

## Chapter 5: Plan Implementation

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Throughout this document, five national wildlife refuges (NWRs, refuges) are discussed individually—such as the Gravel Island NWR or the Green Bay NWR. This document also discusses all five NWRs collectively as one entity and when doing so, refers to the group as the “Great Lakes islands refuges” or “Great Lakes islands NWRs.”

### New and Existing Projects

The Gravel Island, Green Bay, Harbor Island, Huron, and Michigan Islands NWRs Comprehensive Conservation Plan (CCP) outlines an ambitious course of action for the future management of the Great Lakes islands refuges. All refuges that collectively make up the Great Lakes islands refuges will continually need appropriate operational and maintenance funding to implement the objectives in this plan.

The following provides a brief description of the highest priority refuge projects, as chosen by the refuge staff and listed in the Refuge Operating Needs System.

### Great Lakes Islands Refuges Operating Needs Projects

#### Gravel Island and Green Bay NWRs

##### ***Enhance refuge management and administration via a Resource Specialist***

Provide a Resource Specialist to conduct wildlife and habitat surveys, invasive species control, habitat management and restoration projects, and other needs such as updating and writing refuge plans. The refuge islands provide important habitat for migratory and breeding birds. The shoals and shallow waters of the islands provide spawning and nursery areas for many imperiled aquatic species of the Great Lakes. The unique coastal environment contains distinctive biota and the biological diversity is of global significance.

Estimated cost: \$130,000

##### ***Develop a Visitor Services Plan for the refuge islands***

Plum Island provides the public with a unique opportunity for outreach and interpretation if suitable infrastructure can be developed and maintained. The plan is an essential tool that will guide the development of a sustainable and successful visitor service program including interpretive themes and signs. The plan will also provide an essential tool for refuge management, allow for improved stakeholder discussions, and provide for increased funding opportunities.

Estimated cost: \$20,000

### ***Establish Plum Island interpretive trail and informational kiosks***

This project will provide funding to design, construct, and maintain a self-guided interpretive trail on Plum Island. Kiosks, informational signs, and other items will be developed to provide information about Green Bay NWR, the National Wildlife Refuge System (NWRS, Refuge System), Great Lakes Basin ecology, and cultural history of Plum and Pilot Islands. There are two unmaintained trails on Plum Island that were historically used by the U.S. Coast Guard (USCG). The existing (but overgrown) perimeter trail will be cleared and developed into an interpretive trail. A section of the trail is currently home to the federally threatened dwarf lake iris. This section will need to be re-routed to assure necessary protection. The existing “cross-island” trail, which connects the lifesaving station on the north side of the island to the keeper’s quarters and rear range light on the south side of the island will need to be closed and/or re-routed to avoid disturbing an active Bald Eagle’s nest. The trails will allow for wildlife observation and environmental education opportunities on Plum Island.

Estimated cost: \$15,000

### ***Use solar and/or wind power to generate power to existing and new infrastructures on Plum Island***

New facilities for future visitor services including restroom facilities and a well for drinking water will be required. The existing Plum Island boathouse and lifesaving station could also be powered by solar/and or a residential-sized wind turbine. The island provides an ideal location for receiving and generating solar and wind power.

Estimated cost: \$300,000

### ***Continue and increase efforts concerning invasive species control***

For several years, money has been provided through the Natural Resource Damage Assessment fund for a temporary employee who has implemented invasive species control measures and habitat restoration projects. However, the funding is depleted, and new populations are detected annually. Monitoring and control efforts must continue to protect and restore important island habitat including a unique coastal wetland complex threatened by invasives. This project would purchase equipment and supplies for this long-term effort. An efficient boat, motor, and trailer will be purchased. This boat will be large enough to provide safety to staff and volunteers working in the Great Lakes environment and have the capability of hauling and unloading supplies. Control of these invasive weeds is important since they cause degradation of nesting habitat and a decrease in overall plant and animal diversity.

Estimated cost: \$200,000

### ***Implement a Visitor Service Program on Plum Island***

Hire a full-time Visitor Services Specialist with a major responsibility to cooperatively work with partners and volunteers to implement a Visitor Services Plan for Plum Island. Plum Island contains a number of historic buildings and related structures including the front and rear range

lights, the original keeper's quarters, a fog signal building, the USCG station and a substantial boathouse and dock. The rear range light, built in 1896, is still operational and listed on the National Register of Historic Places. There is also a concentration of shipwrecks, dating from the 1800s and early 1900s. A partnership between the US Fish and Wildlife Service (FWS, Service) and the Friends of Plum and Pilot Islands (FOPPI), currently helps support the preservation, restoration, and maintenance of the lighthouse and other historic structures while also protecting wildlife resources. Plum Island provides an excellent opportunity to integrate history and local community traditions and values into refuge interpretive and education programs.

The project will leverage the resources provided by this partnership to provide wildlife-dependent recreational opportunities on Plum Island. The full-time specialist would work with Friends Group to accomplish the following:

- Acquire grant money or other funding to implement the plan.
- Facilitate partnerships and increase efforts to aid in the management of cultural resources with federal and state agencies, the State Historic Preservation Office, professional archeologists, and the general public.
- Work with FOPPI to cooperatively preserve, restore, and maintain the lighthouse and other historic structures on Plum and Pilot Islands. The boathouse on Plum Island may be used as a visitor contact station and exhibit space to provide information about Green Bay NWR, the Refuge System, Great Lakes Basin ecology, and historic resources on Plum and Pilot Islands. Additionally, the USCG station may be used as a research station and bunkhouse for refuge staff, researchers, and volunteers.
- Coordinate more than 100 Friends Group members and volunteers who provide assistance to the refuge on many different projects in all program areas.
- Develop and implement quality opportunities for wildlife-dependent recreation on Plum Island to cultivate an understanding and appreciation of refuges' ecology and the human influence on the region's ecosystem
- Develop and implement interpretive programs (such as Refuge Week, International Migratory Bird Day, etc.) for area schools, local communities, and refuge visitors.

A full-time Visitor Services Specialist would allow us to better meet one of the highest priorities for the Service, which is "Connecting People with Nature: Ensuring the Future of Conservation."

Estimated cost: \$130,000

### ***Improve visitor services by providing refuge brochures***

Develop brochures for Green Bay NWR. Many people request information on specific items such as certain types of wildlife that use the refuge and the maritime history. Brochures will be needed to inform the visiting public about Plum Island. This project would provide funding to develop and print refuge brochures, bird lists, hunting brochures, maps, and maritime history for visitors and volunteers.

Estimated cost: \$7,000

### ***Increase refuge awareness***

Investigate the acquisition or lease of properties on the mainland and/or Washington Island to provide refuge informational kiosks and/or signs accessible to area visitors. Kiosks and/or signs will be located in proximity to major ferry and island-viewing tour boats and kayak access points. Door County is a major tourist destination during the summer. The majority of tourists and summer residents come from the metropolitan areas of Milwaukee, Chicago, Madison, and the Twin Cities or Minneapolis–St. Paul. Visitors come to visit the areas five state parks, explore the area lighthouses, and to recreate on Lake Michigan waters. Kiosks will provide an opportunity to better educate and inform the public about Gravel Island and Green Bay NWRs and the mission of the Refuge System and Service.

Estimated cost: \$5,000

### ***Reestablish safe access to Plum Island***

Repair and/or replace the Plum Island dock and breakwater to allow for safe access. The current stability of the structure is unknown; therefore, conducting an assessment is high priority because of the safety concern. A professional structural engineer will be hired to conduct an inspection and assessment of the Plum Island dock and breakwater and to prepare a report, which will include a summary of findings of existing conditions, options for repair/restoration, and a cost estimate for the repair options. The dock piers also support the boathouse; so, preserving the dock will also contribute to the stability and preservation of the historic boathouse. Refuge staff and volunteers use the Plum Island dock on a regular basis during the field season. Allowing the deterioration of the dock to continue will lead to increased costs for repair and eventually prevent staff, volunteers, and potential future visitors from accessing the island.

Estimated cost:\$500,000

### ***Locate wilderness area boundaries***

Investigate refuge and wilderness boundary designation to assure necessary protection of plant and wildlife communities, particularly the nesting colonies of waterbirds. The boundaries—as marked on the original Executive Order, which set aside the islands for preservation—are unclear. Fluctuating water levels complicate the issue. Restricting boating traffic during the crucial nesting period is important since disturbance can lead to unsuccessful nesting and cause colony abandonment. This project would allow for the installation of signs and/or buoys to protect nesting colonies, provide signs (regulatory and interpretive) at area public boat launching ramps, and print and distribute educational information through local marinas and other coastal businesses.

Estimated cost: \$10,000

### ***Improve habitat for native fish in coastal waters***

The shoals surrounding the refuge are historic spawning beds for lake trout, herring, and other Great Lakes species. The island reefs and shorelines provide coastal habitat required by these species to complete their lifecycles. Implementing an aquatic habitat assessment is necessary to determine if future restoration projects are needed to enhance vital spawning and nursery

habitat for native Lake Michigan fish species. These efforts will provide for the enhancement, abundance, and diversity of self-sustaining fish populations in the waters surrounding refuge lands.

Estimated cost: \$75,000

## Harbor Island NWR

### ***Explore establishing a refuge Friends Group***

The refuge has received strong interest from portions of the Drummond Island community to increase tourism in that area of Lake Huron, which includes Harbor Island NWR. Formation of a Friends Group will establish a productive and cooperative relationship between the refuge and area residents to make sure the increased development does not negatively affect Harbor Island NWR. Working with the Friends Group will open up additional sources of potential funding to support the refuge.

Estimated cost: \$0 (included in current budget)

### ***Determine accurate visitation numbers, and develop Visitor Use Plan***

Harbor Island NWR is part of a large complex of islands that are close together. Several of the islands are privately owned and include year round or seasonal residents. Drummond Island supports a large year round population. Harbor Island currently gets quite a bit of visitation. The refuge estimates the island currently receives several visitors, but this is only an estimate, and all indications show that use is increasing. Good hard data are needed to determine the actual number of visitors to Harbor Island. A Visitor Use Plan is necessary to determine the appropriate interpretive infrastructure needed, the appropriate level of recreational activities that the island can support, and to build the infrastructure to support that use.



*Visitor Sign, Harbor Island NWR*

Estimated cost: \$35,000

## Huron NWR

### ***Determine need and ultimate disposition of refuge buildings***

There are eight buildings/structures on Huron Island associated with the old USCG station. The exterior of the lighthouse, a National Historic Landmark, has been rehabbed and maintained through the efforts of the Huron Island Lighthouse Preservation Association. The dock was completely renovated in 2008. The fog signal building on the north end of the island is brick construction; the exterior of the building is in good shape. The lighthouse keeper's quarters is

wood construction, The exterior of the building is still in fair-to-good shape, but all windows and doors are missing leaving the structure open to the weather. If significant work is not done in the near future the building will likely deteriorate to the point of not being worth saving. The other four buildings are showing significant wear or have issues:

- The boathouse, a concrete structure, is showing extensive cracking in the walls, roof and foundation. People have to walk by it to access the island.
- The barracks on the north end of the island is wood construction. The roof has a large hole, which has been patched with plywood, but the shingles are badly deteriorated. The siding is showing significant wear.
- The comfort station is deteriorating and has no windows or doors in place.
- The hazardous storage building is showing signs of wear.

There should be no question of keeping and maintaining the lighthouse and the dock, but retaining the other six buildings should be open for discussion. If any buildings are razed, it needs to be determined whether to leave the materials on the island or transport off island for disposal. In addition to the buildings, there are remnants of the old USCG station—such as a large tank, old metal poles, old cable, etc.—that need to be removed and disposed of.

Estimated cost: \$150,000 (disposed cost)

### ***Determine accurate visitation numbers, and develop Visitor Use Plan***

Currently, the Service estimates that West Huron (or Lighthouse) Island—the only island of the eight refuge islands that is open to the public—receives one hundred visitors per year. This estimate is likely low. Good hard data are needed to determine the number of visitors to Huron NWR. We presume that a majority of the visitors are visiting the island because of the lighthouse and the old USCG station. We need to determine if this is correct or not. A Visitor Use Plan is necessary to determine the appropriate interpretive infrastructure needed, the appropriate level of visitation that the island can support, and to build the infrastructure to support that use.



*West Huron (or Lighthouse) Island, Huron NWR*

Estimated cost: \$35,000

### **Harbor Island NWR/Huron NWR/Michigan Islands NWR**

#### ***Establish dedicated staff for island refuges***

In 2007, the Midwest Region conducted a staffing model exercise, which indicated the need for three staff positions dedicated to the islands. This level of staffing probably can't be supported without a large increase in refuge budgets. However, a staff member at both Seney and Shiawassee NWRs, with a significant portion of their work dedicated to the islands, would greatly assist in implementing this plan. A key responsibility would be the managerial functions such as developing partnerships, handling Special Use Permit requests, managing real property, insuring appropriate regulatory signage, and gathering and analyzing essential data for making sound management decisions. Another responsibility would be collecting essential flora and fauna data and conducting analysis to enable sound management decisions. Support is also needed for conducting environmental education activities in area schools, developing interpretive materials, identifying possibilities for public use/recreational infrastructure, leading tours, and conducting programs.

Estimated cost: \$120,000

### ***Strengthen and expand cooperation with the USCG***

Seney NWR has a long history of working with the USCG at Huron NWR and at Hat and Gull Islands at Michigan Islands NWR. It is very likely cooperation will continue, given the activities that have or will take place on the islands. The lighthouse at Huron NWR is still a functioning lighthouse. Although, the lighthouse is automated, the USCG maintains a battery bank charged by solar panels to keep the light operating. The USCG visits the island at least quarterly to check on the light. Other activities that have taken place or are opportunities for future cooperation include the following:

- The Service worked with the USCG to remove barrels from Hat Island.
- The USCG has a navigation aid on the north end of Gull Island, which will likely require inspection.
- Seney NWR annually cooperates with the USCG station at St. Ignace managing a Common Tern colony.

There are many opportunities with the USCG to strengthen and expand our cooperative relationship.

Estimated cost: \$0 (included in current budget)

### **Michigan Islands NWR (Seney)**

#### ***Establish formal Memorandum of Understanding with Central Michigan University (CMU)***

Establish a formal Memorandum of Understanding with CMU to promote biological and ecological studies on and around the refuge islands. Information collected from the studies would help the refuge staff more effectively manage the islands and their resources and would provide opportunities for students to learn about and conduct real science. CMU runs a biological station on Beaver Island that is active during the summer months, and some Seney NWR staff hold adjunct appointments at CMU. The four Seney NWR-managed islands of the Michigan Islands NWR are all located fairly close to Beaver Island. Three of the four islands are normally an easy boat ride from Beaver Island. The Michigan islands are located approximately

three hours from the Seney NWR office. Access to the islands can be weather-dependent and includes one-to-two hours of traversing open water. Explore opportunities with CMU, such as:

- positioning refuge personnel at the Beaver Island station for short or extended periods;
- storing a refuge boat and/or vehicle at the station over the winter; and
- dock the boat during the summer.

These and other opportunities to leverage support and resources with CMU should provide us better access to the islands help us more effectively manage the refuge.

Estimated cost: \$5,000/year

### ***Control nonindigenous invasive plants***

Introduced invasive plants such as common reed, purple loosestrife, and reed canarygrass are a significant threat to the islands' natural resources. These aggressive plants push out native species and degrade the quality of habitat for wildlife. Moreover, these aggressive species threaten populations of the federally listed (threatened) Pitcher's thistle and (threatened) dwarf lake iris. This project is necessary to reduce or eliminate these invasives on islands where they presently occur and prevent their colonization elsewhere.

Estimated Cost: \$50,000

### ***Improve habitat for migratory bird species by controlling invasive Mute Swans***

The Mute Swan population is growing rapidly near the islands. This non-native species competes aggressively for resources with native waterfowl and colonial waterbirds. In fact, these birds will sometimes completely displace, or even kill, native waterbirds. Further, Mute Swans concentrate in large numbers at productive feeding areas and overgraze submerged vegetation to the point that it cannot fully recover. This causes a reduction in the quality of wetland and aquatic habitat for waterbirds, fish, and other wildlife.

Estimated Cost: \$20,000

## **Current and Future Staffing Requirements**

None of the Great Lakes islands refuges have a permanent staff. The staff at Horicon, at Seney, and at Shiawassee NWRs oversee the islands and provide services on an as-needed basis. These duties include, but are not limited to, partnership coordination, Special Use Permit administration, and onsite law enforcement. Full-time oversight may be required at some units in the future if new islands are acquired or special programs are expanded. Strategies presented in chapter 4 envision a total of three positions dedicated to island refuge management: one Visitor Services Specialist and one Resource Specialist at Green Bay NWR; and one half-time Manager at Seney and Shiawassee each.

## Step-Down Management Plans

Step-down management plans describe specific actions that support the accomplishment of refuge objectives. The refuges that are collectively known as the Great Lakes islands refuges do not require many step-down plans due to relatively small size of properties and the lack of staff and funding. The objectives and strategies outlined in this CCP will provide adequate detail for most of the programs at these refuges. However, strategies presented in chapter 4 call for a Visitor Services Plan for Green Bay NWR, Huron NWR, and Harbor Island NWR and a Habitat Management Plan for Michigan Islands NWR. In addition, a Biological Inventory and Monitoring Plan will be completed for each island refuge.

## Partnership Opportunities

Partnerships have become an essential element for the successful accomplishment of Gravel Island and Green Bay NWRs' goals, objectives, and strategies. The objectives outlined in this CCP need the support and the partnerships of federal, state, and local agencies; non-governmental organizations, and individual citizens. This broad-based approach to managing fish and wildlife resources extends beyond social and political boundaries and requires a foundation of support from many. Gravel Island and Green Bay NWRs will continue to seek creative partnership opportunities to achieve its vision for the future.

The Friends of Plum and Pilot Island works to support the goals of the preservation, restoration, and maintenance of the lighthouses, accessory buildings, and other historic resources on Plum and Pilot Islands and to conserve and protect wildlife resources. This partnership enables refuge staff to improve on protection of historic properties and foster a visitor program through partnerships. Plum Island provides an excellent opportunity to integrate history and local community traditions and values into refuge interpretive and education programs.

Other particularly notable partners of the refuges include refuge volunteers and the Wisconsin and Michigan Departments of Natural Resources.

## Wilderness Review

As part of the CCP process, the Service reviewed islands within the legislative boundaries of each refuge for wilderness suitability. No additional lands were found suitable for designation as wilderness as defined in the Wilderness Act of 1964. The islands not designated as wilderness do not contain 5,000 contiguous, roadless acres. Most islands acquired subsequent to the original Wilderness Act have been substantially affected by humans, particularly through lighthouse infrastructure.

Potential impacts to wilderness resources from offsite activities such as tour boat operations, commercial and recreational fishing, and recreational boating and other current levels of activity and facility developments diminish wilderness character of most islands.

## Monitoring and Evaluation

The direction set forth in this CCP and specifically identified strategies and projects will be monitored throughout the life of this plan. On a periodic basis, the regional office will assemble a station review team whose purpose will be to visit the island refuges and evaluate current

activities in light of this plan. The team will review all aspects of management including direction, accomplishments, and funding. The goals and objectives presented in this CCP will provide the baseline from which each field station will be evaluated.

## **Plan Review and Revision**

The CCP for the Great Lakes islands refuges is meant to provide guidance to refuge managers and staff over the next 15 years. However, the CCP is also a dynamic and flexible document and several of the strategies contained in this plan are subject to such things as drought, floods, windstorms, and other uncontrollable events. Likewise, many of the strategies are dependent upon Service funding for staff and projects. Because of all these factors, the recommendations in the CCP will be reviewed periodically and, if necessary, revised to meet new circumstances.

## Finding of No Significant Impact (FONSI)

### Finding of No Significant Impact

#### Environmental Assessment and Comprehensive Conservation Plan for Gravel Island, Green Bay, Harbor Island, Huron and Michigan Islands NWR, States of Michigan and Wisconsin

An Environmental Assessment (EA) has been prepared to identify management strategies to meet the conservation goals of Gravel Island, Green Bay, Harbor Island, Huron and Michigan Islands NWRs. The EA examined the environmental consequences that 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 evaluated three alternatives for the future management of these Great Lakes Islands Refuges.

The alternative selected for implementation on the refuge is Alternative C: Enhanced Management to Promote Natural Integrity and Public Stewardship. The preferred alternative would provide for the growth of the island refuges and more opportunities for compatible recreational use.

Up to 14,133 acres of new island habitats would be pursued under this alternative. Protection measures will include transfers from other government agencies, donations, and fee simple and conservation easement purchase from federal and private funding sources. Site-specific actions would be taken to control overpopulations of colonial nesting waterbirds, particularly Double-crested Cormorants, when compatible with approved joint agency plans and only if desirable co-nesting waterbirds are not negatively impacted. Efforts would be made to prevent the introduction of invasive or noxious plant and animal species.

Islands within Congressionally-designated Wilderness will be managed according to the wilderness policy of the Service. Efforts would be made to prevent the introduction of invasive or noxious plant and animal species. Cultural resources related to maritime navigation will be inventoried, restored, and protected in cooperation with non-profit organizations and state historic preservation offices.

In general, visitors will be encouraged to minimize their impact on these fragile island habitats. However, new visitor facilities and seasonal programs will be considered on some islands. New facilities may include marked trails and designated boat landings. Environmental interpretation will focus on the uniqueness of Great Lakes island ecosystems and cultural resources.

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: Enhanced Management to Promote Natural Integrity and Public Stewardship, as the management alternatives for these refuges 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. This action will not have an adverse impact on threatened or endangered species.

**Supporting References:**

Environmental Assessment  
Land Protection Plan  
Comprehensive Conservation Plan

**ACTING**   
Regional Director

11/30/13  
Date