of visitors using the island during staff visits over the course of the year. The majority of staff visits occur two to three times per year, on a weekday in the summer. This does not give us a full picture of the actual visitation on the island. We simply do not have enough data to properly estimate the number of people visiting the refuge. Most visits appear to be boaters stopping to recreate on the beaches in June, July and August with some hiking through the interior of the island. Some people may kayak to the refuge from Drummond Island. Some years people may be able to access the island over the ice.

Impacts on Affected Resources

Alternative A

Under this alternative, deer and bear hunting would still be allowed on Harbor Island during the state seasons but would not expand to recently acquired lands. No additional recreational pressure would result from the alternative. The current hunting visits account for just under five percent of the total estimated visits in 2020. Most visitation occurs to the islands in June, July and August. Hunting visits, if they occur are in September, October, November and December. To date the refuge has had no reports of user conflicts. Impacts to other visitor use and experience is negligible.

Alternatives B and C

Alternatives B and C would increase hunting from approximately 30 visits to an estimated 62 visits across both islands. This additional hunting is just under ten percent of estimated visitor usage as estimated in 2020. Most of these visits would be in the fall for the waterfowl and deer hunting seasons. Some proposed species may be hunted year-round in Michigan include coyote, red squirrels, opossums,

porcupines, house sparrows, feral pigeons, starlings, skunks, ground squirrels, woodchuck, weasel and Russian boar. Alternative C would close hunting in June, July and August, the months with the most visitation. Of those species available to be hunted year-round only coyote, starling, and red squirrels are known to use the refuge. Coyotes are usually hunted in the winter for the best pelts. Squirrel and starling hunting are unlikely to cause substantial safety issues. Crow may be hunted in August, but it too is unlikely to cause significant safety issues. Most of these species would not attract hunters in June, July and August when most of the non-hunting public use occurs as the harvest of these species will likely occur opportunistically during other hunting seasons. However, if hunters were present, they may pose a safety risk to other users since the islands are relatively small and some bullets could travel long distances depending on the types of firearms and loads used. Some non-hunting visitors may hear gunshots or have real or perceived safety concerns, which could alter their use of the refuge. This could reduce non-consumptive wildlife user visitation. However, hunting is likely not to occur in the summer months when conflicts could occur and would be similar to impacts from existing hunting that occurs today. Because hunting will not occur in the summer months the impacts of Alternative B and C is the same.

Alternatives B and C would allow sport fishing from the banks of the refuge. Fishing in Lake Huron is a popular activity and Harbor Island's harbor is popular with boaters and anglers. We do not know exactly how many people will take advantage of this fishing opportunity; however, we expect no negative public reaction to this opportunity. Visitation could increase to an additional 100 visits as anglers who had fished from boats in the harbor decide to fish from refuge shore.

Refuge Management and Operations

Land Use on the Refuge

Description of Affected Environment for the Affected Resource and Relevant Environmental Trends and Planned Actions

Harbor Island National Wildlife Refuge consists of two islands in Lake Huron near Drummond Island. The refuge is only accessible by boat and is several hours away from the headquarters office. There are no buildings, infrastructure or roadways. The islands are managed passively to preserve the landscape. We conduct inventory and monitoring activities, invasive plant management (mainly phragmites) and encourage research on the island.

Impacts on Affected Resources

Alternatives A, B and C

The refuge will continue to engage in habitat management activities during the hunting season to ensure the refuge meets its other management objectives. Impacts would be minimized by ensuring hunters, cooperators and partners are aware of each other's activities and timed to minimize conflict when possible.

Under Alternatives B and C there may be a negligible increase in boats moored on the shore of the islands, with no increased cost or impacts to infrastructure that will support the use. There could also be a slight increase to the number of invasive species transported to the islands from hunting and fishing equipment. However, most new users expected to be waterfowl hunters who are likely already hunting the refuge offshore or anglers who already visit the refuge for other recreational opportunities. Therefore, the risk is negligible. Education and awareness can also help reduce introduction of invasive species on the islands.

Administration

Description of Affected Environment for the Affected Resource and Relevant Environmental Trends and Planned Actions

The hunting program is designed to be administered with minimal refuge resources. The costs of administering and enforcing the refuge hunting program comes out of the complex's annual budget. The refuge is part of the Seney National Wildlife Refuge Complex, which includes Harbor Island, Huron and part of Michigan Islands National Wildlife Refuges and the Kirtland's Warbler Wildlife Management Area. The annual cost of the hunt and fish program is expected to be less than \$1,000. The hunt would be managed passively and require the following updates annually:

- Check and update the website.
- Ensure the refuge's boundaries are marked.
- Refuge entrance sign and regulation signs maintained in good condition.

The refuge continues to add to its land base. Any additional islands purchased will need to place boundary, entrance and regulation signs. An updated hunt and fish plan and categorical exclusion would be needed to open new lands to hunting and fishing. An increase in law enforcement patrols over time might also be necessary. If we estimate two law enforcement officers spending one to two weeks per year

checking hunters at the refuge it would cost the refuge approximately \$1,500 to \$3,000 in lodging and per diem. Refuge officers cooperate with, and are assisted by, state and county officers as well as state conservation officers. Ongoing coordination and communication between refuge staff and law enforcement officers is conducted throughout the year.

Impacts on Affected Resources

Alternatives A, B and C

No additional increase in costs for administration, law enforcement, biological monitoring, research or annual maintenance is anticipated for implementing Alternative B or C. Refuge staff will be able to continue administration of the refuge in both alternatives. Alternative A is already being implemented within existing resource allocations. As new acreage is added to the refuge and made available, costs may increase, but are expected to be manageable within annual budget allocations and staff availability. There would be negligible impact to the refuge management ability of staff. Hunting and Fishing has been found compatible given existing refuge resources. See Appendix B, Attachment B and C for the hunting and fishing compatibility determinations.

Socioeconomics

Local and Regional Economies

Description of Affected Environment for the Affected Resource and Relevant Environmental Trends and Planned Actions

The refuge is in rural Chippewa County in Michigan. The area directly surrounding the refuge is populated with small towns and private residences. The refuge is open to wildlife observation, photography, mushroom and berry picking, hunting, interpretation and environmental education. However due to the distance from the office no interpretation or environmental education is currently preformed on the refuge. Using the “Banking on Nature 2017” report by the U.S. Fish and Wildlife Service we were able to estimate the refuge’s contribution to the local area. Nationally the refuge system draws 53.6 million visitors annually. The money generated for the local economies is estimated at \$3.2 billion annually. That averages out to about \$60 per visitor per day. With an estimated 2,600 visitors, including 92 hunters, to the refuge that means that the local economy will bring in an estimated \$155,224. The expenditures included food, drinks, lodging,

transportation, equipment and other expenses. Implementation of the proposed action alternative may provide a benefit to the Chippewa County Michigan economies by drawing in non-local hunters and providing a source of revenue.

According to the “U.S. Fish and Wildlife Service Socioeconomic Profile for Harbor Island National Wildlife Refuge in Chippewa County Michigan for Oct. 13, 2020”, the two largest portions of the private economy in the county are retail 12.3% and accommodation and food services 8.3%. While tourism was not specifically mentioned, many people traveling to the region to recreate on public lands, including hunters and anglers contribute substantially to these economies (U.S. Fish and Wildlife Service, 2020b).

Impacts on Affected Resources

Alternatives A, B and C

The exact increase in the local economy is unknown; however, we anticipate slightly greater visitation and expenditures under the Alternatives B and C, although impacts to the local and regional economy are likely to have negligible impacts under either alternative. Alternative C may be the best choice to support the economy because user groups would not conflict.

Environmental Justice

Description of Affected Environment for the Affected Resource and Relevant Environmental Trends and Planned Actions

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

The “U.S. Fish and Wildlife Service Socioeconomic Profile for Harbor Island National Wildlife Refuge in Chippewa County Michigan for Oct. 13, 2020” shows Chippewa county does have a substantial minority population of 14.3% American Indian, 6.6% Black and 6.9% mixed race communities. Fifty-five percent of households in Chippewa County make less than \$50,000 annually (\$35k to \$50k – 16.3%, \$25k to \$35k – 11.3%, \$10k to \$25k – 20.6%, less than \$10k – 7.2%). In 2018, it was estimated that 13% of families were living below the poverty line (U.S. Fish and Wildlife Service, 2020b).

Impacts on Affected Resources

Alternatives A, B and C

Alternative A would cause no change to occur to minority or low-income communities because no change would be implemented.

Alternatives B and C may cause a slight net benefit to the local communities due to the increase of hunters in the area who may stay overnight in hotels, purchase items in local shops or eat in the local restaurants. Minority and low-income community members will not be disproportionately affected by any impacts from these proposed actions. However, if non-hunting visitors did not visit the refuge due to perceived safety threats during the highest visitation months of June, July and August, it could reduce tourism in the area and affect the economy. Though, it would likely not affect the economy substantially. The agency has not identified any potential high and adverse environmental or human health impacts from this proposed action or any of the alternatives.

Monitoring

Continued annual biological monitoring of both resident and migratory wildlife and their habitats is done on the refuge in conjunction with our State partners.

Inventory and monitoring activities of the refuge's huntable species include direct observation, consultation with State and Service species specialists, and review of current species survey information and research. The refuge will fall under the monitoring and evaluation that the state of Michigan performs in managing wildlife and habitat in Chippewa County and statewide. In addition, the station will stay apprised on the status of threatened and endangered species on the refuge through consultation and local monitoring. All conflicts between users will be dealt with on a case-by-case basis and if too many conflicts arise at any given point the refuge will reevaluate the hunting program.

Summary of Analysis

Alternative A – Continue Current Hunting Opportunities – No Action Alternative

As described above, no action would be taken to open additional refuge lands or species to public hunting or fishing. Hunting opportunities would be limited to those interested in only hunting species currently allowed on the refuge. Harbor

Island would remain open to white-tailed deer and black bear. It would not allow alignment with the state of Michigan hunting and fishing regulations. Effects on wildlife and habitat would be negligible because there would likely be the same amount of use by hunters as currently occurring on the refuge. This alternative also meets the purpose and needs of the agency as described above, because it would provide wildlife-dependent recreation opportunities, however, it does not provide alignment with state regulations to the most practicable extent possible. Furthermore, it does not meet the habitat management goal to increase deer hunting opportunities.

Alternative B – Open the refuge to state hunting and fishing opportunities and seasons – Preferred Action Alternative

As described above, this alternative will expand hunting and fishing opportunities for migratory game birds, upland game, big game and sport fishing. Additional opportunities are likely to attract more hunters and anglers, potentially impacting and leading to conflicts with other users. At this time, we believe opening to sport fishing use from shore will not conflict with other visitor uses. Hunting use will likely not conflict with non-consumptive wildlife users as they typically utilize the refuge at different times of the year. If hunting and fishing use conflict with other visitor uses, then we will work to mitigate it at that time. There will be an increase in visitation from increasing hunting and fishing on the refuge, although impacts to the local economy and regional economy are likely to have a negligible impact. There are no effects anticipated for endangered or threatened species because of this expansion. Effects on hunted and other wildlife and habitat would be negligible. This alternative helps meet the purpose and needs of the agency as described above, because it provides additional wildlife-dependent recreation opportunities on the refuge, meeting the agency's priorities and mandates. This alternative also helps align agency regulations with state regulations to the most practicable extent possible to make hunting more accessible and understandable by the hunting public. The agency has determined that the proposed action is compatible with the purposes of Harbor Island National Wildlife Refuge and the mission of the National Wildlife Refuge System. The Compatibility Determinations are found within the Hunt and Sport Fishing Plan (Appendix A, Attachments B (Hunt) and C (Fish)).

Alternative C – Open the refuge to state hunting and fishing opportunities with reduced seasons

As described above, this alternative will expand hunting and fishing opportunities for migratory game birds, upland game, big game and sport fishing, however the refuge would close to hunting in June, July and August to reduce conflict, real or perceived, between user groups. Under this alternative it reduces the risk of hunters using the refuge at the same time as most non-consumptive users. However, in comparison to Alternative B, hunters will likely not utilize the refuge during this period anyway. At this time, we believe fishing use will not conflict with other visitor uses, and in the future, any impact between consumptive and non-consumptive users will be mitigated. There are no effects anticipated for endangered or threatened species because of this expansion. Effects on wildlife and habitat would be negligible. This alternative helps meet the purpose and needs of the agency, as described above, because it provides additional wildlife-dependent recreation opportunities on the refuge, meeting the agency's priorities and mandates. This alternative also helps align agency regulations with state regulations to make hunting more accessible and understandable by the hunting public, however to a lesser extent than Alternative B and not to the most practicable extent. The agency has determined that the proposed action is also compatible with the purposes of Harbor Island National Wildlife Refuge and the mission of the National Wildlife Refuge System.

List of Sources, Agencies and Persons Consulted

Michigan Department of Natural Resources

U.S. Fish and Wildlife Service Personnel: Kristin Rasmussen, Brandon Jones, Cathy Nigg

Tribes (see list of tribes contacted below in tribal consultation section)

List of Preparers

Sara Giles – Visitor Services Manager, Seney National Wildlife Refuge

Sara Siekierski – Refuge Manager, Seney National Wildlife Refuge

Greg McClellan – Deputy Refuge Manager, Seney National Wildlife Refuge

Jennifer Wycoff – Park Ranger, Seney National Wildlife Refuge

Nate Carle – Wildlife Biologist, Blackwater National Wildlife Refuge. During time of finalizing documents was serving as the Acting Refuge Manager, Seney National Wildlife Refuge.

State Coordination

Harbor Island National Wildlife Refuge and the Michigan Department of Natural Resources have worked together in the past to open the refuge to deer and bear hunting. Throughout the revision of the hunt and fish plan, the Michigan Department of Natural Resources was consulted on the inclusion of new species. The refuge reviewed the operations and regulations for the state of Michigan and the wildlife management units that contain the refuge. The refuge is looking to align hunting seasons, methods, bag limits and species to the state to simplify regulations for hunters. The refuge first reached out to the state through an official letter to the Michigan Department of Natural Resources Director on Sept. 28, 2020 and reached out locally on October 2, 2020 to discuss the Hunt and Sport Fish Plan. On October 13, 2020 we received a call from the local state biologist regarding the plan. He gathered more information on our intentions. On October 20, 2020 a letter of support was received from the state. See Appendix C for correspondence with the state.

Tribal Consultation

Tribes and tribal members are welcome to provide comment during the public comment period. A formal letter was sent to all federally recognized tribes within the great lakes region and two inter-tribal agencies inviting them to provide comments on the proposed changes to the hunting program on September 29, 2020 (See Appendix C). At the time of publishing, the refuge has not received any comments from local tribes. Tribes and intertribal agencies contacted include:

- 1854 Treaty Authority
- Bad River Band of Lake Superior Tribe of Chippewa Indians
- Bay Mills Indian Community
- Bois Forte Band of Lake Superior Chippewa
- Fond du Lac Band of Lake Superior Chippewa
- Forest County Potawatomi Community
- Grand Portage Band of Lake Superior Chippewa
- Grand Traverse Band of Ottawa and Chippewa Indians
- Great Lakes Indian Fish and Wildlife Commission

- Hannahville Indian Community
- Ho-Chunk Nation
- Keweenaw Bay Indian Community
- Lac Courte Oreilles Band of Ojibwe
- Lac du Flambeau Band of Lake Superior Chippewa Indians
- Lac Vieux Desert Band of Lake Superior Chippewa Indians
- Leech Lake Band of Ojibwe
- Little River Band of Ottawa Indians
- Little Traverse Bay Bands of Odawa Indians
- Lower Sioux Indian Community
- Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians of Michigan
- Menominee Indian Tribe of Wisconsin
- Mille Lacs Band of Ojibwe
- Nottawaseppi Huron Band of Potawatomi
- Oneida Tribe of Indians of Wisconsin
- Prairie Island Indian Community
- Red Cliff Band of Lake Superior Chippewa
- Red Lake Band of Chippewa Indians
- Sac and Fox Tribe of the Mississippi in Iowa
- Saginaw Chippewa Indian Tribe of Michigan
- Sault Tribe of Chippewa Indians, Pokagon Band of Potawatomi Indians
- Shakopee Mdewakanton Sioux Community
- Sokaogon Chippewa Community of Wisconsin
- St. Croix Chippewa Indians of Wisconsin
- Stockbridge-Munsee Community
- Upper Sioux Community of Minnesota
- White Earth Nation

Public Outreach

Public input has previously been sought regarding hunting and fishing opportunities on the refuge as a recreational opportunity during the comprehensive conservation planning process. On April 15, 2021 the Service released the final Section 7 analysis, draft Environmental Assessment, draft Compatibility Determinations, draft minor amendment to a Comprehensive Conservation Plan memo, and draft Hunt and Fish Plan for public review. Members of the public were notified of the availability of the draft documents through a

press release sent to state news media outlets and posted on the refuge website. Following the release of the draft documents, the Service opened a 60-day local public comment period that was extended through the Federal Register Public Comment Period for the 2021/2022 Proposed Hunt and Fish Rule that ended July 6, 2021. The national notice in the Federal Register (Volume 85, Number 69; FWS-HQ-NWRS-2021-0027 FXRS12610900000-212-FF09R20000) published on May 5, 2021. The public was encouraged to submit comments regarding the draft documents via email to sara_siekierski@fws.gov, by phone, or by mail. Two comments were received during the public comment period. See Appendix D for the public comment analysis report and response to comment. No changes were made to the preferred alternative as a result of any comments received.

Determination

Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, executive orders, and policies that protect fish and wildlife resources, it has been determined that:

- ☒ The Service's action will not result in a significant impact on the quality of the human environment. See the attached "**Finding of No Significant Impact**".
- ☐ The Service's action **may significantly affect** the quality of the human environment and the Service will prepare an Environmental Impact Statement.

References

- Corace G. 2015. Habitat Management Plan For Harbor Island NWR, Huron NWR, Michigan Islands NWR. Accessed 08/04/2021:
<https://ecos.fws.gov/ServCat/DownloadFile/45718>
- Elliott-Smith, Elise, Haig, Susan. 2020. Birds of the World – Piping Plover: Habitat. Birds of the World The Cornell Lab of Ornithology. Accessed 08/04/2021:
<https://birdsoftheworld.org/bow/species/pipplo/cur/habitat>
- Frawley, Brian. 2020a. 2018 Bobcat Hunter and Trapper Harvest in Michigan. Michigan Department of Natural Resources. Accessed 08/04/2021:
https://www.michigan.gov/documents/dnr/2018_michigan_bobcat_hunter_trapper_harvest_678257_7.pdf
- Frawley, Brian. 2020b. 2018 Michigan Furbearer Harvest Survey. Michigan Department of Natural Resources. Accessed 08/04/2021:
https://www.michigan.gov/documents/dnr/2018_michigan_furbearer_harvest_survey_report_678251_7.pdf
- Frawley, Brian. 2020c. 2018 Waterfowl Harvest Survey. Michigan Department of Natural Resources. Accessed 08/04/2021:
https://www.michigan.gov/documents/dnr/2018_waterfowl_harvest_report_677054_7.pdf
- Frawley, Brian. 2020d. 2019 Michigan Black Bear Hunter Survey. Michigan Department of Natural Resources. Accessed 08/04/2021:
https://www.michigan.gov/documents/dnr/2019_bear_hunter_survey_report_702082_7.pdf
- Frawley, Brian. 2020e. 2019 Michigan Fall Turkey Hunter Survey. Michigan Department of Natural Resources. Accessed 08/04/2021:
https://www.michigan.gov/documents/dnr/2019_fall_turkey_harvest_report_702117_7.pdf
- Frawley, Brian. 2020f. Michigan Deer Harvest Survey Report 2019 Season. Michigan Department of Natural Resources. Accessed 08/04/2021:
https://www.michigan.gov/documents/dnr/2019_deer_harvest_survey_report_701035_7.pdf

- Frawley, Brian. 2019a. 2019 Michigan Spring Turkey Hunter Survey. Michigan Department of Natural Resources. Accessed 08/04/2021:
https://www.michigan.gov/documents/dnr/2019_spring_turkey_survey_report_675900_7.pdf
- Frawley, Brian. 2019b. 2017 Small Game Harvest Survey. Michigan Department of Natural Resources. Accessed 08/04/2021:
https://www.michigan.gov/documents/dnr/2017_small_game_harvest_survey_report_675898_7.pdf
- Michigan Department of Natural Resources. 2020. Black Bear Digest. Michigan Department of Natural Resources. Accessed 09/04/2020:
https://www.michigan.gov/documents/dnr/Bear_Hunting_Digest_454168_7.pdf
- Michigan Department of Natural Resources. 2020. Fall Turkey Digest. Michigan Department of Natural Resources. Accessed 09/04/2020:
https://www.michigan.gov/documents/dnr/fall_turkey_hunting_digest_530154_7.pdf
- Michigan Department of Natural Resources. 2020. Fur Harvester Digest. Michigan Department of Natural Resources. Accessed 09/04/2020:
https://www.michigan.gov/documents/dnr/michigan_fur_harvester_digest_625943_7.pdf
- Michigan Department of Natural Resources. 2020. Michigan Fishing Guide. Michigan Department of Natural Resources. Accessed 09/04/2020:
https://www.michigan.gov/documents/dnr/FishingGuide2020_684742_7.pdf
- Michigan Department of Natural Resources. 2020. Michigan Hunting Digest. Michigan Department of Natural Resources. Accessed 09/04/2020:
https://www.michigan.gov/documents/dnr/hunting_and_trapping_digest_461177_7.pdf
- Michigan Department of Natural Resources. 2020. Spring Turkey Digest. Michigan Department of Natural Resources. Accessed 09/04/2020:
https://www.michigan.gov/documents/dnr/Spring_Turkey_Digest_443091_7.pdf
- Michigan Department of Natural Resources. 2020. Waterfowl Digest. Michigan Department of Natural Resources. Accessed 09/04/2020:

https://www.michigan.gov/documents/dnr/waterfowl_hunting_digest_530152_7.pdf

Michigan Sea Grant. 2021. Lake Huron. Web Resource. Accessed January 2021.

Available online at: <https://www.michiganseagrant.org/topics/great-lakes-fast-facts/lake-huron/#:~:text=Lake%20Huron%20now%20offers%20quality,walleye%20on%20the%20same%20trip>.

Hunt W.G., R.T. Watson, J.L. Oaks, C.N. Parish, K.K. Burnham, R.L. Tucker, Belthoff, and G. Hart. 2009. Lead Bullet Fragments in Venison from Rifle-Killed Deer: Potential for Human Dietary Exposure. PLoS ONE 4(4): e5330. doi:10.1371/journal.pone.000533.

Iqbal S., W. Blumenthal, C. Kennedy, F.Y. Yip, S. Pickard, W.D. Flanders, K Loring, K. Kruger, K.L Caldwell, M. Jean Brown. 2009. Hunting with lead: association between blood lead levels and wild game consumption. Environmental Research 109(8):952-9. DOI: 10.1016/j.envres.2009.08.007.

iNaturalist.org.

Kelly, T.R., P.H. Bloom, S.G. Torres, Y.Z. Hernandez, R.H. Poppenga, W.M. Boyce, C.K. Johnson. 2011. Impact of the California lead ammunition ban on reducing lead exposure in golden eagles and turkey vultures. PLoS ONE. 6(4): e17656. doi:10.1371/journal.pone.0017656.

Kendall, R.J., T.E. Lacher Jr., C. Bunck, B. Daniel, C. Driver, C.E. Grue, F. Leighton, W. Stansley, P.G. Watanabe, and M. Whitworth. 1996. An ecological risk assessment of lead shot exposure in non-waterfowl avian species: upland game birds and raptors. Environmental Toxicology and Chemistry 15:4-20.

Kramer, J.L., P.T. Redig. 1997. Sixteen years of lead poisoning in eagles, 1980-95: An epizootiological view. Journal of Raptor Research. 31(4): 327-332.

Raftovich, R.V., K.K. Fleming, S.C. Chandler, and C.M. Cain. (2020). Migratory bird hunting activity and harvest during the 2018-19 and 2019-20 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland, USA.

Roberts, N. and Crimmins, S. 2010. Bobcat Population Status and Management in North America: Evidence of Large-Scale Population Increase. Journal of Fish and Wildlife Management. 169-174.

- Scheuhammer, A.M. and S.L. Norris. 1996. The ecotoxicology of lead shot and lead fishing weights. *Ecotoxicology* 5(5):279-95. doi: 10.1007/BF00119051
- Stauber, E., N. Finch, P.A. Talcott, and J.M. Gay. 2010. Lead poisoning of bald (*Haliaeetus leucocephalus*) and golden (*Aquila chrysaetos*) eagles in the US inland Pacific Northwest- An 18-year retrospective study: 1991-2008. *Journal of Avian Medicine and Surgery* 24:279-287. doi: <http://dx.doi.org/10.1647/2009-006.1>.
- Stewart, Alan and Trowbridge, Jacob. 2019. Ruffed Grouse and American Woodcock Status in Michigan, 2019. Michigan Department of Natural Resources. Accessed 09/04/2020:
https://www.michigan.gov/documents/dnr/ruffed_grouse_and_woodcock_status_2019_665104_7.pdf
- Streater, S. 2009. Wild meat raises lead exposure. *Environmental Health News*. Available: <https://www.scientificamerican.com/article/wild-game-deer-venison-condors-meat-lead-ammunition-ban/> (March 2017).
- U.S. Fish and Wildlife Service. 2020b. IPac Information for Planning and Consultation: Chippewa County, Michigan Search. Accessed 09/04/2020:
<https://ecos.fws.gov/ipac/location/2KEPA23W4NEPPCPLACFDGHRVLM/resources>
- U.S. Fish and Wildlife Service. 2019. American Hart's-Tongue Fern Fact Sheet. Accessed 09/04/2020:
<https://www.fws.gov/midwest/endangered/plants/ahtf/amerihtf.html>
- U.S. Fish and Wildlife Service. 2019. Dwarf Lake Iris Fact Sheet. Accessed 09/04/2020:
<https://www.fws.gov/midwest/endangered/plants/dwarflakeiris/dwarflak.html>
- U.S. Fish and Wildlife Service. 2019. Houghton's Goldenrod Fact Sheet. Accessed 09/04/2020:
<https://www.fws.gov/midwest/endangered/plants/houghton.html>
- U.S. Fish and Wildlife Service. 2019. Pitcher's Thistle Fact Sheet. Accessed 09/04/2020:
<https://www.fws.gov/midwest/endangered/plants/pitchersthistle/pitchers.html>

- U.S. Fish and Wildlife Service. 2013. Issuance of Annual Regulations Permitting the Hunting of Migratory Birds: Final Supplemental Environmental Impact Statement. Accessed 09/04/2020: <https://www.fws.gov/migratorybirds/pdf/policies-and-regulations/FSEISIssuanceofAnnualRegulations.pdf>.
- U.S. Fish and Wildlife Service. 2016. Adaptive Harvest Management: 2017 Hunting Season. U.S. Department of the Interior, Washington, DC. Accessed 09/04/2020: <http://www.fws.gov/birds/management/adaptive-harvest-management/publications-and-reports.php>.
- U.S. Fish and Wildlife Service. 2020. National Fishing License Data: Calculation Year 2020. Wildlife and Sport Fish Restoration Program. Online resource accessed January 2021. <https://www.fws.gov/wsfrprograms/subpages/LicenseInfo/Natl%20Fishing%20License%20Report%202020.pdf>

Appendix A

Harbor Island National Wildlife Refuge Hunt and Sport Fish Plan (2021)

See separate attached document. Attachment A includes a vicinity map and refuge hunt unit map. Attachment B provides the hunting compatibility determination. Attachment C provides the fishing compatibility determination.

Appendix B

Intra-service section 7 biological evaluation form

See separate attached document

Appendix C

Letters and Correspondence with State and Tribes

See separate attached documents

Appendix D

Public comment analysis report and response to comment

On April 15, 2021 the Service released the draft Environmental Assessment, draft Compatibility Determinations and draft Hunt and Fish Plan for public review. Members of the public were notified of the availability of the draft documents through a press release posted on the refuge website at <https://www.fws.gov/refuge/seney/>. Following the release of the draft documents, the Service opened a 60-day local public comment period that was extended through the Federal Register Public Comment Period for the 2021/2022 Proposed Hunt and Fish Rule that ended July 6, 2021. The national notice in the Federal Register (Volume 85, Number 69; FWS-HQ-NWRS-2021-0027 FXRS12610900000-212-FF09R20000) published on May 5, 2021. The public was encouraged to submit comments regarding the draft documents via email to sara_siekierski@fws.gov or by mail. This comment analysis only addresses comments received specific to the refuge during the public comment period. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. See the 2021-2022 Final Hunt and Fish rule for response to additional comments.

Nature of Comments Received

Two comments were received through the public comment period. Both comments were in opposition of opening the refuge to additional hunting. One letter came from an organization, while the other came from an individual. The refuge is using this chance to respond to all comments received based on topics derived from the comments.

Response to Comments by Topic

This section summarizes the substantive comments received during the public comment period for the 2021-2022 Hunt and Fish Rule making process specific to the draft Categorical Exclusion put out for public review. As defined in the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act, comments are considered substantive if they:

- question, with reasonable basis, the accuracy of the information in the document
- question, with reasonable basis, the adequacy of the environmental analysis

- present reasonable alternatives other than those presented in the environmental assessment
- cause changes or revisions in the proposal

Substantive comments are organized by topic and further consolidated into concern statements or new information. Comments have been summarized and paraphrased. Representative quotes are then provided for each concern statement.

Hunting is unusually dangerous and unsafe at the island

A comment was received concerning the access to medical facilities and emergency evacuations from the islands. The commenter specifically stated, “the shoreline of each island is unforgiving to boat landings and there is no dock on either island. This makes landing people and equipment difficult, and medical evacuations difficult. There is no clearing for landing an evacuation helicopter or for law enforcement/Department of Natural Resources and other personnel to safely land a vessel and dispatch and retrieve rescuers if an emergency such as a hunting accident arises on either island. The islands’ inaccessibility makes routine patrol, search and rescue, and emergency evacuation operations...” Furthermore, there was a concern for safety of non-consumptive users of the refuge specifically boaters anchoring in the harbor or beach goers and potential risk of damage to adjacent properties and people from hunting activities.

Our Response

As a result of this comment we have determined how an emergency evacuation from the refuge would be accomplished. The refuge has no staff onsite. In the event of an emergency, Chippewa County dispatch would need to be called at 906-495-3312. Due to the proximity to Canada it is possible that a 911 call would be routed to Canada. Eventually the call would get to Chippewa County Dispatch so 911 is still a viable phone number. However, the direct line to Chippewa County Dispatch should be publicized by the refuge for direct access. The Coast Guard and the Chippewa County Sheriff’s Office Marine Services Unit would be dispatched to respond to an emergency. Emergency response to the area would be similar to the emergency response on all other islands in the vicinity of Drummond Island.

Access to the islands is limited. There are no boat landings on either of the islands. The refuge routinely lands its boat on the sandy areas of Harbor Island and personnel wade to the island. Standerson Island’s shore is rocky, boats need to be anchored offshore and people wade in to gain access.

The refuge has allowed hunting for deer and bear on the island since 1985. The refuge does not control the waters surrounding the islands and migratory waterfowl hunting has been permitted in the area from the water according to state regulations. The majority of hunting visits to the island would be in the fall during deer and waterfowl hunting season when hunting has already been permitted on refuge lands or the waters surrounding the refuge which are controlled by the state of Michigan.

Most visitation occurs during the summer months in June, July, and August. The state of Michigan allows the hunting of coyote, opossum, porcupine, weasel, red and ground squirrels, skunk, woodchuck, Russian boar, feral pigeon, starling, and house sparrow year-round. Many of these species are not currently found on the refuge. Crow season opens August 1. We predict that none of these animals would be hunted in June, July, or August based on limited hunting opportunities, desirability of hunting activities at the time of year and the remoteness of the island.

The refuge staff will track user conflicts. The refuge manager may establish specific regulations for individual species or portions of the refuge depending on conflicts with other wildlife dependent recreation priorities. Permanent or periodic hunting closures for specific species or closures of portions of the refuge may be necessary if the refuge manager determines that there are public safety requirements.

No changes were made to the preferred alternative based on this comment.

Noise was not evaluated in the environmental assessment

A comment was received indicating that the impacts of hunting and fishing noises were not evaluated in the environmental assessment. The commenter provided additional information to consider such as, "Noise from gunfire travels much farther across water than in a forest. Harbor and Standerson islands are situated close to the center of Potagannissing Bay - which means that noise generated there affects and pollutes a far greater area than in a more typical forested environment, and the sound echoes back and forth across the bay between the shorelines...Moreover this noise pollution would degrade not only a popular recreational and family vacation area, but also Potagannissing Bay itself, which houses a National Wildlife Refuge and the Bay's very waters are also designated as a National Flyway for migrating birds."

Our Response

As a result of this comment we have evaluated the impacts of noise more explicitly that could occur from hunting and fishing activities within the response to this comment. Currently, hunting noises already occur when hunters harvest deer from the refuge. The refuge has received no negative comments about noise from hunting activities. The addition of additional hunters under the preferred alternative is predominately from waterfowl and one additional deer harvest. Huron Lake is open to waterfowl hunting and noise disturbance is already occurring on the landscape. Noise disturbance from hunting is temporary in nature and although it travels a further distance the impacts are still negligible given the amount of hunting that will likely occur because of this action.

The refuge staff will track user conflicts. The refuge manager may establish specific regulations for individual species or portions of the refuge depending on conflicts with other wildlife dependent recreation priorities. Permanent or periodic hunting closures for specific species or closures of portions of the refuge may be necessary if the refuge manager determines it necessary.

No changes were made because of this comment.

The Service should not allow killing contests

Within the submitted comment, Harbor Island was specifically listed as a refuge that allowed wildlife killing contests. Killing contests was defined as “participants compete to kill the most, the largest, or the smallest animals within a specified time period for the chance to win cash or other prizes.” Further stating, “Certain practices allowed by the proposed rule are incompatible with the National Wildlife Refuge System.”

Our Response

Applicable to Harbor Island National Wildlife Refuge, the Service does not attempt to define or authorize “trophy hunting” in any of our laws, regulations, or policies concerning hunting. The refuge follows state hunting and fishing regulations (except for where we determine it is necessary to be more restrictive), including state regulations concerning responsible hunting, or prohibitions on wanton waste (defined as “to intentionally waste something negligently or inappropriately”).

In addition, the refuge applies this same stance on alleged “killing contests.” At Harbor Island National Wildlife Refuge, wildlife “killing contests” have not been

found compatible and the refuge follows state bag limits for species open to hunting, except where we may restrict bag limits in order to meet compatibility requirements for the activity. In states where excessive take of particular species is encouraged for sport only, the Service retains the right to restrict bag limits. We only allow hunting on refuges and hatcheries when we have determined that the opportunity is sustainable and compatible. For example, “contests” targeting non-game species where there are no bag limits under state regulations, including species classified as “predators” under state laws, are permitted in Michigan. However, the Service would not issue permits for coyote hunting “contests” at refuges in these States for several reasons, including unacceptable disturbance impacts to other game and nongame species, conflicts with other user groups, and conflicts with the Service’s Biological Integrity Diversity and Environmental Health policy.

Under 50 CFR 26.21(b), the use of dogs for hounding is prohibited on refuges unless authorized by station-specific regulations, and many refuges like Harbor Island National Wildlife Refuge only authorize the use of dogs for retrieval of migratory birds, upland game birds, and small game. As in most refuges allowing dogs, it is required that the dogs are under the immediate control of the hunter at all times or leashed, unless actively retrieving an animal.

Located in a state where certain forms of baiting are allowed, the refuge has elected to be more restrictive and not support this method of hunting. No distribution of feed or bait or hunting over bait is permitted on the 736-acres.

We did not make any changes to the rule or this environmental assessment because of this comment.

The Service should not allow the hunting of bobcats or coyotes as it is not biologically supported and inhumane

The Service should not expand hunting opportunities for these animals on Service lands, as they are already facing a myriad of threats and hunting them is not biologically supported. The Service must fully analyze the impacts of expanding these opportunities.

Our Response

The Service does not attempt to define or authorize “trophy hunting” in any of our laws, regulations, or policies concerning hunting. We follow state hunting and

fishing regulations, except for where we are more restrictive on individual stations, including state regulations concerning responsible hunting, or prohibitions on wanton waste (defined as “to intentionally waste something negligently or inappropriately”). We only allow hunting on refuges when we have determined that the opportunity is sustainable and compatible.

Bobcats are a top predator in many ecosystems and can be a significant source of predation on species such as white-tailed deer (Roberts and Crimmins 2010). In a nation-wide study, Roberts and Crimmins reported 31 states having increasing populations of bobcats, while 15 states having stable bobcat populations, 1 state reported fluctuating bobcat populations, and Florida having a decreasing bobcat population as of 2010. In this study, Michigan reported increasing bobcat populations and had a monitoring system to estimate population size. Monitoring methods used in the state of Michigan were hunter surveys and snow track surveys (Roberts and Crimmins, 2010). The impacts of opening to hunting on the refuge is minimal to the population as it is estimated zero bobcats will be harvested from the refuge. The refuge references two years of state collected data where no bobcats were harvested in the surrounding counties. Additionally, a majority of bobcat hunting, 97%, uses trapping or hounding as the main method of take, which the refuge does not allow. Although formal bobcat surveys are not conducted on the refuge there have been rare observations of these species on the islands surrounding the refuge and the refuge does have suitable habitat to support them. The refuge will open to bobcat hunting.

The refuge falls within the coyote natural home range, but none have been officially documented on the refuge. Coyotes have been documented on islands near the refuge. It is possible that they may visit the refuge from time to time by swimming or walking across the ice. A coyote’s normal home range can cover 12 to 40 square miles, much larger than the size of the refuge. Coyotes would only be considered transient visitors because the refuge cannot support coyotes on its own. Due to this transient nature and coyote hunting not being a desirable activity and likely to occur incidental to other hunting activities like deer hunting there would be no harvest of coyotes from hunting. The refuge will open to coyote hunting.

Hounding on National Wildlife Refuges is unsporting and was not evaluated for environmental impacts

Expands coyote, bobcat, fox, and rabbit hunting where hounding of those species is permissible on multiple refuges, including on Harbor Island National Wildlife Refuge, “is cruel and unsporting has wide-ranging environmental impacts, including harms to non-target species. The Ecological Assessments for the refuges on which the Service proposes to open or expand hounding opportunities entirely fail to analyze the environmental impacts of the practice, in violation of NEPA.”

Our Response:

Harbor island only allows the use of dogs for furbearer hunting when dogs are in the immediate control of their owners. Hounding activities are not considered having the dogs in your immediate control and thus dogs cannot be used for coyote, bobcat, fox, and rabbit/hare hunting unless retrieving downed game. As this is not an activity permitted on the refuge under any alternative it was not further evaluated as there would be no effect.

General opposition to hunting

Two commenters expressed general opposition to any hunting or fishing in the National Wildlife Refuge System and specifically on the Harbor Island National Wildlife Refuge. In many cases, commenters stated that hunting was antithetical to the purposes of a “refuge,” which, in their opinion, should serve as a safe place from hunting.

Our Response

The Administration Act, as amended, stipulates that hunting (along with fishing, wildlife observation and photography, and environmental education and interpretation), if found to be compatible, is a legitimate and priority general public use of a refuge and should be facilitated. The Service has adopted policies and regulations implementing the requirements of the Administration Act that refuge managers comply with when considering hunting and fishing programs. We allow hunting of resident wildlife on refuges only if such activity has been determined compatible with the established purpose(s) of the refuge and the mission of the refuge system as required by the Administration Act.

Hunting of resident wildlife on refuges generally occurs consistent with state regulations, including seasons and bag limits. The Administration Act, as amended,

states “regulations permitting hunting or fishing of fish and resident wildlife within the refuge system shall be, to the extent practicable, consistent with state fish and wildlife laws, regulations and management plans (16 U.S.C. 668dd(m)). Refuge-specific hunting regulations can be more restrictive (but not more liberal) than state regulations and often are more restrictive in order to help meet specific refuge objectives. These objectives include resident wildlife population and habitat objectives, minimizing disturbance impacts to wildlife, maintaining high-quality opportunities for hunting and other wildlife-dependent recreation, eliminating or minimizing conflicts with other public uses and/or refuge management activities, and protecting public safety.

Refuges, including Harbor Island National Wildlife Refuge, conduct hunting programs within the framework of state and federal regulations. Population estimates of huntable species are developed at a regional, state, and continental scale. Hunting frameworks and take limits are set based upon these estimates. The proposed refuge hunting program rules would conform to hunting regulations in the state of Michigan. By maintaining hunting regulations that are the same as or more restrictive than the state, individual refuges ensure that they are maintaining seasons which are supportive of management on a more regional basis. Such an approach also provides consistency with largescale population status and objectives. Expanding hunting at the refuge allows us to align with the state regulations where appropriate.

In general, we did not make any changes because of these comments.

References

Roberts NM, Crimmins SM. 2010. Bobcat population status and management in North America: evidence of large-scale population increase. *Journal of Fish and Wildlife Management* 1(2):169– 174; e1944–687X. DOI: 10.3996/122009-JFWM-026. Accessed 08/04/2021:
<https://meridian.allenpress.com/jfwm/article/1/2/169/206731/Bobcat-Population-Status-andManagement-in-North>

Harbor Island National Wildlife Refuge Hunt and Sport Fish Plan

August 2021

**U.S. Fish and Wildlife Service
Harbor Island National Wildlife Refuge**

1674 Refuge Entrance Road

Seney, MI 49883

Submitted By

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Table of Contents

Harbor Island National Wildlife Refuge Hunt and Sport Fish Plan.....	1
Submitted By.....	2
Concurrence:	2
Approved:.....	2
Introduction.....	5
Statement of Objectives	7
Description of Hunting/Fishing Program	9
Areas to be Opened to Hunting and Fishing	9
Species to be Taken, Hunting and Fishing Periods, Hunting and Fishing Access	9
Hunter Permit Requirements	10
Angler Permit Requirements.....	10
Consultation and Coordination with the State and Tribes	11
Law Enforcement.....	11
Funding and Staffing Requirements	12
Conduct of the Hunting and Fishing Programs	12
Hunter Permit Application, Selection and/or Registration Procedures	12
Refuge-Specific Hunting and Fishing Regulations.....	12
Other Refuge Rules and Regulations for Hunting and Fishing.....	14
Public Engagement.....	15
Outreach for Announcing and Publicizing the Hunting and Fishing Program....	15
Public Reaction to the Hunting and Fishing Program.....	15
How Hunters and Anglers Will Be Informed of Relevant Rules and Regulations	15
Compatibility Determination	16
Minor Amendment to the Comprehensive Conservation Plan	16
References.....	17
Attachment A: Harbor Island National Wildlife Refuge Maps	18
<i>Figure 1. Harbor Island National Wildlife Refuge Vicinity Map</i>	18

<i>Figure 2. Harbor Island National Wildlife Refuge Hunt Unit Map</i>	19
Attachment B: Harbor Island National Wildlife Refuge Compatibility Determination (Hunting).....	20
Attachment C: Harbor Island National Wildlife Refuge Compatibility Determination (Fishing)	21

Introduction

National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System, the establishing purpose(s) of an individual refuge, U.S. Fish and Wildlife Service policy, and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual.

Harbor Island National Wildlife Refuge was purchased in 1983 under authority of the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j) as part of the Unique Ecosystem's Program.

The primary purpose of the refuge is *"... (for the) conservation, management, and restoration of the fish, wildlife and plant resources and their habitats for the benefit of present and future generations of Americans..."* 16 U.S.C. n 668dd(a)(2) (National Wildlife Refuge System Administration Act)

Harbor Island National Wildlife Refuge consists of two islands, Harbor Island and Standerson Island. These islands are in the state of Michigan in Potagannissing Bay, Lake Huron near Drummond Island at the eastern end of the Upper Peninsula just 3.5 miles south of the Canada border. The refuge consists of approximately 736-acres in Chippewa County, Michigan. It should be noted that per the documented acres as described in the deed the refuge is described as 719.5 acres, geospatial acres are reported as 735.66. It is common for these acres to not match perfectly. As acres associated with this action are described geospatially, through use of maps made available to the public, the GIS calculated acres are used for describing the number of acres associated with this proposed action. In 1983, the agency purchased the 695-documented acre Harbor Island from the Nature Conservancy as part of the Unique Ecosystems program effectively starting the refuge. In December of 2019, the agency purchased the 25-documented acre Standerson Island located just to the northwest of Harbor Island expanding the refuge's size. Additional lands may be added in the future.

The mission of the National Wildlife Refuge System as outlined by the National Wildlife Refuge System Administration Act, as amended by the National Wildlife Refuge System Improvement Act (16 U.S.C. 668dd et seq.), is *"... to administer a national network of lands and waters for the conservation, management and, where*

appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

The National Wildlife Refuge System Improvement Act (16 U.S.C. 668dd(a)(4) mandates the Secretary of the Interior in administering the System to provide for the conservation of fish, wildlife, and plants, and their habitats within the National Wildlife Refuge System;

- Ensure that the biological integrity, diversity and environmental health of the Refuge System are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the Refuge System described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;
- Ensure effective coordination, interaction and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the states in which the units of the Refuge System are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the Refuge System and the purposes of each refuge;
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the Refuge System through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses; and
- Monitor the status and trends of fish, wildlife and plants in each refuge.

Therefore, it is a priority of the U.S. Fish and Wildlife Service to provide for wildlife-dependent recreation opportunities, including hunting and fishing, when those opportunities are compatible with the purposes for which the refuge was established and the mission of the Refuge System.

Public hunts on Harbor Island began as early as 1985 with the introduction of white-tailed deer and black bear hunting. We are expanding hunting opportunities on Harbor Island and opening the newly acquired lands to all state hunting seasons. This includes opening to migratory bird hunting (crows, ducks, mergansers, coots, geese, snipe, Virginia and sora rails, moorhens and woodcock) and upland game (foxes (gray and red), rabbit and hare, coyote, ruffed grouse, squirrels (red, ground, fox and gray), opossums, porcupines, weasels, house sparrows, skunks, woodchucks, feral pigeons, starlings, turkeys, bobcats and raccoons) and additional

big game (Russian boars). It would also expand deer and bear hunting to newly acquired lands.

The refuge is currently closed to fishing. Although, neither island has inland fishable waters we would open the island to sport fishing so that anglers can stand on the shoreline and fish into Lake Huron.

Habitats on the refuge consist of balsam and cedar lowlands and oak, beech and maple uplands. Resident wildlife species include red fox, ruffed grouse, snowshoe hare, white-throated sparrows, gray jays and magnolia warblers. Gray wolves may hunt the island during winter months. Bald eagles also use the Harbor Island's large bay for fishing. Access to the islands are by private boat and Harbor Island's bay is used by boaters for fishing and overnight anchorage. The sandy beaches are also used by swimmers. In 2019, the number of hunting visits was estimated to be 30 big game hunters. There will likely be an increase in hunters that use the refuge because of the new hunting opportunities.

Statement of Objectives

The objectives of a hunting and fishing program on Harbor Island National Wildlife Refuge are:

- To provide quality, diverse and safe hunting opportunities on refuge lands that minimize conflict with other wildlife-dependent public recreation activities and are compatible with the refuge purpose and agency policy.
- To increase or maintain biological diversity by preserving the natural diversity and variety of biotic communities occurring on refuge lands and aid in reducing deer browse.
- Promote public understanding of and increase public appreciation for the refuge's and surrounding areas' natural resources.

Hunting and fishing have been identified as priority public uses for the National Wildlife Refuge System. A review of the "Gravel Island, Green Bay, Harbor Island, Huron and Michigan Islands National Wildlife Refuges Comprehensive Conservation Plan" provided no opposition to the expansion of hunting and fishing opportunities on the Harbor Island National Wildlife Refuge, however it also does not specifically address expanding these opportunities in the objectives for the island refuge.

The portion of the Comprehensive Conservation Plan which covers Harbor Island National Wildlife Refuge states that, *“hunting is currently allowed for big game. The entire island is open to the hunting of white-tailed deer and black bear. These hunts are conducted in accordance with State of Michigan regulations.”*

The Comprehensive Conservation Plan also identifies specific objectives and strategies that pertain to people and their use of the refuge. The people goal and people objective one: community outreach, strategy four, aims, *“...to make Harbor Island more accessible to visitors..”* with the help of a friends’ group. Currently Harbor Island has no friends group, however the refuge can continue to explore access opportunities for the public.

Another citation found in the plan states that, *“refuge managers have to determine whether existing and future opportunities for wildlife observation and photography, hunting, fishing, environmental education and interpretation are appropriate and sustainable on specific islands.”* Currently Harbor Island National Wildlife Refuge is open to the public during daylight hours and visitors can enjoy limited hunting opportunities, wildlife observation and photography, mushroom and berry picking.

Appendix B of the Comprehensive Conservation Plan also contains the Hunting Compatibility Determination for Harbor Island National Wildlife Refuge. According to the determination big game hunting is the only type of hunting that is currently allowed on the refuge. It does not specify any objections to expanding hunting opportunities in the future.

The Comprehensive Conservation Plan states that its goals were intentionally broad, descriptive statements of purpose. The goals highlight elements of the vision statement that emphasize future refuge management. Therefore, it does not appear that the plan would prohibit the expansion of hunting and fishing opportunities on the refuge and as such, this Hunt and Sport Fish Plan does not trigger a minor amendment to the Comprehensive Conservation Plan.

The Comprehensive Conservation Plan directed the development of a Habitat Management Plan, which was completed in 2015. In development of the refuge’s Habitat Management Plan, it was determined that it was necessary to provide more detailed objectives under the Ecosystem, Habitat and Wildlife Goal. A specific wildlife objective outlined in the Habitat Management Plan was to *“liberalize*

hunting of white-tailed deer.” There is some concern that deer may be damaging the island’s forest.

Description of Hunting/Fishing Program

Areas to be Opened to Hunting and Fishing

Hunting for deer and bear are open on the entire 695-acres of Harbor Island during state of Michigan seasons. Changes to the hunting program within this plan would include expanding hunting options on Harbor Island and opening all other refuge lands to the same hunting opportunities as on Harbor Island. New species opportunities offered on the refuge will align with the state of Michigan hunting species. Currently no sport fishing is allowed on either island. Neither island has interior fishable waters. We are opening all refuge lands to sport fishing. Anglers would be allowed to fish from shore on both islands. The islands that are opening for hunting and fishing are shown in the refuge vicinity map (figure 1) and in hunt unit map (figure 2) in Attachment A.

Species to be Taken, Hunting and Fishing Periods, Hunting and Fishing Access

Species and season dates will align with Michigan state seasons, except for night hunting and fishing. The refuge is only open during daylight hours. Season dates are set on an annual basis and provided to the public through a hunting and fishing regulations handbook.

Migratory Bird Hunting

Open to crow, duck, mergansers, coot, geese, snipe, Virginia and sora rails, moorhens and woodcock on refuge lands. These seasons typically run from September to November with the exception of crows which has two seasons August to September and February to March.

Upland Game Hunting

Open to cottontail rabbit, snowshoe hare, coyote, ruffed grouse, squirrels (ground, red, fox and gray), opossum, porcupine, weasel, house sparrow, skunk, woodchuck, feral pigeons, starlings, turkey, bobcat, fox (red and gray) and raccoon on refuge lands with the following condition; the refuge is open daylight hours only, night hunting is prohibited.

Some of these species have year-round seasons including opossum, porcupine, weasel, red squirrel, skunk, ground squirrel, woodchuck, feral pigeons, starlings, house sparrows and coyote. Others have shorter seasons that typically run as follows; cottontail rabbit, snowshoe hare and fox and gray squirrels (September to March), ruffed grouse (September to January), bobcat (January to March) red and gray fox (October to March), raccoon (October to January). Turkey has both a fall and spring season (September to November and April to May).

Big Game Hunting

Currently white-tailed deer and bear hunting are allowed on Harbor Island consistent with state of Michigan season. This hunt and fish plan would open to white-tailed deer and bear on all other refuge lands and open the entire refuge to Russian boar hunting.

Sport Fishing

Open to sport fishing for all game species except mussels (clams), crayfish, leech, frog, toad, salamander, snake, lizard, turtle and other non-fish species.

Hunter Permit Requirements

Hunters must comply with all applicable state and refuge specific regulations. Hunters must have a valid Michigan hunting license and any federal and state stamps, permits and/or tags required. Tribal members may exercise tribal hunting rights within the refuge according to tribal regulations. No special application or registration process is required to hunt on the refuge.

State hunting regulations are available from the Michigan Department of Natural Resources in their annual Hunting, Black Bear, Fall and Spring Turkey, Fur Harvester, and Waterfowl Digests. These are available on the department's website at <https://www.michigan.gov/dnr/>. Refuge specific regulations can be found on the refuge's website at http://www.fws.gov/refuge/harbor_island.

Angler Permit Requirements

Anglers must comply with all applicable state regulations. Anglers must have a valid Michigan fishing license. Tribal members may exercise their fishing rights within the refuge according to tribal regulations. No special application or registration process is required to fish on the refuge.

State fishing regulations are available from the Michigan Department of Natural Resources in their annual Fishing Digest. These are available on the department's website at <https://www.michigan.gov/dnr/>.

Consultation and Coordination with the State and Tribes

The refuge reviewed the operations and regulations for the state of Michigan and the wildlife management units that contain the refuge. The refuge is looking to align hunting seasons, methods, bag limits and species with the state to simplify regulations for hunters. The refuge first reached out to the state through an official letter to the Michigan Department of Natural Resource Director on September 28, 2020 and reached out locally on October 2, 2020 to discuss the Hunt and Sport Fish Plan. On October 13, 2020, we received a call from the local state biologist regarding the plan. He gathered more information on our intentions. A letter of support was received from the state on October 20, 2020.

The Harbor Island National Wildlife Refuge falls within the ceded territory of the Treaty of Washington, signed in 1836. Tribal members may exercise tribal hunting and fishing rights within the refuge according to tribal regulations. A formal letter was sent to all federally recognized tribes within the Great Lakes region and two inter-tribal agencies inviting them to provide comments on the proposed changes to the hunting program on September 29, 2020. At the time of publishing, the refuge has not received any comments from local tribes. See Appendix D of the Environmental Assessment for the letter sent to the tribes and intertribal agencies.

Law Enforcement

Enforcement of refuge violations normally associated with management of a national wildlife refuge is the responsibility of commissioned Federal Wildlife Officers. Other officers, special agents, state game wardens and the local Sheriff's Department may assist the refuge. The following methods are used to control and enforce hunting regulations:

- Refuge and hunt area boundaries will be clearly posted;
- The refuge will provide hunting regulations on their website with a map showing the refuge boundaries;
- Officers will randomly check hunters for compliance with federal and state laws.

Funding and Staffing Requirements

The hunting program is designed to be administered with minimal refuge resources. The costs of administering and enforcing the refuge hunting program comes out of the refuge's annual budget. Expenses include program management, staff resources, boundary posting, signage, website updates and other hunting specific activities.

Conduct of the Hunting and Fishing Programs

Hunter Permit Application, Selection and/or Registration Procedures

No special application or registration process is required to hunt on the refuge. Hunters must follow federal, state, tribal and refuge specific rules and regulations. They must have the proper federal and Michigan state hunting licenses, permits and tags. The Harbor Island National Wildlife Refuge falls within the ceded territory of the Treaty of Washington, signed in 1836. Tribal members may exercise tribal hunting and fishing rights within the refuge according to tribal regulations.

Refuge-Specific Hunting and Fishing Regulations

To ensure compatibility with refuge purposes and the mission of the National Wildlife Refuge System, hunting must be conducted in accordance with state and federal regulations, with additional regulations for the refuge. All federal regulations are available in the Code of Federal Regulations. See 50 CFR Part 32 Subpart A § 32.2 and Subpart B §32.41(b)) for Harbor Island National Wildlife Refuge <https://www.govinfo.gov/app/details/CFR-2019-title50-vol12/CFR-2019-title50-vol12-part635-subpart-id478>. Refuge-specific stipulations are also detailed in the Hunting Compatibility Determination (Attachment B) and on the refuge's website. Listed below are general procedures that pertain to hunting on Harbor Island National Wildlife Refuge as of the date of this plan. These may be modified as conditions change or if refuge expansion occurs.

Listed below are refuge-specific regulations (expanded upon for understanding from the Code of Federal Regulations), that pertain to hunting and fishing on the refuge as of the date of this plan. These regulations may be modified as conditions change or if refuge expansion occurs. Under all species, trapping and falconry are not considered methods of take allowed under this hunting plan.

Migratory Game Bird Hunting

We allow hunting of crow, duck, coot, geese, snipe, Virginia and sora rails, moorhens and woodcock on refuge lands in accordance with state regulations and subject to the following conditions.

- Hunters may enter the refuge no earlier than one hour before legal sunrise and must leave the refuge no later than one hour after legal sunset.
- You must remove boats, blinds, blind materials, stands, decoys and other hunting equipment from the refuge at the end of each day.
- We allow the use of dogs while hunting in accordance with Michigan state regulations, provided the dog is under the immediate control of the hunter at all times.
- You may possess only approved nontoxic shot shells while in the field while pursuing migratory game birds (see 50 CFR §32.2(k)).

Upland Game Hunting

We allow hunting of cottontail rabbit, snowshoe hare, coyote, ruffed grouse, squirrels (ground, red, fox and gray), opossum, porcupine, weasel, house sparrow, skunk, woodchuck, feral pigeons, starlings, turkey, bobcat, fox (red and gray) and raccoon on refuge lands in accordance with state regulations and subject to the following conditions.

- Hunters may enter the refuge no earlier than one hour before legal sunrise and must leave the refuge no later than one hour after legal sunset.
- We allow the use of dogs while hunting in accordance with Michigan state regulations, provided the dog is under the immediate control of the hunter at all times. It should be noted that we only allow the use of dogs for furbearer hunting when dogs are in the immediate control of their owners. Hounding activities are not considered having the dogs in your immediate control and thus dogs cannot be used for coyote, bobcat, fox, and rabbit/hare hunting unless retrieving downed game.
- You may possess only approved nontoxic shot shells while in the field while pursuing upland game (see 50 CFR §32.2(k)).

Big Game Hunting

We allow hunting of white-tailed deer and black bear on Harbor Island. We propose opening white-tailed deer, bear and Russian boar on refuge lands in accordance with state regulations and subject to the following conditions.

- Hunters may enter the refuge no earlier than one hour before legal sunrise and must leave the refuge no later than one hour after legal sunset.
- Hunting big game with a dog is prohibited.
- Deer hunters may place one portable stand or blind on the refuge for use while deer hunting, but only during the open deer season. The stand must be clearly labeled with the hunter's [state license/sportsmen's ID] number. The blind must be removed by the end of the season.
- No screw in steps or any objects that penetrate through the bark of a tree are allowed.

Sport Fishing

To ensure compatibility with refuge purposes and the mission of the National Wildlife Refuge System, fishing must be conducted in accordance with state and federal regulations, as supplemented by refuge specific regulations. All federal regulations are available in the Code of Federal Regulations. See 50 CFR Part 32 Subpart A § 32.5 and Subpart B §32.41 b for Harbor Island National Wildlife Refuge <https://www.govinfo.gov/app/details/CFR-2019-title50-vol12/CFR-2019-title50-vol12-part635-subpart-id478>.

Refuge-specific stipulations are also detailed in the Fishing Compatibility Determination (Attachment C) and on the refuge's website. Listed below are general procedures that pertain to fishing on Harbor Island National Wildlife Refuge as of the date of this plan. These may be modified as conditions change or if refuge expansion occurs.

- We encourage the use of non-toxic fishing weights or lures.
- Anglers are required to dispose of fishing line properly. Line left lying on the ground or in the water may entangle wildlife causing serious injury or death.
- We prohibit the taking of any mussels (clams), crayfish, leech, frog, toad, salamander, snake, lizard, turtle and other non-fish species by any method on the refuge.

Other Refuge Rules and Regulations for Hunting and Fishing

We prohibit:

- Cutting shrubs and standing trees (dead or alive).
- The use and possession of bait and artificial lures for hunting.
- All-terrain vehicles and snowmobiles.
- Target shooting and light shining.

- Dog training.
- Overnight camping and open fires.

Hunters using shotguns are required to use and possess only non-toxic shot shells.

Public Engagement

Outreach for Announcing and Publicizing the Hunting and Fishing Program

The draft hunting and fishing plan and the associated draft compatibility determinations and environmental assessment were available for public review and comment for more than 60 days. The refuge put out a region wide press release and posted the information for public comment at their office and online beginning on April 15, 2021. The Federal Register published the proposed rule on May 5, 2021 and accepted comments through the end of the “2021-2022 Station-Specific Hunting and Sport Fishing Regulations” on July 6, 2021. The draft compatibility determination was posted at the Seney National Wildlife Refuge office at 1674 Refuge Entrance Road, Seney, MI 49883 and made available online at https://www.fws.gov/refuge/harbor_island.

Public Reaction to the Hunting and Fishing Program

Two comments were received through the public comment period. Both comments were in opposition of opening the refuge to hunting. One letter came from an organization, while the other came from an individual. The refuge is using this chance to respond to all comments received based on topics derived from the comments. Detailed summaries of comments received and responses to comments are included in the environmental assessment.

How Hunters and Anglers Will Be Informed of Relevant Rules and Regulations

General information regarding hunting, fishing and other wildlife-dependent public uses can be obtained at the Seney National Wildlife Refuge Headquarters Office. The physical address for the Headquarters Office is, Seney National Wildlife Refuge 1674 Refuge Entrance Road Seney, MI 49883. Seney manages Harbor Island National Wildlife Refuge. Refuge staff can be reached by phone at 906-586-9851.

Hunting and fishing information can also be found on the refuge’s website at https://www.fws.gov/refuge/Harbor_Island/visit/rules_and_regulations.html.

Regulations pertaining to hunting on all national wildlife refuges are found in the Code of Federal Regulations (CFR) 50 CFR part 32. Copies of the CFR can be found online and in area libraries. Harbor Island National Wildlife Refuge Regulations can be found at Section 32.41.

Compatibility Determination

Hunting and sport fishing along with all associated program activities proposed in this plan have been found appropriate and compatible with the purposes of the refuge. See attached Hunting (Attachment B) and Fishing (Attachment C) Compatibility Determinations.

Minor Amendment to the Comprehensive Conservation Plan

After review it was determined that a minor amendment to the Comprehensive Conservation Plan memo was not required. The Comprehensive Conservation Plan Appendix B specifically states, "Uses that have been administratively determined to be appropriate are the take of fish and wildlife under state regulations. States have regulations concerning take of wildlife that includes hunting, fishing and trapping. We consider take of wildlife under such regulations appropriate. However, the refuge manager must determine if the activity is compatible before allowing it on a refuge." Thus, expanding hunting to include additional species is in the spirit of the Comprehensive Conservation Plan.

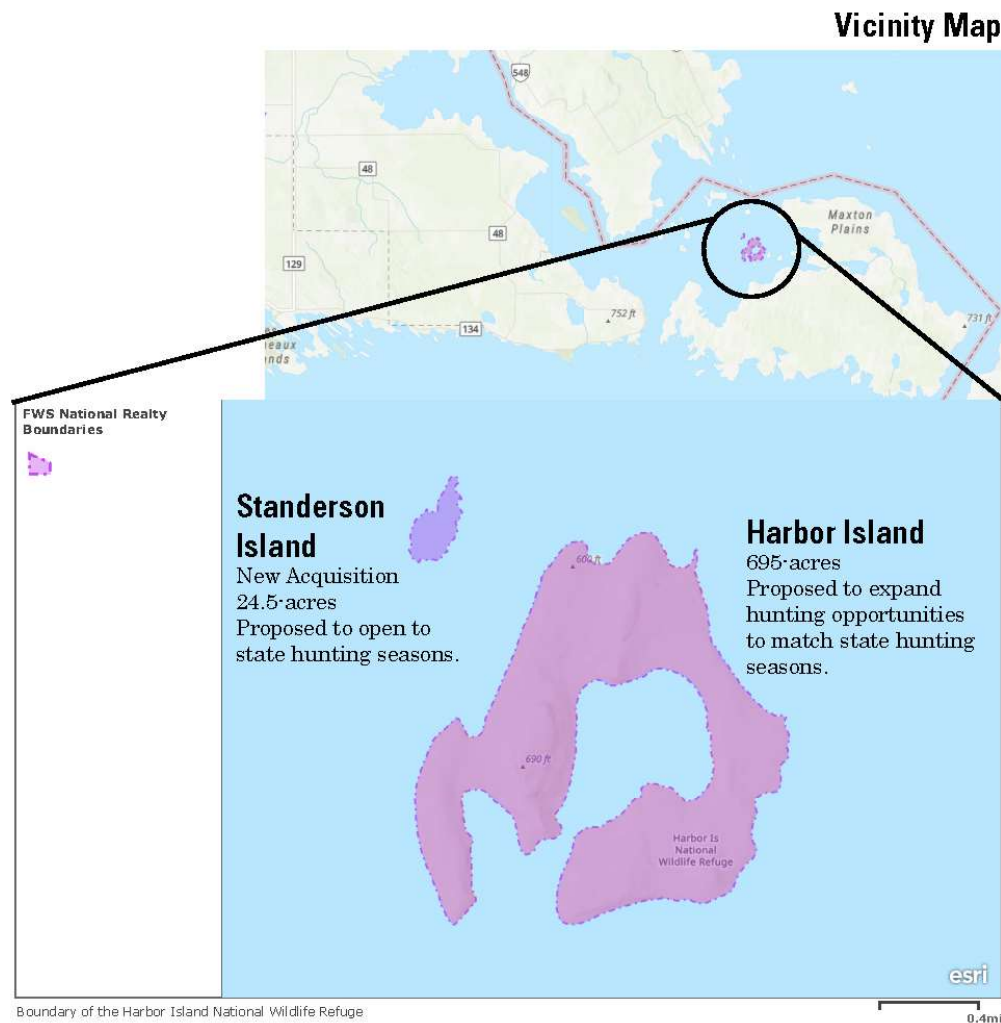
References

- Corace, Greg. 2015. Habitat Management Plan for Harbor Island, Huron, and Michigan Islands National Wildlife Refuges.
https://www.fws.gov/uploadedFiles/Islands_Habitat_Management_Plan_SeneyNWR_Final_Apr_2015.pdf
- Michigan Department of Natural Resources. 2020 Michigan Fur Harvester Digest.
https://www.michigan.gov/documents/dnr/michigan_fur_harvester_digest_625943_7.pdf
- Michigan Department of Natural Resources. 2020 Michigan Hunting Digest.
https://www.michigan.gov/documents/dnr/hunting_and_trapping_digest_461177_7.pdf
- Michigan Department of Natural Resources. 2020 Michigan Waterfowl Digest.
https://www.michigan.gov/documents/dnr/waterfowl_hunting_digest_530152_7.pdf
- U.S. Fish and Wildlife Service. 2013. Gravel Island, Green Bay, Harbor Island, Huron and Michigan Islands National Wildlife Refuges Comprehensive Conservation Plan:
https://www.fws.gov/midwest/planning/GreatLakesIslands/CCP/FINAL/GLI_CCP-08Feb2013-web.pdf.

Attachment A: Harbor Island National Wildlife Refuge Maps

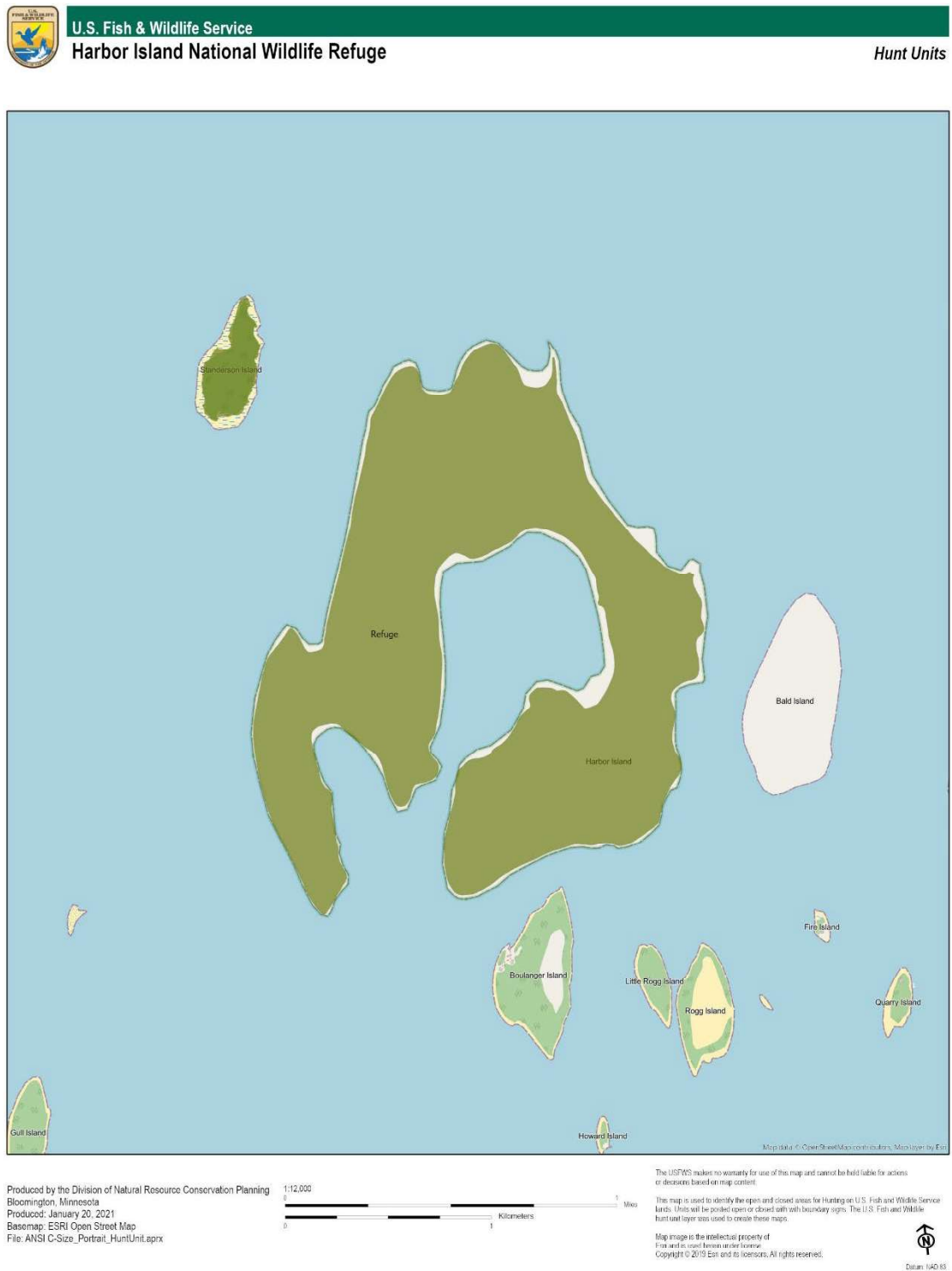
Figure 1. Harbor Island National Wildlife Refuge Vicinity Map

Harbor Island National Wildlife Refuge



Esri, NASA, NGA, USGS, FEMA | Esri Community Maps Contributors, Province of Ontario, LTC, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCAN, Parks Canada

Figure 2. Harbor Island National Wildlife Refuge Hunt Unit Map



Attachment B: Harbor Island National Wildlife Refuge Compatibility Determination (Hunting)

See separate attached document.

Attachment C: Harbor Island National Wildlife Refuge Compatibility Determination (Fishing)

See separate attached document.

FINDING OF APPROPRIATENESS OF A REFUGE USE

Use of this form is required for documenting all appropriate use findings (603 FW 1)

Refuge Name: Harbor Island National Wildlife Refuge

Use: Hunting

This is a: New Use

✓ Existing Use

A. Does this use qualify for an appropriateness review exemption?

(Please Check One)

Some refuge uses are exempted from an appropriateness review [603 FW 1.2; 603 FW 1.2(A)]. Appropriate use finding exemptions are documented through the use of this form.

 This use is "protected," "conditioned," or otherwise provided for under law or regulation.

Examples include the use of snow machines, airplanes, or motorboats on Alaska refuges under certain conditions per the ANILCA. Provide a written justification as to how this use qualifies for this particular exemption.

 The Service does not have jurisdiction over the use

This could be as a result of treaty rights, court orders, consent decrees, pre-existing rights (such as subsurface Non-Federal oil and gas or mineral rights, grandfathered easements, etc.). Provide a written justification as to how this use qualifies for this particular exemption.

 This is a Right-of-Way Permit request

Right-of-way requests are subject to 340 FW 3 and compatibility determinations (603 FW 2). Attach a brief explanation as to how this use qualifies for this particular exemption.



This use DOES NOT qualify for an appropriateness review exemption.

Proceed to evaluate the use under Part B.

If the use meets one of the three qualifying exemptions above, then it is exempt from an appropriate use determination. Skip Parts B, C, D and E and complete Parts F and G, sign and date, and submit a copy to the Refuge Supervisor.

B. Is the use administratively determined as appropriate in law or policy?

(Please Check One)

The following refuge uses are appropriate because they have been administratively determined as appropriate uses by statute or policy [603 FW 1.11(A)(1); 603 FW 1.6(A)(3)].



This use is a wildlife-dependent recreational use.

Hunting, Fishing, Wildlife Observation, Wildlife Photography, Environmental Education, or Interpretation.



This use involves the take of fish and wildlife under state/territorial regulations.

Including other forms of state-regulated take beyond hunting and fishing.

 This use HAS NOT been administratively determined as appropriate by statute or policy.

Proceed to evaluate the use under Part C.

If the use meets one of the two qualifying definitions above, then it is appropriate. Complete Parts E, F, and G, sign and date, and submit a copy to the Refuge Supervisor.

C. Is the use appropriate because it contributes to the refuge's purpose(s), goals, or objectives or Refuge System mission?

(Please check one.)

Refuge managers, in their sound professional judgement, may determine a refuge use to be appropriate if it contributes to fulfilling the refuge purpose(s), goals, or objectives described in the refuge's comprehensive conservation plan, or the Refuge System mission [603 FW 1.11 (A)(2)]. Urban wildlife refuges have the additional goal of fostering environmental awareness through outreach programs and activities that develop an informed and involved populace that supports fish and wildlife conservation [110 FW 1.5].

_____ This use contributes to the refuge purpose(s), goals, or objectives, or Refuge System mission.
Provide a written justification of how the use contributes to the qualifying purpose(s), goals, or objectives or Refuge System mission. Complete Parts E, F, and G, sign and date, and submit a copy to the Refuge Supervisor.

_____ This use DOES NOT contribute to refuge purpose(s), goals, objectives, or Refuge System mission.
Proceed to evaluate the use under Part D.

D. Is this use appropriate?

Decision Criteria:	YES	NO
(1) Does the use comply with applicable laws and regulations (Federal, State/Territorial, tribal, and local)?		
(2) Is the use consistent with applicable Executive orders and Department and Service policies?		
(3) Is the use consistent with public safety?		
(4) Is the use consistent with the goals and objectives of approved management plans or other management document?		
(5) If this is the first time the use has been proposed or if it was previously found appropriate, check Yes. If the use was previously analyzed but denied, check No.		
(6) Is the use manageable within available budget and staff?		
(7) Will the use be manageable in the future with existing resources? [603 FW 1.11 (A)(3)(h)].		
(8) Does the use contribute to the public's understanding and appreciation of the refuge's natural and cultural resources?		
(9) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality [603 FW 1.6 (D)], compatible, wildlife-dependent recreation into the future?		
(10) Is the use on an urban wildlife refuge [110 FW 1.15] and/or will it help new audiences become familiar and comfortable with fish, wildlife and their habitats?		

If the answer is "NO" to (1), (2), or (3), mark the use as "Not Appropriate" under Part G. If the answer is "NO" to any of (4) through (10), the use will generally be "Not Appropriate." Refuge managers may, however, check one or more of boxes (4) through (10) and still find the use "Appropriate" by providing a written justification of the finding and how the factor(s) are mitigated or of minimal effect.

Complete Parts E, F, and G, sign and date, and submit a copy to the Refuge Supervisor.

E. Consultation with State/Territorial Fish and Wildlife Agency

(Please check one.)

Refuge managers must consult with the applicable State/Territorial fish and wildlife agency when a request for a use could affect fish, wildlife, or other resources that are of concern to a State fish and wildlife agency [603 FW 1.7E(3) and 1.12].



Consultation WAS required.

Consultation took place on: 09/28/2020

(Month/Date/Year)

Proceed to Part F.

☐ Consultation WAS NOT required.

Proceed to Part F.

F. Is the use significantly complex or potentially controversial?

(Please check one.)

☐ Yes

If Yes, date the Regional Chief was briefed: _____

(Month/Date/Year)

Proceed to Part G.



No

Proceed to Part G.

G. Finding

Based on my review of all relevant factors, I find the refuge use identified above:

☐ Exempted

☐ Not Appropriate



Appropriate*

[* Includes findings that a use is administratively determined as appropriate (Section B and C) or is found appropriate through the use of the decision tool (Section D).]

Refuge Manager SARA SIEKIERSKI

Digitally signed by SARA SIEKIERSKI
Date: 2020.12.01 07:13:25 -05'00'

Date 12/01/2020

H. Concurrence

The Refuge Supervisor MUST concur and sign a finding of "Not Appropriate" for an EXISTING use if the designation is made OUTSIDE of the Comprehensive Conservation Plan process. The Refuge Supervisor MUST concur and sign a finding of "Appropriate" for any proposed NEW use. Signature from the Refuge Supervisor WILL NOT be necessary for a finding of "Not Appropriate" with a proposed NEW use.

Refuge Supervisor CATHERINE NIGG

Digitally signed by CATHERINE NIGG
Date: 2020.12.10 13:29:58 -06'00'

Date 12/10/2020

Any use found to be "Appropriate" will require the development of a compatibility determination before the use may be allowed on Refuge lands.

COMPATIBILITY DETERMINATION

USE

Hunting (migratory game birds, upland game and big game)

REFUGE NAME

Harbor Island National Wildlife Refuge

ESTABLISHING AND ACQUISITION AUTHORITY

Harbor Island National Wildlife Refuge was purchased from The Nature Conservancy in Dec. 1983 as part of the Unique Ecosystem Program and waterfowl production area under authority of the Fish and Wildlife Act of 1956 (16 U.S.C. 742a – 742j).

REFUGE PURPOSE

“... (for the) conservation, management and restoration of the fish, wildlife and plant resources and their habitats for the benefit of present and future generations of Americans...” 16 U.S.C. n 668dd(a)(2) (National Wildlife Refuge System Administration Act)

NATIONAL WILDLIFE REFUGE SYSTEM MISSION

“The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.” (National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57)

DESCRIPTION OF USE

What is the Use?

Hunting of game is an existing public use activity under authority of the National Wildlife Refuge System Improvement Act of 1997 and it is considered a priority public use. Currently, hunting for big game (white-tailed deer and black bear) is allowed on Harbor Island, part of the refuge. This compatibility determination updates and supersedes the determination developed with the refuge’s Comprehensive Conservation Plan and will reevaluate hunting on the refuge to include hunting of all species in accordance with state of Michigan hunting seasons. Hunting species, season dates, bag limits and harvest methods will be consistent with Michigan state hunting seasons and regulations on all game species, unless more restrictive refuge regulations apply or management of the specific area

requires a special hunt outside of state seasons and regulations to ensure compliance with refuge-specific laws and compatibility issues.

Michigan state seasons and limits would apply for all refuge-specified species on the refuge. Those game species are as follows:

- A. Migratory Game Birds: crows, ducks, coots, mergansers, geese, snipe, Virginia and sora rails, moorhens and woodcock
- B. Upland Game: rabbit and hare, coyote, ruffed grouse, fox (red and gray), squirrels (ground/chipmunk, fox, red and gray), opossums, porcupines, weasels, house sparrows, skunks, woodchucks, feral pigeons, starlings, turkeys, bobcats and raccoons
- C. Big Game: white-tailed deer, black bear and Russian boar

Where is the use conducted?

The described hunting will occur on refuge lands identified within the congressionally approved boundary as outlined in the 2020-2021 Hunt Plan. Adding new lands, species or hunts requires submission of an opening package, which includes an announcement in the Federal Register; this is done on an annual basis.

When is the use conducted?

All hunting activities are in accordance with the state of Michigan Department of Natural Resources hunting seasons which are updated annually. Some of the more popular species and seasons hunted include the following:

- **Migratory Waterfowl** – *Ducks, Coots and Mergansers*: Late September to late November, *Geese*: September to mid-December and *Woodcock*: Mid-September to early November.
- **Big Game** – *White-tailed Deer*: Mid-September to early January.
- **Upland Game** – *Hare*: Mid-September to March, *Red Squirrel*: Year-round and *Ruffed Grouse*: Mid-September to mid-November and December to early January.

How is the use conducted?

To ensure a quality hunt and visitor and staff safety, all hunting activities are in accordance with federal and state regulations, subject to refuge-specific regulations. State regulations incorporated into the refuge hunting program include all methods of take legal in Michigan (i.e., firearms, archery but not trapping or falconry), all weapons and ammunition restrictions (e.g., caliber and loads), and all state-regulated special seasons (e.g., youth deer, youth turkey, youth waterfowl) unless otherwise restricted by refuge-specific regulation. Non-toxic shot shells are

required for all migratory bird and upland game hunting activities. State regulations, such as seasons, bag limits and general methods of take, are published annually in a variety of hunting digests published by the state of Michigan.

Refuge hunting regulations are available on the refuge's website and regulation signs are posted on each of the refuge's islands to inform the public of hunting opportunities and refuge regulations. General information regarding hunting and other wildlife-dependent public uses can be obtained at Seney National Wildlife Refuge headquarters office who manages the Harbor Island National Wildlife Refuge at 1674 Refuge Entrance Road, Seney, MI 49883 or by calling (906) 586-9851. Hunting season dates, refuge directions and maps will be available on the station website at: https://www.fws.gov/refuge/harbor_island. Regulations pertaining to hunting on all National Wildlife Refuges are found in the Code of Federal Regulations (CFR); see 50 CFR Part 32 Subpart A § 32.2 and Subpart B §32.41(b). Copies of the CFR can be found online and in area libraries; in addition, refuge-specific regulations are available on the refuge's website.

Why is the use being proposed?

A high priority for the refuge is to provide compatible wildlife-dependent public uses such as hunting as identified in the National Wildlife Refuge System Improvement Act of 1997. The activity of hunting is an important and effective wildlife management tool used to control populations of species that might otherwise exceed carrying capacity of their habitats or threaten the well-being of other wildlife species, including the health and safety of humans. The 2015 Habitat Management Plan for Harbor Island noted that white-tailed deer browse was negatively impacting the island's ecosystem and recommended expanding hunting opportunities and encouraging hunters. The Comprehensive Conservation Plan (CCP) also identifies specific objectives and strategies that pertain to people and their use of the refuge. The CCP people goal and objective one: community outreach, strategy four, aims "...to make Harbor Island more accessible to visitors..." Expanding hunting opportunities will help make the refuge more accessible to visitors. A hunting program promotes appreciation and support for the refuge system mission.

AVAILABILITY OF RESOURCES

The hunting program is designed to be administered with minimal refuge resources. The costs of administering and enforcing the refuge hunting program comes out of the complex's annual budget. The refuge is part of the Seney National Wildlife Refuge Complex which includes Harbor Island, Huron and part of Michigan Islands National Wildlife Refuges. The annual cost of the hunt and fish program is

expected to be less than \$1,000. The hunt would be managed passively and require the following updates annually:

- Check and update the website.
- Ensure the refuge's boundaries are marked.
- Refuge entrance sign and regulation signs maintained in good condition.

The refuge continues to add to its land base. Any additional islands purchased will need to place boundary, entrance and regulation signs. An updated hunt plan or categorical exclusion would be needed to open new lands to hunting and fishing. An increase in law enforcement patrols over time might also be necessary. We estimate law enforcement officers may spend between one and four days patrolling the islands spending less than \$1,000 in lodging and per diem annually. Refuge officers cooperate with, and are assisted by, state and county officers as well as state conservation officers. Ongoing coordination and communication between refuge staff and law enforcement officers is conducted throughout the year. In summary, resources needed to manage this use include:

- Special equipment, facilities or improvements necessary to support the use: funded through regular management activities, no additional funding is needed.
- Maintenance costs: funded through regular management activities, no additional funding is needed.
- Monitoring costs: funded through annual biological monitoring, no additional funding is needed.
- Offsetting revenues: none

ANTICIPATED IMPACTS OF THE USE

To see a full analysis of effects of hunting on the human environment, reference the Environmental Assessment that has been completed in relation to the Hunting and Fishing Plan. Compatibility evaluates whether the use materially interferes with the refuge purpose while the Environmental Assessment evaluates if there are significant environmental effects. Some of the impacts are similar under the environmental assessment and provide more detail and is referenced for additional context. Below is an evaluation of the impacts of the hunting on the ability to meet refuge purposes.

Short and Long-term Impacts:

Previously allowed hunting did not show impacts to habitats on Harbor Island National Wildlife Refuge. It is not anticipated that level of impact will change. Refuge islands are only accessible by boat, or over ice in the winter which results in limited numbers of people using the islands. Therefore, only a small increase in the

number of hunters is likely. A slight increase in hunters may cause more trampling of vegetation or disturbance of wildlife. The refuge staff monitors changes in refuge vegetation and plant health that includes invasive species monitoring. This continued vegetation monitoring helps direct habitat management and restoration based on change identified on the landscape. The refuge will fall under the monitoring and evaluation that the state of Michigan performs in managing wildlife and habitat in Chippewa County and statewide. In addition, the station will stay apprised on the status of threatened and endangered species on the refuge through consultation and local monitoring. All conflicts between users will be dealt with on a case-by-case basis and if too many conflicts arise at any given point the refuge will reevaluate the hunting program. Although hunting causes mortality and temporary disturbance to wildlife, harvesting populations within the carrying capacity of existing habitat insures long-term health and survival of the species.

Disturbance to wildlife is limited to occasional flushing of non-target species during the open hunting season and is estimated to be a short-term disturbance. There are no foreseen long-term impacts to sensitive non-target species from disturbance by hunters. Federally threatened and endangered species may be found on the refuge, but it is expected that this use will not conflict with the recovery or protection of these species, requiring no mitigation measures to occur.

Indirect and Cumulative Impacts:

The refuge is open during the hunting season to other priority public uses such as fishing, wildlife observation, wildlife photography, environmental education and interpretation. Conditions that might precipitate discussion for the need to close the refuge during the summer season (June, July and Aug.) includes, but are not limited to, changes in game species populations or distribution, increased participation leading to safety or quality of experience concerns or public requests for additional recreational activity. Even though there will be an increase in users, refuge management activities can be accomplished without conflict with hunting activities.

PUBLIC REVIEW AND COMMENT

The draft compatibility determination and the associated draft hunting and fishing plan and environmental assessment were available for public review and comment for more than 60 days. The station put out a press release and posted the information for public comment at their office and online beginning on April 15, 2021. The Federal Register published the proposed rule on May 5, 2021 and accepted comments through the end of the “2021-2022 Station-Specific Hunting and Sport Fishing Regulations” on July 6, 2021. The draft compatibility determination was posted at the Seney National Wildlife Refuge office at 1674 Refuge Entrance Road, Seney, MI 49883 and made available online at https://www.fws.gov/refuge/harbor_island. Detailed summaries of comments received and responses to comments are included in the environmental assessment.

DETERMINATION

- ☐ Use is not compatible
- ☒ Use is compatible with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY

1. This use must be conducted in accordance with state, tribal and federal regulations and special refuge regulations published in the Refuge Hunting Regulations and Public Use Regulations brochures and in 50 CFR Part 32 Subpart A § 32.2 and Subpart B §32.41(b).
2. Hunting hours are determined by state regulations except as restricted by refuge specific regulations.
3. Hunting is permitted only in designated areas shown on the map and defined in the refuge specific approved hunt plan.
4. Utility and all-terrain vehicles are not permitted except by individuals with a disability possessing a refuge Special Use Permit. Persons with disabilities may be granted special permits for accommodated access.

JUSTIFICATION

In view of the above information and with the stipulations previously described, hunting will not materially interfere with or detract from the purposes of the refuge or the mission of the refuge system. Hunting seasons and bag limits are established by the Michigan Department of Natural Resources and are generally adopted by the refuge. These restrictions ensure the continued well-being of overall populations of game animals. Hunting does result in the taking of individuals within the overall population, but restrictions are designed to safeguard and maintain adequate breeding populations from year to year. Specific refuge regulations address equity

and quality of opportunity for hunters and help safeguard refuge habitats. Disturbance to other fish and wildlife does occur, but this disturbance is generally short-term, and adequate habitat occurs in adjacent areas. Allowing this use also furthers the mission of the National Wildlife Refuge System by providing renewable resources for the benefit of the American public while conserving fish, wildlife and plant resources on the refuge.

Hunting is one of the six priority wildlife-dependent recreational uses identified in the National Wildlife Refuge System Improvement Act of 1997. Service policy directs us to provide hunting opportunities when compatible with refuge management, and offering this use helps us meet the long-term goal of the refuge. Hunting is consistent with the refuge's larger goals to reduce deer browse and make the refuge more accessible to visitors. Additional information about these goals can be found in the Comprehensive Management Plan (2013) and Habitat Management Plan (2015).

SIGNATURE

NATHAN CARLE Digitally signed by
NATHAN CARLE
Date: 2021.08.04
15:33:44 -04'00'

Acting Refuge Manager

CONCURRENCE

SUZANNE BAIRD Digitally signed by
SUZANNE BAIRD
Date: 2021.08.06
09:32:11 -05'00'

Regional Chief, NWRS

MANDATORY 10 OR 15-YEAR RE-EVALUATION DATE
2036

FINDING OF APPROPRIATENESS OF A REFUGE USE

Use of this form is required for documenting all appropriate use findings (603 FW 1)

Refuge Name: Harbor Island National Wildlife Refuge

Use: Fishing

This is a: ☒ New Use ☐ Existing Use

A. Does this use qualify for an appropriateness review exemption?

(Please Check One)

Some refuge uses are exempted from an appropriateness review [603 FW 1.2; 603 FW 1.2(A)]. Appropriate use finding exemptions are documented through the use of this form.

☐ This use is "protected," "conditioned," or otherwise provided for under law or regulation.

Examples include the use of snow machines, airplanes, or motorboats on Alaska refuges under certain conditions per the ANILCA. Provide a written justification as to how this use qualifies for this particular exemption.

☐ The Service does not have jurisdiction over the use

This could be as a result of treaty rights, court orders, consent decrees, pre-existing rights (such as subsurface Non-Federal oil and gas or mineral rights, grandfathered easements, etc.). Provide a written justification as to how this use qualifies for this particular exemption.

☐ This is a Right-of-Way Permit request

Right-of-way requests are subject to 340 FW 3 and compatibility determinations (603 FW 2). Attach a brief explanation as to how this use qualifies for this particular exemption.



This use DOES NOT qualify for an appropriateness review exemption.

Proceed to evaluate the use under Part B.

If the use meets one of the three qualifying exemptions above, then it is exempt from an appropriate use determination. Skip Parts B, C, D and E and complete Parts F and G, sign and date, and submit a copy to the Refuge Supervisor.

B. Is the use administratively determined as appropriate in law or policy?

(Please Check One)

The following refuge uses are appropriate because they have been administratively determined as appropriate uses by statute or policy [603 FW 1.11(A)(1); 603 FW 1.6(A)(3)].



This use is a wildlife-dependent recreational use.

Hunting, Fishing, Wildlife Observation, Wildlife Photography, Environmental Education, or Interpretation.



This use involves the take of fish and wildlife under state/territorial regulations.

Including other forms of state-regulated take beyond hunting and fishing.

☐ This use HAS NOT been administratively determined as appropriate by statute or policy.

Proceed to evaluate the use under Part C.

If the use meets one of the two qualifying definitions above, then it is appropriate. Complete Parts E, F, and G, sign and date, and submit a copy to the Refuge Supervisor.

C. Is the use appropriate because it contributes to the refuge's purpose(s), goals, or objectives or Refuge System mission?

(Please check one.)

Refuge managers, in their sound professional judgement, may determine a refuge use to be appropriate if it contributes to fulfilling the refuge purpose(s), goals, or objectives described in the refuge's comprehensive conservation plan, or the Refuge System mission [603 FW 1.11 (A)(2)]. Urban wildlife refuges have the additional goal of fostering environmental awareness through outreach programs and activities that develop an informed and involved populace that supports fish and wildlife conservation [110 FW 1.5].

_____ This use contributes to the refuge purpose(s), goals, or objectives, or Refuge System mission.
Provide a written justification of how the use contributes to the qualifying purpose(s), goals, or objectives or Refuge System mission. Complete Parts E, F, and G, sign and date, and submit a copy to the Refuge Supervisor.

_____ This use DOES NOT contribute to refuge purpose(s), goals, objectives, or Refuge System mission.
Proceed to evaluate the use under Part D.

D. Is this use appropriate?

Decision Criteria:	YES	NO
(1) Does the use comply with applicable laws and regulations (Federal, State/Territorial, tribal, and local)?		
(2) Is the use consistent with applicable Executive orders and Department and Service policies?		
(3) Is the use consistent with public safety?		
(4) Is the use consistent with the goals and objectives of approved management plans or other management document?		
(5) If this is the first time the use has been proposed or if it was previously found appropriate, check Yes. If the use was previously analyzed but denied, check No.		
(6) Is the use manageable within available budget and staff?		
(7) Will the use be manageable in the future with existing resources? [603 FW 1.11 (A)(3)(h)].		
(8) Does the use contribute to the public's understanding and appreciation of the refuge's natural and cultural resources?		
(9) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality [603 FW 1.6 (D)], compatible, wildlife-dependent recreation into the future?		
(10) Is the use on an urban wildlife refuge [110 FW 1.15] and/or will it help new audiences become familiar and comfortable with fish, wildlife and their habitats?		

If the answer is "NO" to (1), (2), or (3), mark the use as "Not Appropriate" under Part G. If the answer is "NO" to any of (4) through (10), the use will generally be "Not Appropriate." Refuge managers may, however, check one or more of boxes (4) through (10) and still find the use "Appropriate" by providing a written justification of the finding and how the factor(s) are mitigated or of minimal effect.

Complete Parts E, F, and G, sign and date, and submit a copy to the Refuge Supervisor.

E. Consultation with State/Territorial Fish and Wildlife Agency

(Please check one.)

Refuge managers must consult with the applicable State/Territorial fish and wildlife agency when a request for a use could affect fish, wildlife, or other resources that are of concern to a State fish and wildlife agency [603 FW 1.7E(3) and 1.12].



Consultation WAS required.

Consultation took place on: 09/28/2020

(Month/Date/Year)

Proceed to Part F.

☐ Consultation WAS NOT required.

Proceed to Part F.

F. Is the use significantly complex or potentially controversial?

(Please check one.)

☐ Yes

If Yes, date the Regional Chief was briefed: _____

(Month/Date/Year)

Proceed to Part G.



No

Proceed to Part G.

G. Finding

Based on my review of all relevant factors, I find the refuge use identified above:

☐ Exempted

☐ Not Appropriate



Appropriate*

[* Includes findings that a use is administratively determined as appropriate (Section B and C) or is found appropriate through the use of the decision tool (Section D).]

Refuge Manager SARA SIEKIERSKI

Digitally signed by SARA SIEKIERSKI
Date: 2020.12.01 07:12:49 -05'00'

Date 12/01/2020

H. Concurrence

The Refuge Supervisor MUST concur and sign a finding of "Not Appropriate" for an EXISTING use if the designation is made OUTSIDE of the Comprehensive Conservation Plan process. The Refuge Supervisor MUST concur and sign a finding of "Appropriate" for any proposed NEW use. Signature from the Refuge Supervisor WILL NOT be necessary for a finding of "Not Appropriate" with a proposed NEW use.

Refuge Supervisor CATHERINE NIGG

Digitally signed by CATHERINE NIGG
Date: 2020.12.10 13:31:22 -06'00'

Date 12/10/2020

Any use found to be "Appropriate" will require the development of a compatibility determination before the use may be allowed on Refuge lands.

COMPATIBILITY DETERMINATION

USE

Sport Fishing (non-commercial)

REFUGE NAME

Harbor Island National Wildlife Refuge

ESTABLISHING AND ACQUISITION AUTHORITY

Harbor Island National Wildlife Refuge was purchased from The Nature Conservancy in Dec. 1983 as part of the Unique Ecosystem Program and waterfowl production area under authority of the Fish and Wildlife Act of 1956 (16 U.S.C. 742a – 742j).

REFUGE PURPOSE

"... (for the) conservation, management and restoration of the fish, wildlife and plant resources and their habitats for the benefit of present and future generations of Americans..." 16 U.S.C. n 668dd(a)(2) (National Wildlife Refuge System Administration Act)

NATIONAL WILDLIFE REFUGE SYSTEM MISSION

"The mission of the refuge system is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans." (National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57)

DESCRIPTION OF USE

What is the Use?

Fishing is an existing public use activity under the authority of the National Wildlife Refuge System Improvement Act of 1997 and is considered a priority public use. Fishing species, season dates, bag limits and harvest methods will be consistent with Michigan state fishing seasons and regulations on all game species, unless more restrictive refuge regulations apply. Species not included in this compatibility determination are mussels (clams), crayfish, leech, frog, toad, salamander, snake, lizard, turtle and other non-fish species covered in the Michigan Fishing Guide.

This is a new use on the refuge and has been found appropriate. The Comprehensive Conservation Plan Appendix B specifically states, "Uses that have been administratively determined to be appropriate are the take of fish and wildlife

under state regulations. States have regulations concerning take of wildlife that includes hunting, fishing and trapping. We consider take of wildlife under such regulations appropriate. However, the refuge manager must determine if the activity is compatible before allowing it on a refuge. " Thus, expanding hunting to include additional species is in the spirit of the Comprehensive Conservation Plan. Anglers have been able to fish Lake Huron around the refuge since its inception; however this use is evaluating fishing from the shore of Harbor Island National Wildlife Refuge.

Where is the use conducted?

Fishing will occur on refuge lands identified within the congressionally approved boundary as outlined in the 2021-2022 Hunting and Fishing Plan. The refuge has no inland water bodies, this determination covers fishing from shore into Lake Huron. A map of the refuge can be found in the Hunt and Sport Fish Plan. Adding new lands or species requires submission of an opening package, which includes an announcement in the Federal Register; this is done on an annual basis.

When is the use conducted?

All fishing activities are conducted in accordance with the state of Michigan Department of Natural Resources fishing seasons which are updated annually. Fishing can occur year-round during daylight hours. Nighttime fishing is prohibited.

How is the use conducted?

To ensure a quality fishing experience, all fishing activities are in accordance with federal and state regulations, subject to refuge-specific regulations. State regulations incorporated into the refuge fishing program include all methods of take legal in Michigan unless otherwise restricted by refuge-specific regulation. State regulations, such as seasons, bag limits and general methods of take, are published annually in the Michigan Fishing Guide. Fishing would occur with hook and line from shore, floating fishing platform, by watercraft or through the ice on Lake Huron; the refuge has no inland waters. Like the state of Michigan, we encourage the use of non-toxic fishing weights or lures for fishing activities.

Refuge fishing regulations are available on the refuge's website and regulation signs are posted on each of the refuge's islands to inform the public of fishing opportunities and refuge regulations. General information regarding fishing and other wildlife-dependent public uses can be obtained at Seney National Wildlife Refuge headquarters office who manages the Harbor Island National Wildlife Refuge at 1674 Refuge Entrance Road, Seney, MI 49883 or by calling (906) 586-9851.

Refuge directions and maps will be available on the station website at: https://www.fws.gov/refuge/harbor_island. Regulations pertaining to fishing on all National Wildlife Refuges are found in the Code of Federal Regulations (CFR); see 50 CFR Part 32 Subpart A § 32.5 and Subpart B §32.41(b). Copies of the CFR can be found online and in area libraries; in addition, refuge-specific regulations are available on the refuge's website.

Why is the use being proposed?

Fishing is a traditional outdoor pastime, deeply rooted in the American heritage. A high priority for the refuge is to provide compatible wildlife-dependent public uses such as fishing as identified in the National Wildlife Refuge System Improvement Act of 1997. The Comprehensive Conservation Plan (CCP) also identifies specific objectives and strategies that pertain to people and their use of the refuge. The CCP people goal and objective one: community outreach, strategy four, aims "...to make Harbor Island more accessible to visitors..." Expanding fishing opportunities will help make the refuge more accessible to visitors. A fishing program promotes appreciation of natural resources and the Agency's management of all lands and waters within the National Wildlife Refuge System.

AVAILABILITY OF RESOURCES

The fishing program is designed to be administered with minimal refuge resources. The costs of administering and enforcing the refuge fishing program comes out of the complex's annual budget. The refuge is part of the Seney National Wildlife Refuge Complex which includes Harbor Island, Huron and part of Michigan Islands National Wildlife Refuges. The annual cost of the fishing program is expected to be less than \$1,000. Fishing would be managed passively and require the following updates annually:

- Check and update the website.
- Ensure the refuge's boundaries are marked.
- Refuge entrance sign and regulation signs maintained in good condition.

The refuge continues to add to its land base. Any additional islands purchased will need to place boundary, entrance and regulation signs. An updated fishing plan or categorical exclusion would be needed to open new lands to fishing. In summary resources needed to manage this use include:

- Special equipment, facilities, or improvements necessary to support the use: funded through regular management activities, no additional funding is needed.
- Maintenance costs: funded through regular management activities, no additional funding is needed.

- Monitoring costs: funded through annual biological monitoring, no additional funding is needed.
- Offsetting revenues: none

ANTICIPATED IMPACTS OF THE USE

To see a full analysis of effects of hunting on the human environment, reference the Environmental Assessment that has been completed in relation to the Hunting and Fishing Plan. Compatibility evaluates whether the use materially interferes with the refuge purpose while the Environmental Assessment evaluates if there are significant environmental effects. Some of the impacts are similar under the environmental assessment and provide more detail and is referenced for additional context. Below is an evaluation of the impacts of the hunting on the ability to meet refuge purposes.

Short and Long-term Impacts:

Fishing has not been previously allowed on the refuge. A slight increase in anglers may cause more trampling of vegetation or disturbance of wildlife localized to the refuge shore. The refuge staff monitors changes in refuge vegetation and plant health that includes invasive species monitoring. This continued vegetation monitoring helps direct habitat management and restoration based on changes identified on the landscape. The refuge will fall under the monitoring and evaluation that the state of Michigan performs in managing wildlife and habitat in Chippewa County and statewide. In addition, the station will stay apprised on the status of threatened and endangered species on the refuge through consultation and local monitoring. All conflicts between users will be dealt with on a case-by-case basis and if too many conflicts arise at any given point the refuge will reevaluate the fishing program. Although fishing causes mortality and temporary disturbance to wildlife, harvesting populations within the carrying capacity of existing habitat insures long-term health and survival of the species.

Disturbance to wildlife is limited to occasional flushing of non-target species during the fishing season and is estimated to be a short-term disturbance. There are no foreseen long-term impacts to sensitive non-target species from disturbance by anglers. Federally threatened and endangered species may be found on the refuge, but it is expected that this use will not conflict with the recovery or protection of these species, requiring no mitigation measures to occur.

Indirect and Cumulative Impacts:

The refuge is open during the fishing season to other priority public uses such as fishing, wildlife observation, wildlife photography, environmental education and

interpretation. No conflicts between anglers and other users are expected. Refuge management activities can be accomplished without conflict with fishing activities.

PUBLIC REVIEW AND COMMENT

The draft compatibility determination and the associated draft hunting and fishing plan and environmental assessment were available for public review and comment for more than 60 days. The station put out a press release and posted the information for public comment at their office and online beginning on April 15, 2021. The Federal Register published the proposed rule on May 5, 2021 and accepted comments through the end of the “2021-2022 Station-Specific Hunting and Sport Fishing Regulations” on July 6, 2021. The draft compatibility determination was posted at the Seney National Wildlife Refuge office at 1674 Refuge Entrance Road, Seney, MI 49883 and made available online at https://www.fws.gov/refuge/harbor_island. Detailed summaries of comments received and responses to comments are included in the environmental assessment.

DETERMINATION

- ☐ Use is not compatible
- ☒ Use is compatible with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY

1. This use must be conducted in accordance with state, tribal and federal regulations, and special refuge regulations published on the refuge website http://www.fws.gov/refuge/harbor_island and in 50 CFR Part 32 Subpart A § 32.2 and Subpart B §32.41(b).
2. Dispose of fishing line properly. Line left lying on the ground or in the water may entangle wildlife causing serious injury or death.
3. We prohibit the taking of any mussels (clams), crayfish, leech, frog, toad, salamander, snake, lizard, turtle and other non-fish species by any method on the refuge.

JUSTIFICATION

In view of the above information and with the stipulations previously described, fishing will not materially interfere with or detract from the purposes of the refuge or the mission of the refuge system. Fishing seasons and bag limits are established by the Michigan Department of Natural Resources and are generally adopted by the refuge. These restrictions ensure the continued well-being of overall populations of game animals. Fishing does result in the taking of individuals within the overall population, but restrictions are designed to safeguard and maintain adequate

breeding populations from year to year. Specific refuge regulations address equity and quality of opportunity for anglers and help safeguard refuge habitats.

Disturbance to other fish and wildlife does occur, but this disturbance is generally short-term, and adequate habitat occurs in adjacent areas. Allowing this use also furthers the mission of the National Wildlife Refuge System by providing renewable resources for the benefit of the American public while conserving fish, wildlife and plant resources on the refuge.

Fishing is one of the six priority wildlife-dependent recreational uses identified in the National Wildlife Refuge System Improvement Act of 1997. Service policy directs us to provide fishing opportunities when compatible with refuge management, and offering this use helps us meet the long-term goal of the refuge. Fishing is consistent with the refuge's larger goals to make the refuge more accessible to visitors. Additional information about these goals can be found in the Comprehensive Management Plan (2013) and Habitat Management Plan (2015).

SIGNATURE

NATHAN CARLE Digitally signed by
NATHAN CARLE
Date: 2021.08.04
15:38:34 -04'00'

Acting Refuge Manager

CONCURRENCE

SUZANNE BAIRD Digitally signed by
SUZANNE BAIRD
Date: 2021.08.06
09:32:32 -05'00'

Regional Chief, NWRS

MANDATORY 10 OR 15-YEAR RE-EVALUATION DATE
2036

Intra-Service Section 7 Biological Evaluation Form

Originating Person: Sara Siekierski

Telephone Number: 906-630-2015

Date Submitted: 08/04/2021

For assistance with Section 7 reviews, go to Region 3's Section 7 Technical Assistance website:

<http://www.fws.gov/midwest/endangered/section7/s7process/>

I. Region: Midwest Region 3

II. Service Activity (Program) and Geographic Area or Station Name:

Harbor Island National Wildlife Refuge - Hunting and Fishing Opening Package

III. List Species (including proposed and candidate Species) or critical habitat (including proposed) found within action area. Use IPaC to identify your project location and receive an official species list (pursuant to 50 CFR 402.12) of T&E species that should be considered when evaluating the potential impacts of a project.

Harbor Island National Wildlife Refuge uses IPaC to identify threatened and endangered species, including for purposes of this Biological Evaluation. This is done because the IPaC database is the better of the Service's databases for refuge and may contain the best available information on species presence. Nevertheless, in order to ensure a thorough review, this Biological Evaluation considers all threatened and endangered species identified by both the IPaC and ECOS databases. Note, however, that these databases are updated regularly, approximately every 90 days, and, thus, it is possible that the specific threatened and endangered species identified as present on or near the refuge may change between the finalization of this Biological Evaluation and its publication and/or between finalization and your reading this document. The refuge also includes listed T&E species that are known to occur, or we have had incidental observations of on the refuge. Federally listed Threatened and Endangered Species that occur within the acquisition boundary of the refuge include Canada Lynx, *Lynx canadensis*- Threatened; Northern Long-eared Bat, *Myotis septentrionalis* - Threatened; Piping Plover, *Charadrius melodus* - Endangered; Red Knot, *Calidris canutus rufa* - Threatened; Dwarf Lake Iris, *Iris lacustris* - Threatened; Houghton's Goldenrod, *Solidago houghtonii*- Threatened; Pitcher's Thistle, *Cirsium pitcheri* - Threatened; American Hart's-tongue Fern, *Asplenium scolopendrium* var. *americanum* - Threatened; Monarch Butterfly, *Danaus plexippus*- Candidate. Kirtland's warbler and gray wolf are delisted species and as such are not further evaluated under this biological opinion.

IV. Describe Location including County, State and Township, Section & Range or other specific location information (**attach map):

Standerson Island and Harbor Island, Chippewa County, Michigan. Drummond Township. Township 42 North, Range 5 East, Section 2.

Standerson Island and Harbor Island is located approximately 1/2 mile northeast of Harbor Island NWR in the Potagannissing Bay of Lake Huron.

V. Description of proposed action (*attach additional pages as needed*):

The refuge is proposing to expand hunting and fishing opportunities as described in the draft hunt and fish plan for Harbor Island NWR (695 acres) and the Standerson Unit (24 acres). Under the draft plan, the “Preferred Action Alternative” is to provide new hunting opportunities for migratory bird hunting (crows, ducks, coots, geese, snipe, Virginia and sora rails, moorhens and woodcock), upland game (rabbit and hare, coyote, ruffed grouse, fox and gray squirrels, red squirrels, opossums, porcupines, weasels, house sparrows, skunks, ground squirrels, woodchucks, feral pigeons, starlings, turkeys, bobcats, gray and red foxes and raccoons) and big game (Russian boar). White-tailed deer and black bear hunting opportunities would be expanded to new refuge land acquisitions. All refuge lands would be opened to sport fishing so that anglers can stand on the shoreline and fish into Lake Huron.

Not all species we plan to open to hunting and fishing may occur on the refuge, however all species listed in this plan are currently huntable/fishable in the state of Michigan. Hunting/fishing seasons would reflect the state of Michigan seasons. Hunters and anglers will need to follow all applicable federal, state and refuge regulations.

Expanding hunting on Harbor Island National Wildlife Refuge is likely to increase hunter presence from approximately 27 hunt visits to up to 127 hunt visits. The majority of these hunting visits would be duck and goose hunters (90 visits), followed by an increase of 3 deer hunting days with the remaining hunt visits being hare, ruffed grouse, red squirrel and woodcock. Current visitation on the islands is estimated to be about 600 people, this is likely the low end of visitation.

Expanding hunt and fishing will only occur after determining through the 2021/22 hunt and fish rule making process that:

- 1) The unit is large enough to support the anticipated quantity, frequency, and duration of hunter/fishermen use without adversely affecting game populations or habitat conditions within the area;
- 2) Public access to the unit does not require travel across private lands or closed government lands;
- 3) Sites are available for hunters/fishermen to park their vehicles legally and in a manner that will not adversely affect the habitat in the unit or existing public travel routes;
- 4) Public hunting/fishing will not have adverse effects on any federally listed or proposed species of concern; and
- 5) Hunting/fishing can be conducted without jeopardizing public safety.

- VI. Description of effects (*attach additional pages as needed*):
Explain the anticipated effects of the action on species and critical habitats listed in item III. Beneficial and adverse effects, as well as actions to avoid or minimize adverse effects, should be identified.

Staff present on the refuge and conducting this evaluation may have the best available information about the presence of fish and wildlife species. Thus, where species are identified by either database, but the refuge has information that the species is not actually present within the “action area,” we have explained that as the basis for our determination that any hunting and fishing activities will have no effect on the species. The threatened dwarf lake iris is a shoreline species found in the region nearby but has never been documented and is not known to occur on any refuge lands. The pitcher’s thistle is a threatened plant that grows on open sandy dunes and low open beach ridges near the Great Lakes shoreline from Canada to Illinois. Based on observations, it is unlikely the project area provides the type of conditions suitable for this species. No pitcher’s thistles have been documented and it is not known to occur on any refuge lands. The threatened American Hart’s-tongue fern is believed to occur in Michigan. At all known locations (only 2 counties in Michigan), American hart’s-tongue appears to require high humidity, shaded conditions, a moist substrate, and the presence of dolomitic limestone. It is unlikely the project area provides the type of conditions suitable for this species and it has not been known to occur on any refuge lands.

Canada lynx (threatened) have a home range of 12 to 83 square miles of predominantly boreal forest or conifer trees with high hare density. The entire island refuge currently consists of two islands totaling 720-acres which is just over one square mile. In 1975 a lynx was observed on Bald Island, adjacent to Harbor. However, the islands would be unable to support the needs of a single animal. The project area is a relatively small component of a necessary larger home range and the disturbance and harvest from hunters or anglers is not likely to impact this species. Furthermore, there have been no further sightings and lynx are not known to occur in the project area. Therefore, there would be no effect to this species.

Monarch butterflies have been documented to occur throughout the Upper Peninsula of Michigan and can be assumed to use Harbor Island National Wildlife Refuge. Michigan is on the northern end of the spring migration and monarchs are typically found in the upper peninsula from late May/early June through late August/early September. The action area are islands in the lake Huron and monarch use is likely very limited given there is little habitat to support the monarch and their location from other suitable monarch habitat. Monarchs are being evaluated in the off chance they are on the island when hunters are present. Little to no hunting occurs from May through August when monarchs could be reproducing in the area, given limited interest in opportunities to harvest species open year-round. Monarch butterfly could use the islands in September, predominately by adults butterflies seeking nectar sources for the migration south, when hunters would be present in significant numbers. Hunting activity that starts in September could result in trampling of nectar sources available for monarchs; however, it will be concentrated and leave plenty of available nectar sources on other areas of the refuge. There may be some milkweed present on the refuge, however the islands do not provide a ton of monarch breeding habitat. If larvae stages are present on the refuge when hunters use the refuge they could be trampled by hunters walking but this is unlikely as foot travel is expected to be light from small number of hunters. As the islands are only accessible by boat it is unlikely there would be strikes to butterflies by boats. Noise disturbance from gun use and walking is not a concern at any time of year due to its temporary nature and ability for the insects to move away from hunters using the refuge. Hunting does not result in the removal of vegetation as this is a prohibited activity. The diet of adult monarch butterflies consists of nectar sources, the pollen of which carries fewer lead contaminants than any other part of the plant. Larvae consume the leaves and stem of milkweeds where higher concentrations of lead could be present if the plant uptakes lead from the soil. Plants do not take heavy metals up until they have reached critical thresholds in the soil (Sharma and Dubey 2005). Bioaccumulation through the plant to the monarch butterfly or larvae could occur, however concentrations of lead from hunting activities is likely low. Effects of hunting are not likely to jeopardize the monarch butterfly candidate species.

The threatened Houghton’s goldenrod may be found on Lakes Huron and Michigan shorelines in the northern Lower Peninsula and the Upper Peninsula of Michigan including Chippewa county where the refuge is located. Houghton’s goldenrod has never been documented and is not known to occur on any refuge lands, however small populations could occur on the refuge. Houghton’s goldenrod typically grows on moist sandy beaches and shallow depressions between low sand ridges along the shoreline. This habitat is called interdunal wetland. These habitats exist on the refuge and thus Houghton’s goldenrod could occur on the refuge even though it has not be documented. Vegetation removal is prohibited on the refuge and as such impacts to this plant, if present, are limited to potential trampling from people coming to shore to hunt or fish. These areas would not support bank fishing and likely will not be hunted except potentially by waterfowl hunters so walking by these users is limited to access and limited waterfowl hunting usage. Waterfowl hunting requires use of lead free ammunition and as fishing will likely not occur in the areas where this habitat occurs, there are no impacts to these plants from lead entering the environment from these activities. Houghton’s goldenrod cannot consume lead directly because it is a plant. As there is no lead expected to enter the environment in the areas where the plant could be present there is expected to be no impact to lead entering the plant

through uptake in soils. Expanding hunting opportunities would not change the current habitat conditions of the project area from what they currently are based on temporary use for access. Existing conditions would continue to persist and therefore there is no effect for these species.

Northern long-eared bats, threatened, may use the refuge during the summer months, April through September. The bats roost underneath bark or in cavities in living and dead trees. During the winter they hibernate in caves or mines. No caves or mines are present on the refuge. Therefore, it is possible that northern long-eared bats use the refuge during the summer months for foraging and roosting in trees, but would not likely be present during the fall or winter when hunters could put up portable tree stands or would use the refuge. Even though hunting is open year-round for some species, hunting is only expected to occur in the fall. We do not expect summer hunting to occur because there are limited opportunities to harvest desirable species, the islands are used predominantly by non-consumptive users during this time, and hunting is not a popular summer activity. If hunting were to occur the impacts to bats would be limited to temporary disturbance from walking and potential gun discharge. This could result in bats leaving roosting trees but will not result in mortality of bats. It is possible that hunters may place tree stands on potential NLEB roost trees, but with hunting taking place during daylight hours when NLEBs are not active this activity should not disturb the species. With tree stand use, there is potential for flushing roost trees from climbing or placing stands; however, it is unlikely and would not cause mortality. In addition, the proposed refuge regulations would require all stands be removed at the end of the hunting season. Deer season is when tree stands are used most by hunters. Deer season does not overlap with bat presence on the refuge. Noise pollution as a result of discharging of firearms could result in bats flushing from trees but it is unlikely as they would probably continue to seek shelter when encountered with a sudden noise. Air pollution levels from discharging of firearms are negligible to the point of causing no harm to wildlife or the environment. Lead ammunition and tackle can be used during the white-tailed deer and small game hunting seasons and fishing seasons. The amount of lead introduced to the environment as a result of this activity, however, is negligible. The bio-accumulation of lead is a potential concern, but lead added to the environment from this activity is in such small quantity that there is a low probability of accumulation of lead from food sources of all species and there would be no direct consumption of lead by these species because of their foraging habits and size. Lead bullets typically retain 70 - 90% of their weight after being shot from a weapon (Stokke, et al 2017). Lead bullets and fragments do not always completely leave the harvested animal and a small portion of the lead enters the environment, on average 2.6 or 3 grams of metal lost from ammunition (Stokke, et al 2017). Lead bullet fragments would have to break down in the soil in order to be taken up by plants near the area in which the fragments fall on or penetrate the soil surface. Lead is taken up by plants mainly through the root system and partly, in minor amounts through the leaves. Inside the plants lead accumulates primarily in the root but a part of it is translocated to the aerial portions. Larvae of certain herbivorous insect species could ingest some of the lead when they eat the exposed plants. Typically, however, plants do not take heavy metals up until they have reached critical thresholds in the soil (Sharma and Dubey 2005) and hunting and sport fishing activities are unlikely to introduce such high levels of lead. Some of the insects that consume plants that could be affected by lead could then be consumed by bats. Northern long-eared bats' diets consist of insects such as moths, flies, leafhoppers, caddisflies and beetles, only some of which are herbivorous. In addition, bats are transitory in nature and will not consume their entire diets on the refuge acres. In light of the chain of events that are necessary for exposure and the small amount of lead that would contribute to lead concentrations in refuge soils, it seems unlikely that any bats will consume enough lead derived from ammunition fired by hunters on the refuge to be affected and likely that many bats will not consume any such lead. As the bats and hunters will not use the refuge during the same time period (seasonally or time of day), and considering impacts of lead, there would be no effect to this species.

The range for endangered Great Lakes piping plover covers the Great Lakes coast lines along Lake Superior, Lake Michigan and Lake Huron. Although Harbor and Standerson Islands fall within the range of the bird, they are not considered critical habitat. Piping plovers prefer open sandy beaches, sparsely vegetated sand beaches, or sparsely vegetated gravel beaches with a higher sand content. The project area contains narrow beaches composed of vegetation, cobble, rock and sand. The project area may provide a small amount of suitable stopover or foraging habitat for plovers when lake levels are low, however it is not likely to provide suitable nesting habitat. The range of the threatened red knot includes coastlines throughout the Great Lakes region.

Red knots are migrants and may use the area during their migration from Central and South America to the tundra to breed. From May 1 to September 30 this species could be encountered along the shoreline during migration. There are no known records of piping plovers or red knots using the island. However, migrating or foraging birds could occur. Foraging birds are mobile and would move if approached by a human but would only temporarily be disturbed and likely return to the area they were foraging prior to human disturbance. If hunting were to occur when these species were potentially present on the refuge there could be temporary disturbance from gun discharge noise. Red knots and piping plovers eat invertebrates along beaches where hunting that allows the use of lead ammunition will not occur. Derelict fishing tackle could be left along shorelines where red knots or piping plover could come in contact with it while foraging for worms, mullusks, or crustaceans. Lead that enters the environment from derelict fishing tackle is a low quantity and food sources for these birds are likely not impacted by bioaccumulation from lead specific to this activity. It is possible that sediments and water flow could erode lead tackle left in the environment and release particles of lead compounds into Lake Huron and ultimately end up in food sources for these birds. However, there is not likely enough lead derived from derelict fishing tackle left by anglers and the birds will likely not consume any lead tackle directly left in the environment as it is either too large in size for consumption or is in such small quantities that they will not likely have the opportunity to consume small lead sinkers that could be left in the environment. Furthermore, most fishing is expected to continue to occur from boats instead of from shore, limiting derelict fishing tackle. We also encourage the use of non-lead ammunition and fishing tackle and educate hunters about impacts of lead. As a result, there are no anticipated adverse impacts from hunting and fishing activity to the red knots and piping plovers that could be present on the refuge.

Literature cited

Sharma, P. and Dubey R.S. March 2005. Lead toxicity in plants. *Brazilian Journal of Plant Physiology* 17 (1). Available from: <https://doi.org/10.1590/S1677-04202005000100004>

Stokke, S., Brainerd, S., and Arnemo, J. M. February 2017. Metal deposition of copper and lead bullets in moose harvested in Fennoscandia. *Wildlife Society Bulletin*. Available from: <https://doi.org/10.1002/wsb.731>

B. Determination *(Select one and corresponding response if applicable)*

Determination	Response request from Ecological Services
<input checked="" type="checkbox"/> No Effect on species/critical habitat list species/critical habitat: Canada Lynx, Lynx canadensis- Threatened Northern Long-eared Bat, Myotis septentrionalis - Threatened Dwarf Lake Iris, Iris lacustris - Threatened Houghton's Goldenrod, Solidago houghtonii- Threatened Pitcher's Thistle, Cirsium pitcheri - Threatened American Hart's-tongue Fern, Asplenium scolopendrium var. americanum - Threatened	<input type="checkbox"/> Concurrence <i>(optional)</i>
<input checked="" type="checkbox"/> Not Likely to Adversely Affect species/critical habitat list species/critical habitat: Piping Plover, Charadrius melodus - Endangered Red Knot, Calidris canutus rufa - Threatened	<input checked="" type="checkbox"/> Concurrence
<input type="checkbox"/> Likely to Adversely Affect species/critical habitat list species/critical habitat:	<input type="checkbox"/> Formal Consultation
<input type="checkbox"/> Likely to Jeopardize candidate or proposed species/critical habitat list species/critical habitat:	<input type="checkbox"/> Formal Conference
<input checked="" type="checkbox"/> Not Likely to Jeopardize candidate or proposed species/critical habitat list species/critical habitat: Monarch butterfly (candidate)	<input type="checkbox"/> Concurrence <i>(optional)</i>

NATHAN CARLE

Digitally signed by NATHAN
CARLE
Date: 2021.08.04 12:10:17 -04'00'

08/04/2021

Signature

Date

[Supervisor at originating station]

Reviewing Ecological Services Office Evaluation (*check all that apply*):

A. ☒ **Concurrence**

☐ **Nonconcurrence**

Explanation for nonconcurrence below:

B. ☐ **Formal Consultation Required**

List species or critical habitat unit below:

C. ☐ **Conference Required**

List species or critical habitat unit below:

Name of Reviewing ES Office: _____

Signature: **SCOTT HICKS** Digitally signed by SCOTT HICKS
Date: 2021.08.04 13:03:35 -04'00' Date: _____



IN REPLY REFER TO

FWS/NWRS

United States Department of the Interior

FISH AND WILDLIFE SERVICE

5600 American Boulevard West, Suite 990
Bloomington, Minnesota 55437-1458



September 23, 2020

Michigan Department of Natural Resources
Executive Division
P.O. Box 30028
Lansing, MI 48909

Dear Mr. Eichinger,

The U.S. Fish and Wildlife Service is proposing changes to the Harbor Island National Wildlife Refuge hunting and fishing program for the 2021-2022 season. Harbor Island National Wildlife Refuge consists of two islands, Harbor Island and Standerson Island. We are evaluating alternatives through an Environmental Assessment.

The Service's preferred alternative would:

- Expand hunting opportunities on Harbor and Standerson Islands to include all state hunting seasons.
- Open both islands to fishing so that anglers can stand on the shoreline and fish into Lake Huron.

As a close partner and stakeholder in this process, we would appreciate the DNR's feedback to our proposed changes. Please provide your feedback by November 13, 2020. You can send your feedback by mail to Brandon Jones, Great Lakes Regional Hunting and Fishing Chief (Acting), 470 Cliffhaven Rd. Prairie Du Chien, WI 53821 or email to brandon_jones@fws.gov. The Draft Environmental Assessment and Draft Hunt Plan (based on the Preferred Alternative) will be available for public comment through our rulemaking process in Spring/Summer 2021. We will notify the DNR when these documents become available. Thank you for your ongoing support of this national wildlife refuge.

Sincerely,

Suzanne Baird
Great Lakes Regional Chief, NWRS



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
LANSING



DANIEL EICHINGER
DIRECTOR

October 20, 2020

Mr. Brandon Jones
Great Lakes Regional
Hunting and Fishing Chief (Acting)
US Fish and Wildlife Service
470 Cliffhaven Road
Prairie Du Chien, Wisconsin 53821

Dear Mr. Jones:

Thank you for the opportunity to provide feedback on the proposed changes to hunting and fishing regulations for Harbor Island National Wildlife Refuge within Potagannissing Bay of the St. Marys River in eastern Chippewa County. The Michigan Department of Natural Resources (MDNR) supports expanding hunting opportunities on Harbor and Standerson Islands to include all state hunting seasons and opening both islands to fishing so that anglers can stand on the shoreline and fish into the St. Marys River/Lake Huron.

While the proposal is a change, some hunting opportunities already exist. On Harbor Island, refuge rules and regulations indicate that the hunting of white-tailed deer and black bear are currently permitted according to state and federal regulations. Federal regulations prohibit the use of bait to hunt on refuge lands, and refuge specific regulations prohibit the use of dogs to hunt black bear. We understand these federal regulations would remain in place for Harbor Island and be extended to Standerson Island (recently included in the refuge). While it does not appear that waterfowl hunting is currently permitted on the islands, waterfowl hunting from the public waters surrounding the islands is legal. Expanding hunting opportunities to include all hunting seasons will increase recreational opportunities and simplify regulations for hunters.

The preferred alternative identified by the U.S. Fish and Wildlife Service also opens both islands to shoreline fishing. The MDNR is supportive of the preferred alternative to increase potential fishing opportunities on the islands.

Thank you for the opportunity to comment on the proposal at this stage. We look forward to seeing the Draft Environmental Assessment and Draft Hunt Plan when it is available during the public comment period in 2021, and to the expansion of hunting and fishing opportunities in the National Wildlife Refuge.

Sincerely,

Daniel Eichinger
Director
517-284-6367

cc: Ms. Shannon Lott, Natural Resources Deputy
Mr. Jim Dexter, DNR
Mr. Dan Kennedy, DNR



IN REPLY REFER TO

FWS/NWRS

United States Department of the Interior

FISH AND WILDLIFE SERVICE

5600 American Boulevard West, Suite 990
Bloomington, Minnesota 55437-1458



September 23, 2020

Dear tribal partner,

The U.S. Fish and Wildlife Service is proposing changes to the hunting and fishing programs for the 2021-2022 season at Harbor Island, Loess Bluffs, Necedah, Sherburne and Rice Lake National Wildlife Refuges. We are evaluating alternatives through an Environmental Assessment for each refuge, except Rice Lake NWR. The Service's preferred alternatives would:

- Harbor Island NWR is proposing to expand hunting opportunities on Harbor and Standerson Islands to include all state hunting seasons and open both islands to fishing so that anglers can stand on the shoreline and fish into Lake Huron.
- Loess Bluffs NWR is proposing to open approximately 2,074 acres to the hunting of 18 new species including coots, crows, dark geese, dove, ducks, groundhogs/woodchucks, light geese, opossums, pheasants, quail, rabbits & hares, rails, skunks, snipes, tree squirrels, white-tailed deer (archery), and merganser.
- Necedah NWR is proposing to prohibit the use of lead tackle for fishing and to expand hunting for white-tail deer, ducks, geese, coot, dove, moorhen, rail, snipe, woodcock, wild turkey, gray squirrel, fox squirrel, cottontail rabbit, snowshoe hare and raccoon on approximately 3,780 acres. All species will follow state seasons with small game ending February 28 or in accordance with state season, whichever comes first.
- Rice Lake NWR is proposing to add a muzzleloader hunting season for white-tailed deer that would coincide with the Minnesota State season.
- Sherburne NWR is proposing to open gallinule, moorhen, mourning dove and crow for the first time in alignment with state of Minnesota regulations with the exception of crow, which would have a limited season due to the refuges sanctuary period.

As a close partner and stakeholder in this process, we would appreciate your feedback to our proposed changes. Please provide your feedback by October 30, 2020. You can send your feedback by mail to Brandon Jones Great Lakes Regional Hunting and Fishing Chief (Acting), 470 Cliffhaven Rd. Prairie Du Chien, WI 53821 or email to brandon_jones@fws.gov. The draft compliance documents will be available for public comment through our rulemaking process in Spring/Summer 2021. We will notify you when these documents become available. Thank you for your ongoing support of national wildlife refuges.

Sincerely,

Suzanne Baird
Great Lakes Regional Chief, NWRS