

**DISCOVER  
OUR  
WILD  
SIDE**



**DETROIT RIVER  
INTERNATIONAL WILDLIFE REFUGE**

*2016 Annual Report*

Dear Friends,

This annual report celebrates another incredible year of progress for the Detroit River International Wildlife Refuge. Our Refuge is one of the 14 priority urban refuges in the nation, and its initiatives have led the way in promoting conservation in urban areas. The efforts of the Refuge not only protect continentally-significant natural resources, but also improve the quality of life in our region, enhance community pride, attract and retain employees for our businesses and inspire a sense of wonder in our children.

We have seen progress in a variety of important initiatives championed by the Refuge. We will soon see the opening of the new Visitor Center, and it was an honor to have the U.S. Fish and Wildlife Service name this building after my husband. The new John D. Dingell Visitor Center, as well as the school ship dock and fishing pier, will help form the Refuge Gateway, and we are excited to soon have it open to the public. It is also heartening to see the staff begin the training of over 100 volunteers from the surrounding communities to help run the visitor services' operations.

I continue to be impressed by the collaboration between public agencies and private entities to provide an exceptional conservation and outdoor recreational experience in southeast Michigan. Over \$49.3 million has been raised for the Refuge since 2001. Highlights from 2016 include:

- expansion of the Refuge by 275 acres;
- completion of water control structures and other infrastructure improvements at the 242-acre Ford Marsh Unit and the 96-acre Fix Unit;
- witnessing 421 volunteers donating a total of 7,228 hours of their time to Refuge projects, resulting in \$162,991 of in-kind labor;
- partnering on 12 special Refuge events that attracted 11,000 people; and
- watching over 3,800 people come away from a variety of interpretative programs with more insight into the wildlife that call the Refuge home, the types of recreational opportunities available in their backyard, and how the Refuge is stewarded.

These accomplishments underscore our community's commitment to protecting and preserving southeast Michigan's natural resources. I encourage you to read more in this annual report about the important work being done by so many to make nature part of everyday urban life. Also, please consider taking advantage of one of the many stewardship, environmental education, and natural resource preservation opportunities right in our backyard. With all of us working together we can inspire the next generation of conservation initiatives in urban areas, where 80% of all U.S. citizens now reside.

Sincerely,



Debbie Dingell  
Member of Congress



Photo by the Office of Congresswoman Dingell

# Introduction

The Detroit River International Wildlife Refuge (DRIWR) is only 15 years old, but it is an ecological gem. It stretches along the shoreline of the Detroit River and western Lake Erie, and focuses on conserving, protecting, and restoring habitats for 30 species of waterfowl, 117 kinds of fish, and over 300 species of birds. The Detroit River and western Lake Erie contain extensive feeding and resting habitats for waterfowl, including over 300,000 diving ducks that stop each year to rest and feed on beds of wild celery. The North American Waterfowl Management Plan has identified the Detroit River as part of one of 34 Waterfowl Habitat Areas of Major Concern in the U.S. and Canada. In addition, marshes along the lower Detroit River and western Lake Erie have been declared part of a Regional Shorebird Reserve by the Western Hemispheric Shorebird Reserve Network. The Detroit River and western Lake Erie have one of the highest diversities of fish and wildlife in the Great Lakes. This biodiversity led Environment Canada and U.S. Environmental Protection Agency to identify the Detroit River-Lake St. Clair ecosystem as one of 20 Biodiversity Investment Areas in the Great Lakes. The lower Detroit River has also been identified as an Important Bird Area by the National Audubon Society. Outdoor recreation in these natural resources contributes tens of millions of dollars to the local economy through public uses like fishing, hunting, wildlife observation, environmental education, kayaking, photography, interpretation, and more.

The DRIWR is also very proud to be designated one of 14 priority Urban Refuges throughout the nation charged with bringing conservation to cities and helping make nature part of everyday urban life. This annual report celebrates Refuge accomplishments in 2016 and is intended to inspire more citizens, students, businesses, and communities to become partners in our work. It represents a collaborative effort between the U.S. Fish and Wildlife Service (USFWS) and the International Wildlife Refuge Alliance (IWRA), the nonprofit Friends Organization that builds the capacity of the Refuge.

## Discover Our Wild Side Through the Refuge

There is a change happening in southeast Michigan. Maybe you noticed it while bicycling on one of our greenway trails, kayaking on the Detroit Heritage River Water Trail, hunting in what Ducks Unlimited has called one of the top 10 metropolitan areas for waterfowl hunting in the nation, birding at one of 27 exceptional birding spots on our ByWays to FlyWays bird driving tour, fishing in waters considered part of the "Walleye Capital of the World," or just enjoying some quiet time overlooking our world class water resources.

This change has been slow. It started decades ago when people spoke out against pollution. But today, with thanks to so many doing their part, we can say that the Detroit River is one of the most remarkable ecological recovery stories in the U.S., with the return of bald eagles, peregrine falcons, osprey, lake sturgeon, lake whitefish, walleye, mayflies, wild celery, beaver, and more. Our region offers world-class water, wildlife, and outdoor recreational opportunities right in our backyard.

If you haven't discovered our wild side, you need to! Look around. Visit one of our local waterfront parks. Go bird watching, biking, sailing, hunting, or hiking. You don't have to drive four to five hours up north to enjoy nature. It is in our Refuge, on the Detroit RiverWalk, in State Parks and Metroparks, and in the over 197,000 acres of parks and conservation lands in southeast Michigan. It is right in our backyard waiting for you to discover.

# Habitat Conservation

The Refuge has had another successful year in working with partners to protect fish and wildlife habitat – with four land acquisitions totaling 275 acres. These new Refuge lands will provide habitat for Refuge priority species of waterfowl and shorebirds, the American woodcock (*Scolopax minor*), northern pike (*Esox lucius*) and other marsh-spawning fish. These lands represent critically imperiled coastal ecosystems. The size of the Refuge has surpassed 6,100 acres with these additions, contributing to the over 18,700 acres in southwest Ontario and southeast Michigan now being managed collaboratively for conservation and outdoor recreation. They include:

- 6 acres of former agricultural land adjacent to the Refuge's 204-acre Strong Unit;
- 43 acres of wetlands, forest, and old fields donated by Clive and Clarice Taylor;
- 191 acres of coastal wetlands at North Maumee Bay under a Cooperative Management Agreement with Consumer's Energy, and;
- 35 acres of wetlands at the Port of Monroe.



Photo by U.S. Fish and Wildlife Service  
North Maumee Bay is composed of coastal marshes and is adjacent to the 2,000-acre Erie Marsh Shooting and Fishing Club, now cooperatively managed with The Nature Conservancy.



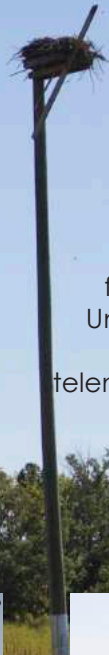
Photo by U.S. Fish and Wildlife Service  
The Port of Monroe Unit is made up of wetland and upland forest, hydrologically connected to marshland along Lake Erie. Its position between Sterling State Park and River Raisin National Battlefield Park creates a continuous tapestry of open space.



Photo by U.S. Fish and Wildlife Service  
This wetland forms part the Taylor Unit, donated by the Clive and Clarice Taylor to the Refuge in 2016.

However, restoration of land where appropriate can more effectively conserve species and ecosystems. The following are examples of 2016 restoration projects:

- Completion of water control structures and other infrastructure improvements to the 242-acre Ford Marsh Unit and the 96-acre Fix Unit with Ducks Unlimited and other partners. These projects will result in immediate improvements to wetland conditions by adding wetland acreage, habitat diversity, food, and shelter for wildlife, especially migratory birds;
- Infrastructure improvements to the Brancheau Unit and Refuge Gateway allowing staff and volunteers to optimize wildlife value, flood storage, and other ecological services from wetlands within these Units;
- Treatment of priority invasive plant species in critical habitats;
- Achievement of goals for *Phragmites* at six Refuge units resulting in recovery of state-listed plant species and restored coastal wetlands;
- Completion of the Refuge's water management and old field plans;
- 24 active nests monitored at Belle Isle's common tern habitat – a partnership between the Refuge and Detroit Zoological Society; and
- 3 Osprey (*Pandion haliaetus*) chicks fledged at the Strong Unit – one was outfitted with a satellite telemetry device to track its whereabouts [at the time of this writing, it is in Maracaibo, Venezuela].



“Julie”, an Osprey fledged at the Strong Unit, shortly after being fitted with a satellite telemetry device to track its migration.



Photo by Jane Purslow



Photo by Tandem/U.S. Fish and Wildlife Service

Formerly agricultural fields, the Fix Unit has been transformed into a pair of wetlands through the construction of dikes. A pump allows USFWS staff to control water levels in the Unit's wetlands to control the type of plants and habitat that develop there.



Photo by U.S. Fish and Wildlife Service

At Ford Marsh, completion of a new pump system and reinforcements to the Unit's shoreline dikes allow USFWS staff to manage water levels to ensure stable marsh habitat for migrating birds and other species.

# Refuge Research, Surveillance and Monitoring

Highlights from 2016 include:

- 8,831 acres surveyed for invasive plants, gathering a total of 3,943 data points that have since been uploaded to the Midwest Invasive Specis Information Network (MISIN) and can be reviewed here: <http://www.misin.msu.edu/browse/>;
- Documentation of breeding Eastern Meadowlark (*Sturnella magna*) and multiple breeding pairs of Dickcissel (*Spiza americana*) at the Refuge's planted prairies and old fields;
- Discovery of new populations of state-listed plants/county records, including giant arrowhead (*Sagittaria montevidensis*), mullein-foxglove (*Dasistoma macrophylla*), whorled milkweed (*Asclepias verticillata*), woodland sunflower (*Helianthus divaricatus*) and others;
- Ecological inventory of the Six Points property owned by the Wyandotte of Anderdon Nation;
- Completion of the 2016 Detroit River Hawk Watch report, available here: [drhawkwatch.org](http://drhawkwatch.org), and;
- Completion of Refuge's Inventory and Monitoring Plan which will help measure progress toward our habitat management goals.



Photo by U.S. Fish and Wildlife Service

A Red cedar (*Juniperus virginiana*) tree at the Strong Unit.



Photo by U.S. Fish and Wildlife Service

Rose mallow (*Hibiscus moscheutos*) growing in the shrub-carr habitat portion of the Strong Unit.



Photo by U.S. Fish and Wildlife Service

State-threatened giant arrowheads thrive in the Strong Unit.

# Alpena Fish and Wildlife Conservation Office – Waterford Substation

- Fisheries staff continues to partner with agencies in the Detroit and St. Clair rivers to restore fish habitat. In the fall of 2016 three reefs were constructed at the head of Belle Isle creating four acres of fish spawning habitat. Since 2004, over 10 acres of spawning reefs have been constructed in the Detroit River aiding in the removal of the “loss of fish and wildlife habitat” and “loss of fish and wildlife populations” beneficial use impairments.
- Fish species assessments were conducted to monitor the success of reef restoration projects in the Detroit River and also to document the status of Lake Sturgeon (*Acipenser fulvescens*), an indicator of ecosystem health for the Detroit River and western Lake Erie.
- Fisheries staff received grant funding for two new projects. A project titled “Spatial Ecology of Juvenile Lake Sturgeon in the Detroit River”; funded through the U.S. Fish and Wildlife Service Science Support program, will evaluate juvenile Lake Sturgeon movement in the Detroit River and western Lake Erie. Funding was also received through the Great Lakes Fish and Wildlife Restoration Act to construct the “Maumee River Lake Sturgeon Rearing Facility”, a streamside rearing facility for Lake Sturgeon along the Maumee River.
- Staff searched for new non-native fishes, crustaceans, molluscs, and amphipods as part of an early detection program in the Detroit River and western Lake Erie.
- Water samples were collected and tested for the presence of environmental DNA (eDNA) from Silver and Bighead Carp (a.k.a., Asian Carps).
- Fishery biologists collaborated with U.S. Environmental Protection Agency and U.S. Geological Survey scientists to identify which species of larval fish are found at sites around the Great Lakes using microscopic analysis and molecular genetics techniques.



Photo by U.S. Fish and Wildlife Service

A barge ferries limestone to be placed at an artificial reef offshore of Belle Isle.



Photo by U.S. Fish and Wildlife Service

Northern Madtom (*Noturus stigmosus*) are collected from a minnow trap to research usage of Detroit River's newly built artificial reefs.



Photo by U.S. Fish and Wildlife Service

USFWS Fisheries staff with a Lake Sturgeon captured in the Detroit River during spring species assessments.



Photo by U.S. Fish and Wildlife Service

USFWS Fisheries staff with a Burbot (*Lota lota*) Rare to the Great Lakes, the Burbot has been increasingly found at the artificial reefs.

# Community Engagement

We pride ourselves in being a national leader in bringing conservation to cities as part of the U.S. Fish and Wildlife Service's Urban Wildlife Conservation Program. We want to help make nature part of everyday urban life to cultivate a connected conservation constituency of people who care about wildlife in their backyard and beyond. Highlights from 2016 include:

- A three-minute Refuge video was created with financial assistance from the U.S. Fish and Wildlife Service - Washington Office. The video highlights the recovery of the Detroit River and underscores the importance of connecting with youth and the urban population to ensure the Refuge becomes relevant in their daily lives. ([www.youtube.com/watch?v=NB5sUHRJoRc](http://www.youtube.com/watch?v=NB5sUHRJoRc))
- The Visitor Services staff has begun training volunteers interested in staffing the front desk of the new visitor center. Training involved tours of four Refuge units and background information on aspects of the Visitor Services Program. These trainings will continue into 2017 and will include a variety of interactive group outings to keep everyone engaged and interested until the center opens. If you are interested in volunteering at the visitor center front desk please contact Visitor Services manager, Jody DeMeyere, at [jody\\_demeyere@fws.gov](mailto:jody_demeyere@fws.gov).
- A total of 421 volunteers gave a total of 7,228 hours of their time to refuge projects, resulting in \$162,991 of in-kind labor!
- Four staff members and six volunteers successfully completed archery training from our own Park Ranger, Jennie Braatz. Instructors are needed to lead youth archery programs at the new visitor center in 2018 and at local events throughout southeast Michigan. If you are interested in training, contact Jennie at [Jennifer\\_Braatz@fws.gov](mailto:Jennifer_Braatz@fws.gov).
- Over 11,000 people attended 12 refuge special events, including Eagle Tours at the Monroe Power Plant, World Wetlands Day at Carlson High School, Nature Fest at Crosswinds Marsh, film screenings at the Trenton Theatre, Grosse Ile's Tour de Ile, Hawk Fest and the Pointe Mouillee Waterfowl Festival.
- Over 3,877 people came away from a variety of interpretative programs with more insight into the wildlife that call the refuge home, the types of recreational opportunities available and how the refuge is managed.
- The Refuge is pleased to announce that the Ralph J. Bunche Preparatory Academy in Detroit has been chosen as our first Refuge Partner School. The students will visit the Refuge two times throughout their fourth, fifth and sixth grade years. In addition, Refuge staff will visit them in their classroom on three different occasions. Specific place-based curriculum has been developed and teachers are undergoing special training to become ambassadors for the Refuge.



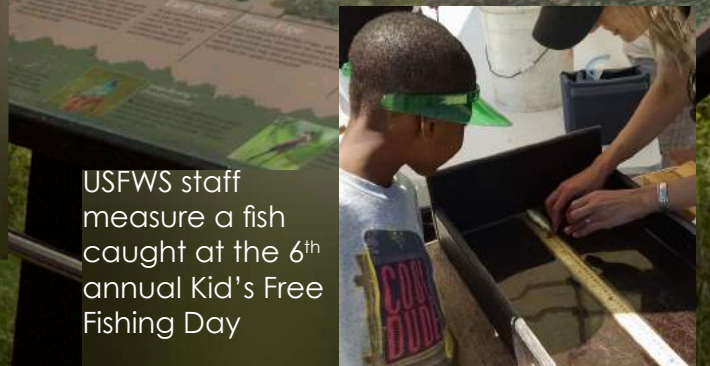


- Over 50 students from Ralph J. Bunche Preparatory Academy attended the 2nd Annual Sturgeon Day on the Detroit RiverWalk at Milliken State Park to learn about Lake Sturgeon that thrived when dinosaurs walked the earth. Partners in the event were the U.S. Geological Survey, Michigan Sea Grant, Detroit Riverfront Conservancy, and Michigan Department of Natural Resources.
- Visitor Services' staff spent seven days with 4,000 4th graders in May and October as part of the federal Every Kid in a Park Program. Over 25 organizations came to Historic Fort Wayne to engage students in hands-on conservation and historical activities.
- Visitor Services' staff again attended Point Pelee's Festival of the Birds in Leamington, Ontario and Ottawa National Wildlife Refuge's Biggest Week in American Birding. In between looking for warblers, they were able to reach out to a variety of audiences and tell them about the refuge.
- The first annual Humbug Marsh lottery deer hunt took place from October to December. While only 14 deer were harvested, hunter comments were positive. Staff expect this to become an annual hunt in coordination with the Michigan Department of Natural Resources' e-license system.
- Beginning as a workshop hosted on the campus of the University of Michigan-Dearborn in May 2015, the Metro Detroit Nature Network has evolved to include nearly 20 Network partners. The Metro Detroit Nature Network strengthens collaborations by maximizing our collective resources and results. It is our belief that through collaboration and shared vision, we will be able to accomplish more than organizations could alone.
- Visitor Services' staff conducted a series of Community Leader Listening Sessions to find out how existing organizations and neighborhoods are accessing natural areas and how the Refuge can assist them in community focused conservation projects. If your organization would like to join the conversation, contact Visitor Services Manager Jody DeMeyere at [jody\\_demeyere@fws.gov](mailto:jody_demeyere@fws.gov).
- In May Visitor Services' staff joined six other partner organizations for a test run of Urban Camping at River Rouge Park in Detroit. Collectively these organizations are attempting to bring back group camping at the Scout's Hollow location.



Photo by Tandem/USFWS

Children take in the sights at Hawkfest at Lake Erie Metropark, a Refuge Partner.



USFWS staff measure a fish caught at the 6<sup>th</sup> annual Kid's Free Fishing Day

Photo by U.S. Fish and Wildlife Service



Students got a chance to encounter a Lake Sturgeon at the 2nd Annual Sturgeon Day at the Detroit RiverWalk.

Photo by U.S. Fish and Wildlife Service

# Maintenance

Maintenance is a critical part of Refuge operations and stewardship. After his first year, the Refuge maintenance mechanic John Nicely settled into his new role at Detroit River and is more aware of the maintenance needs of our station. In 2016, much of our efforts went into tackling some of our maintenance backlog that has built up over several years. Several structures were repaired or replaced at the Brancheau Unit, including the breakwall that experienced severe erosion damage during one of last winter's storms. With assistance from Ottawa National Wildlife Refuge, we also repaired a substantial section of the Ford Marsh lakefront dike that washed out during the same storm. Many roads throughout the Refuge were repaired, re-graded, and re-graveled, including rehabilitation of Brancheau Road, in partnership with the residents and the Swan Boat Club. In early fall we were able to redesign and reconstruct the spillway outlets for the Monguagon wetlands at the Refuge Gateway site. New flap gates were installed and a low-level berm was constructed to regulate wetland water levels and prevent water from entering from the river during periods of high water. John Nicely also assisted Visitor Services with the construction of a hunt parking lot and a split rail fence, a kiosk, and the installation of new spotting scopes at the Gibraltar Bay Unit.

Photo by U.S. Fish and Wildlife Service



A new kiosk at Gibraltar Bay Unit.

Photo by U.S. Fish and Wildlife Service



The view from the new spotting scope at the Gibraltar Bay Unit.

Photo by U.S. Fish and Wildlife Service



Infrastructure upgrades at the Monguagon wetland allow for better flood protection and water level control.

Photo by U.S. Fish and Wildlife Service



A dike, rebuilt this year, protects Ford Marsh Unit from being flooded by Lake Erie during high water events.

# Capacity Building and New Initiatives

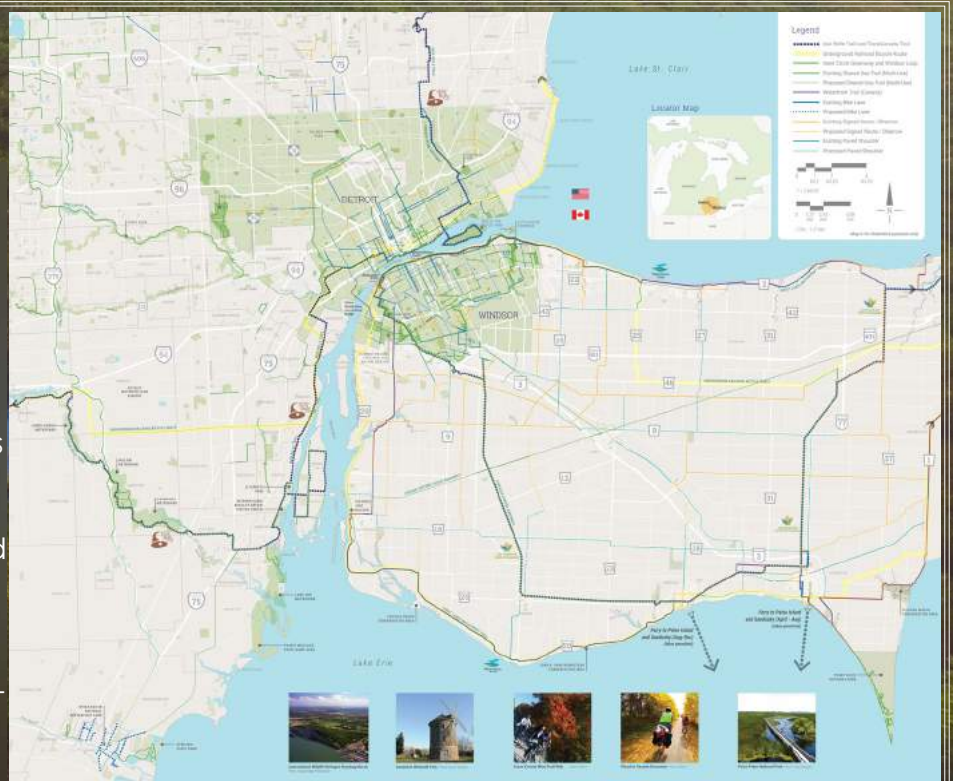
IWRA is the Friends Organization of DRIWR and continues to achieve its goals of fostering conservation, increasing Refuge visibility, encouraging support, enhancing quality of life, and building the capacity of the USFWS to deliver its mission for the Refuge. IWRA actively recruits partners, increases public awareness, and helps secure financial support for Refuge projects.

In recognition of leadership and dedication to conservation on the Detroit River and western Lake Erie Basin, IWRA presents the "John D. Dingell Friend of the Refuge Awards", recognizing an individual, a non-profit, and a corporate partner. In 2016, IWRA was honored to present the individual award to Dr. Gene Jaworski, professor emeritus at Eastern Michigan University, recognizing his major contributions to ecological inventories and monitoring of the Refuge. The Pointe Mouillee Waterfowl Festival was awarded the non-profit category for their partnership in conservation efforts over the past 68 years. Its annual festival attracts thousands of outdoor enthusiasts. Finally, DTE Energy's Monroe Power Plant was recognized for their continued partnership in annual Eagle Tours on their property attracting thousands of applications each year. This furthers awareness and outreach of the DRIWR.

In support of the Refuge's mission to consistently provide quality conservation and outdoor recreational experiences, IWRA has created the Legacy Endowment Fund to ensure sustainability. Considerable funds are needed to operate, maintain, steward, and program the Visitor Center, school ship dock and fishing pier, trails, environmental education shelter, etc. This endowment also helps protect the initial investment in land acquisition, restoration work, and the Visitor Center, and helps ensure quality operations. For more information contact the IWRA office at 734-692-7671 or [iwr\\_alliance@yahoo.com](mailto:iwr_alliance@yahoo.com).

## Binational Cooperation

In 2016 a U.S.-Canadian partnership developed a vision map (right) to help make the case to connect emerging international greenways, trails, and bike lanes in southwest Ontario and southeast Michigan. This Vision Map champions connecting greenways in the Detroit Metropolitan Area with ones in the Windsor Metropolitan Area via a dedicated bike lane on the new Gordie Howe Bridge, a future ferry system between Windsor and Detroit, and future improvements to the Detroit-Windsor Tunnel Bus System.



# What's Next

In 2017, the Detroit River IWR will place a high priority on completion of the Refuge's Visitor Center, while continuing with strategic land acquisitions, habitat restorations, and visitor services to engage our urban audience. A list of 2017 Refuge priorities is presented below:

- Holding a grand opening for our Visitor Center at the Refuge Gateway
- Hosting a ribbon cutting for the school ship dock and fishing pier at the Refuge Gateway
- Adding at least two tracts to the refuge through purchase, donation, or cooperative management agreements
- Working with Canadian partners to continue to add high quality habitat lands to the Canadian portion of the DRIWR
- Continuing to open refuge units for public use
- Implementing the Refuge's Visitor Services Plan
- Implementing the Refuge's Habitat Management and Inventory and Monitoring Plans
- Continuing to participate and provide leadership in Detroit River–Western Lake Erie Cooperative Weed Management Area
- Improving the Refuge's hunting program based on feedback from the 2016 season
- Continuing invasive species management at specific Refuge units, including undertaking prescribed burns
- Completing habitat projects at Fix Unit, in partnership with Ducks Unlimited and others
- Continuing monitoring of the fish community response to habitat enhancement projects by Fisheries staff
- Enhancing monitoring for aquatic invasive species, and threatened and endangered species, by Fisheries staff
- Increasing the number of volunteers involved at the Refuge
- Supporting another IWRA fund raiser in 2017
- Sustaining our collaboration with the Ralph J. Bunche Preparatory Academy in Detroit as our first Refuge Partner School
- Continuing to support established events such as International Migratory Bird Day, World Wetlands Day, Kids Free Fishing Fest, Hawkfest, Pointe Mouille Waterfowl Festival, and Eagle Tours, and convening Sturgeon Day on the Detroit River Walk
- Participating in the work of the Metro Detroit Nature Network to help bring conservation to cities
- Sustaining Detroit River Hawk Watch
- Collaborating on necessary research with Eastern Michigan University, University of Windsor, U.S. Geological Survey, and others



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