

**Appendix A**  
**Environmental Assessment**



# Finding of No Significant Impact

## Environmental Assessment and Comprehensive Conservation Plan for the Ottawa National Wildlife Refuge Complex, Ohio

An Environmental Assessment (EA) has been prepared to identify management strategies to meet the conservation goals of the Ottawa National Wildlife Refuge (Ottawa Refuge Complex). The EA examined the environmental consequences each management alternative could have on the quality of the physical, biological, and human environment, as required by the National Environmental Policy Act of 1969 (NEPA). The EA presented and evaluated four alternatives for managing fish, wildlife and plant habitats, as well as visitor services, on the Ottawa Refuge Complex over the course of the next 10-15 years:

**Alternative A.** No Action (Current Management). The No Action alternative encouraged existing, or status quo, refuge management practices. Woodland, shrubland and managed marsh acres, as well as cooperatively-farmed croplands, would remain at current levels. Visitor services would be maintained primarily at or near the refuge headquarters.

**Alternative B.** Decreased Diversity of Habitats and Services. This alternative favored a “hands-off” approach to refuge management. The primary strategy would be to allow Lake Erie water levels and rainfall to regulate the extent of wetland areas. Minimal maintenance of facilities would impact visitor services and on-site environmental programs.

**Alternative C.** Increased Diversity of Habitats and Services. Improving the quality of services to refuge visitors and shifting habitat emphasis to include more wooded wetlands, natural marsh and scrub/shrub lands were the focus of this alternative.

**Alternative D.** Equalized Habitats and Services. Alternative D emphasized an equal amount of woodlands, wetlands, croplands, grasslands, scrub/shrub and managed water impoundments. Some of these habitat types, including grasslands and croplands, were not components of the original Lake Erie marsh ecosystem. On-site visitor services would be expanded into new areas of the refuge.

The alternative selected for implementation is Alternative C. The strategies presented in the Comprehensive Conservation Plan (CCP) were developed as a direct result of the selection of this alternative. New woodland and scrub/shrub habitats, as well as carefully timed water level adjustments in the impoundments, would benefit a variety of fish, wildlife and plant species identified as Resource Conservation Priority species by the Service. New habitats would be created for migrating songbirds, waterfowl and shorebirds. Visitors to the refuge will also benefit as new trail segments, observation platforms and a Visitor Education Center are all proposed within the CCP. Visitors will also experience an increase in compatible, wildlife-dependent recreational opportunities and on-site environmental education programs.

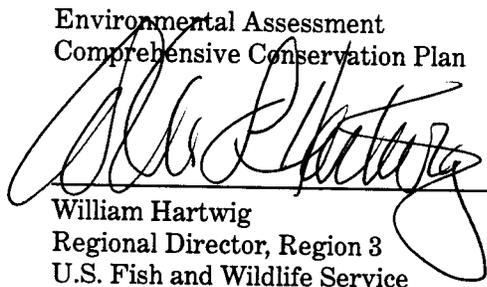
For reasons presented above and below, and based on an evaluation of the information contained in the Environmental Assessment, we have determined that the action of adopting Alternative C as the management alternative for the Ottawa Refuge Complex CCP is not a major federal action which would significantly affect the quality of the human environment, within the meaning of Section 102 (2)(c) of the National Environmental Policy Act of 1969.

Additional Reasons:

1. Future management actions will have a neutral or positive impact on the local economy.
2. A cultural resource inventory completed prior to this CCP included recommendations for the protection of cultural, archaeological and historical resources.
3. This action will not have an adverse impact on threatened or endangered species.

Supporting References:

Environmental Assessment  
Comprehensive Conservation Plan

  
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# Appendix A

## Ottawa National Wildlife Refuge Complex Environmental Assessment

### I. Purpose and Need for Action

The purpose of the proposed action is to determine a management direction for the Ottawa, Cedar Point and West Sister Island National Wildlife Refuges through preparing and implementing a Comprehensive Conservation Plan. The three refuges are administered as the Ottawa National Wildlife Refuge Complex. This plan will identify a set of goals, objectives and strategies for Refuge management for the next 10-15 years.



Photo by Sharon Cummings

This Environmental Assessment (EA) was prepared using guidelines of the National Environmental Policy Act of 1969. The Act requires federal agencies to examine the effects of proposed management actions on the natural and human environment. The EA will present four alternatives for future Refuge management and will identify the preferred course of action. Each alternative was designed to contain a reasonable mix of fish and wildlife habitat prescriptions and wildlife-dependent recreational opportunities. The environmental consequences of each alternative are described below and formed the basis for selection of the preferred alternative. This Environmental Assessment was designed to cover the environmental consequences for most

future management actions and minor facilities on the Ottawa Refuge Complex. However, some future actions such as the construction of major facilities (i.e. a visitor education center) will require further environmental documentation.

### II. Alternatives

#### Description of the Alternatives

During the planning process, the Service planning team identified Alternative C: Increased Diversity of Habitats and Services, as the preferred alternative. Alternative C was selected and developed

based on public input and the best judgement of the planning team. At first glance, Alternatives C and D appear to be very similar in scope and recommended management strategies. However, there are significant differences between the two, especially in the approach toward habitat management. Alternative C calls for a greater diversity of natural habitat types with an emphasis on providing more woodlands. Alternative D would provide an equal measure of all habitat types currently on the Refuge. Some of these types, primarily croplands and grasslands, were not a part of the pre-settlement landscape. Alternative D also calls for an increased level of public use and recreation that may conflict with primary needs of wildlife.

The strategies presented in the CCP were developed as a direct result of the selection of Alternative C.

***Alternative A. No Action (Custodial Management)***

The No Action alternative would encourage existing, or status quo, Refuge management practices. Refuge staff would continue to manage existing wetland impoundments on a rotational basis. Woodland, marsh and shrubland acres would remain at current levels. The existing croplands (200 acres) would continue to be farmed on a cooperative basis. The primary emphasis for habitat management would remain on migratory waterfowl; with a few water units managed to benefit shorebirds and songbirds. Visitor services would be maintained at the Refuge headquarters. Vehicle access for Refuge visitors would continue solely during seasonal tour events.

***Alternative B. Decreased Diversity of Habitats and Services***

This alternative would encourage a “hands-off” approach to Refuge management. A reduction in active wetland and upland habitat management practices would occur over a period of years. The primary strategy would be to allow Lake Erie water levels and rainfall to regulate the extent of wetland areas. Natural successional processes would occur on the upland areas and crop fields within the Refuge boundary would lie fallow. No specific habitat emphasis for waterfowl, shorebirds or songbird habitats would be pursued by the Refuge. The seasonal auto tour would no longer be open. Trails would be closed seasonally, especially during peak waterfowl use days, and fewer interpretive talks would be conducted. Trails will still be open to the public during the rest of the year. Environmental education would be limited to teacher-lead field trips. Minimal maintenance of facilities will be provided.

***Alternative C. Increased Diversity of Habitats and Services (Preferred Alternative)***

Improving the quality of services to Refuge visitors and shifting habitat emphasis to include more wooded wetlands, natural marsh and scrub/shrub lands would be the focus of Alternative C. These new habitat types would be designed to benefit songbirds that depend on forests, shorebirds and other neo-tropical migrants. Active water management to benefit migrating waterfowl would

continue on most impoundments. Croplands would be gradually converted to woodlands or scrub/shrub habitats. Improvements for Refuge visitors would include a visitor center, limited seasonal openings of dike roads and expansion of available walking trails.

***Alternative D. Equalized Habitats and Services***

Alternative D would emphasize an equal amount of woodlands, wetlands, croplands, grasslands, scrub/shrub and managed water impoundments to benefit the highest diversity of plants, mammals and migratory birds. These lands would be intensively managed for these habitats and for visitor services. Recreational uses such as new trails, auto tour routes and other visitor facilities would receive a priority. A year-round auto tour would be provided, open seven days a week from dawn to dusk. The Refuge visitor education center would be open seven days a week. Regularly scheduled interpretive programs would be conducted. Refuge walking trails would not only travel through all habitats but also all areas of the Refuge; except during critical times around eagle nests and priority resting waterfowl areas. This would provide more opportunities for viewing of habitats for shorebirds, waterfowl, eagles, and songbirds. Environmental education on the Refuge will include both staff-lead and educator-lead field trips. Regularly scheduled interpretive programs and more teacher workshops would be conducted each year.

### **III. Affected Environment**

The Ottawa National Wildlife Refuge Complex and the surrounding area lies in the western basin of Lake Erie, stretching from about 30 miles east of Toledo, Ohio, to 75 miles west of Cleveland, Ohio, in Lucas and Ottawa counties. The area is generally flat with predominantly hydric, or wetland soils. Agriculture is the predominant feature of the surrounding landscape with small towns and cities scattered throughout. An estimated 8 million people live within a 3-hour drive of the Refuge.

The Refuge and surrounding land are part of what was traditionally known as the Great Black Swamp, which once included 300,000 acres of coastal wetlands along Lake Erie and extended inland. This vast area was also comprised of riverine marshes, wet prairies, hardwood swamps and oak savanna. Only about 10 percent of this original wetland habitat remains, and this resource supports a tremendous diversity of wildlife. The Ottawa National Wildlife Refuge makes up an important part of this remaining habitat.

See Chapter III of the CCP.

## IV. Environmental Consequences

### Effects Common to All Alternatives

The four alternatives were developed to address most of the issues, concerns and opportunities identified during the planning process. The specific environmental and social impacts of implementing each scenario are examined in five broad categories; fish and wildlife habitats, migratory birds, recreation and environmental education, land acquisition and socioeconomic environment. The alternatives share a few features in common that can be discussed as a whole:

#### Air and Water Quality:

Habitat management involving prescribed burning may occur and only under ideal conditions of weather. Smoke management practices will be implemented during all burning events. Refuge management activities and visitor use should not negatively affect water quality.

#### Cultural and Historic Resources:

The Ottawa Refuge Complex has 53 reported sites on Refuge land, and one site on Coast Guard land. Three prehistoric archeological sites are known and three more are reported to possibly be on the Refuge. The West Sister Island Lighthouse, owned by the U.S. Coast Guard, is listed on the National Register of Historic Places. The 1998 study completed by Midwest Environmental consultants, Inc. concluded that "...the refuges presented largely inhospitable prehistoric and historic occupation zones that have been subjected to large-scale disturbance." However, the report determined that sites on the refuges could include prehistoric archeological sites, historic archeological sites (Indian and Western), farmsteads, and sites associated with commercial trapping and recreational hunting. Archeological surveys have been performed on just 15 acres of the Refuge Complex. Prior to Refuge undertakings, appropriate efforts will be made to identify known and unknown cultural resources within the area of potential effects, with avoidance of cultural resources being the preferred treatment.



Photo by Sharon Cummings

#### Threatened and Endangered Species

Bald eagles, a federally-listed threatened species, are commonly seen near coastal areas during migration and five nests are located on the Ottawa Refuge Complex. Kirtland's warblers have been sighted on the Ottawa and Navarre units during migration seasons. Other federally-listed threatened and endangered species that may be found locally in suitable habitat include the Indiana bat (endangered), lakeside daisy (threatened), eastern prairie bush clover (threatened), and eastern prairie fringed orchid (threatened). None of these additional species have been documented on the Ottawa Refuge Complex.

Thirty-three of the State of Ohio's 60 terrestrial endangered or threatened wildlife species are dependent on wetlands, and some of these species nest in Lake Erie marshes. Migratory bird species on the State list include American and least bittern, king rail, northern harrier, hermit thrush, common tern and sedge wren and several others. In addition to these terrestrial species, the State-listed endangered Great Lakes muskellunge also use coastal wetlands for spawning, nursery and rearing habitat.

Partnerships and Cooperative Relationships:

The Service intends to continue to foster working relationships with local communities, state governments, individuals, conservation groups and other organizations. The recently-formed Ottawa National Wildlife Refuge Association will be a catalyst for environmental education and other programs. The Refuge staff will seek out opportunities to engage people in fulfilling the mission of the Ottawa Refuge Complex.

## **Alternative A. No Action**

Resident Fish and Wildlife:

Seventy-percent of the Ottawa Refuge Complex would remain in controlled water impoundments to primarily benefit migrating waterfowl. No loss of croplands, woodland or grassland habitats would occur on the Refuge Complex. Fish, reptile and amphibian populations would continue natural trends. Deer populations will remain stable or increase depending on the success of control measures.

Migratory Birds:

Migrating waterfowl will receive the highest benefit from the no action alternative. The number of ducks and geese using the Refuge would follow flyway population trends. Shorebird and songbird numbers will remain stable or increase slightly.

Land Acquisition:

The existing acquisition program will continue based on the strategy outlined in the 1994 Environmental Assessment. The emphasis will remain on protecting 5,000 acres of existing wetland habitats throughout the identified study area. Specific habitat prescriptions or public uses on the new lands will be reviewed on a case-by-case basis.

The 1994 Refuge expansion proposal called for the purchase of 5,000 acres of wetland or restorable wetland habitat and adjacent uplands in portions of Lucas, Ottawa, Sandusky and Erie counties. Each tract proposed for purchase will be evaluated and prioritized based on criteria set forth in a workshop conducted by the National Ecology Research Center in 1992. These evaluation criteria can be roughly categorized into species, habitat, and management concerns. They are based on objectives of the Refuge. The criteria include:

- Endangered species use
- Existence of special habitats
- Availability and quality of a water supply
- Future management flexibility
- Existing water management capability
- Estimated operation and maintenance costs
- The threat of adverse change
- Adjacent land uses and habitats
- Parcel size
- Habitat fragmentation
- Opportunities for recreation and education
- Planned beneficial uses

Recreation and Environmental Education:

No new trails or major visitor facilities would be built under this scenario. The Refuge staff will continue to improve their outreach program within current budget limitations. Refuge visitation could increase by 10 percent or less annually based on existing trends and access.

Effects on Socioeconomic Environment:

Currently, ecotourists to the area contribute \$21-\$29 per day/visit to the local economy. The economic impact on the local communities was estimated to be \$5.61 million in 1993-1994 (Kerlinger). The tourists in this study came from 17 states outside Ohio and several foreign countries. No significant change in the local economy or tourist visitation would be expected under the No Action alternative.

## **Alternative B. Decreased Diversity of Habitats and Services**

Resident Fish and Wildlife:

Lake Erie water levels and rainfall would be the driving forces behind the availability of wetland habitats on the Ottawa Refuge Complex. A higher percentage of open water habitats would result in less emergent vegetation being available for resident wildlife such as muskrats. Rough fish numbers would increase initially with easier access to Lake Erie. However, there would also be a decreased emergent vegetation food supply for these foraging fish. Croplands would gradually revert to scrub/shrub or woodland habitats and increase available habitat for small mammals and wintering deer. Fish, reptile and amphibian populations would be reduced by the loss of some shallow marsh habitats to Lake Erie. Deer populations will remain stable or increase depending on the success of control measures.

Migratory Birds:

Migrating waterfowl use of the Refuge Complex would decrease due to the loss of emergent vegetation and shallow water habitats. Shorebirds numbers should remain stable as impoundment water levels will drop seasonally with Lake Erie. An increase in scrub/shrub and woodland habitats will benefit songbirds.



Land Acquisition:

The existing land acquisition program would be discontinued under this alternative. Up to 5,000 acres of Lake Erie coastal wetlands could be lost to development or drainage for agricultural purposes.

Recreation and Environmental Education:

No new trails or major visitor facilities would be built under this scenario. Number of visitors would drop from 1998 total of 120,378, possibly as much as 40 percent. As Ohio's only National Wildlife Refuge, fewer people in the state would be exposed to the Service and Refuge System. This approach will not draw tourists to the area, and may cause more people to find alternate recreation areas, including nearby state facilities. This plan may cause a loss of support by current partners and friends of the Refuge System.

Environmental education programs on-site will decline significantly. Many teachers request the assistance of staff to demonstrate techniques and share their knowledge of the resources with the students. Many other group leaders do not have the experience or knowledge to lead groups on field trips or hikes through the Refuge and would look to other locations for the assistance if not provided at the Refuge.

Socioeconomic Environment:

Of the 455 respondents to the Kerlinger ecotourism study at Magee Marsh, 98.9 percent also visited the Ottawa NWR. A decrease in Refuge visitor services may cause a decrease in Refuge visitation, but is unlikely to significantly decrease general use of the area for ecotourism.

### **Alternative C. Increased Diversity of Habitats and Services (Preferred Alternative)**

Resident Fish and Wildlife:

New woodland and scrub/shrub habitats would benefit a variety of resident wildlife species including small mammals, such as mice, voles, rabbits, red fox and flying squirrels. Marsh habitats would remain in controlled water impoundments to primarily benefit migrating waterfowl. Muskrat and mink populations will be maintained based on natural trends and the success of the trapping program. Fish, reptile and amphibian populations would continue natural trends. Deer populations will decrease depending on the success of new control measures.

Migratory Birds:

Migrating waterfowl will receive the highest benefit from this action alternative. The number of ducks and geese using the Ottawa Refuge Complex would increase or follow flyway population trends. Shore-

bird and songbird numbers will increase slightly following the new shallow water and shrub habitats.

Land Acquisition:

The existing land acquisition program will continue primarily based on the strategy outlined in the 1994 Environmental Assessment. The emphasis will remain on protecting 5,000 acres of existing wetland habitats throughout the identified study area. However, acquiring riparian woodlands and shrub habitat would complement the new direction for the Ottawa Refuge Complex. Specific habitat restoration practices or public uses on the new lands will be reviewed on a case-by-case basis.

Recreation and Environmental Education:

New trail segments and a Visitor Education Center are proposed under this scenario. The Refuge staff will continue to improve their outreach program within budget limitations. The existing auto loop would be opened during several special events throughout the year. New comfort facilities at the existing Refuge headquarters including a restroom, outdoor tables, benches and potable water would be built. Refuge visitation could increase by 25 percent or more annually with these new facilities. The number of visitors to the Refuge may increase as much as 25 percent from the 1998 total of 120,000.

Socioeconomic Environment:

Local income from ecotourism will increase slightly and there is the potential to increase the length of stay of these visitors. Local employment and income from new construction contracts will occur (\$4 million-plus for the visitor center alone). The expanded hunting program will generate new license sales and sporting goods purchases.

## **Alternative D. Equalized Habitats and Services**

Resident Fish and Wildlife:

New upland habitats including woodland, scrub/shrub and grasslands would benefit a variety of resident wildlife species including deer mice, voles, rabbits, red fox and flying squirrels. Marsh habitats would be reduced and the controlled water impoundments more intensively managed to primarily benefit migrating waterfowl. Muskrat and mink populations would decrease based on the loss of wetland habitat. Fish, reptile and amphibian populations would decline slightly. Deer populations will decrease depending on the success of new, intense control measures.

Migratory Birds:

Migrating waterfowl numbers would decline based on the conversion to upland habitats. Forest and grassland-dependent songbird species would find new nesting habitat on the Ottawa Refuge Complex.

Land Acquisition:

The existing land acquisition program would change focus under Alternative D. Habitat diversity and accessibility for the public would be the primary consideration for selecting new lands. Habitat conversion (tree and prairie plantings, etc.) would be prescribed on newly acquired lands. Road and trail access for public recreational activities is encouraged under this alternative.

Recreation and Environmental Education:

A constructed trail system throughout the Ottawa Refuge Complex, year-round auto tour routes and a Visitor Education Center are proposed under this alternative. The Refuge staff will significantly improve their outreach program within budget limitations. The existing auto loop would be opened year-round and additional routes will be examined. New comfort facilities at the existing Refuge headquarters including a restroom, outdoor tables, benches and potable water would be built. The number of visitors to the Refuge may increase as much as 80 percent, from the 1998 total of 120,000. Increased visitation at current non-peak times of year will require more staff time and maintenance work. Increased visitation will augment awareness of the Refuge and increase support for the Refuge System. Environmental education programs will be able to expand to more schools with the increased facilities and staff.

Socioeconomic Environment:

There will be a substantial increase in spending in the local economy. Not only will visitation be increased, but this has the potential to increase the length of stay of visitors. More visitors may visit during times of year that currently see lower use. The need for increased staff to maintain and operate these new facilities will increase the employee salary base available to local vendors. Local employment and income from new construction contracts will occur (\$4 million-plus for the visitor center alone). The expanded hunting program will generate new license sales and sporting goods purchases.

## **V. Consultation and Coordination**

The Ottawa Refuge Complex Environmental Assessment and Comprehensive Conservation Plan has been written with the participation of Service staff, Refuge users and the local community. The CCP planning process began in July 1997 with informal discussions among Refuge employees, local residents and representatives of groups concerned with the future of the Ottawa Refuge Complex. Subsequently, the planning team held two focus group meetings at the Refuge and two open house events in local communities.

A wide range of issues, concerns and opportunities was expressed during the planning process. Numerous discussions among Refuge and planning staff, focus group participants and resource specialists brought to light several recurring themes. These themes included

management of water impoundments, land acquisition, migratory bird diversity, visitor services, new partnerships and cooperative relationships, among other topics.

For more detail, please see Chapter 2 of the CCP and Appendix H for a discussion of the public scoping process.

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