

*Inspiring a  
New Generation  
of Conservationists*



**Detroit River  
International  
Wildlife Refuge  
Annual Report 2017**

# Dear Friends,

For John and I, 2017 was another amazing year for the Refuge. I would like to share with you a few of my personal highlights. In 2017 we participated in the celebration of the preservation of the Corduroy Road from the War of 1812 and the conservation of 95 acres of coastal wetlands with U.S. Silica, the National Park Service, and Refuge partners. This unique public-private partnership allows the National Park Service, the U.S. Fish and Wildlife Service, and U.S. Silica to work together to interpret and celebrate history and natural resources from an adjacent public access site for all citizens in southeast Michigan. What a great project for all of us! We also saw in 2017 the fee simple transfer of the Lady of the Lake and the North Maumee Bay tracts in southern Monroe County to the U.S. Fish and Wildlife Service for the Refuge – totaling 240 acres.

John and I cannot wait to see the Visitor Center open in 2018 and the smiles on children's faces. Related to the Visitor Center, John and I were so pleased to see the school ship dock and fishing pier completed in 2017 and to participate in a special event to thank over 100 funding partners who made this possible.

We were also so proud in 2017 to see Metropolitan Detroit become the 29th Urban Bird Treaty City in the United States. I know a lot of work went into making this possible for so many. It was also great to see nearly 200 people participate in an Urban Bird Summit at the Detroit Zoo that helped identify and build support for key projects in Metropolitan Detroit.

This past year over 6,700 people attended 21 refuge special events and over 15,274 visits were made to the Refuge as a whole, including educational programming, hunting/fishing visits, and wildlife observation. This past year 225 people volunteered for the Refuge and contributed 12,654 hours – nearly a 75% increase in volunteer hours from 2016. That shows that people are coming back because of the very positive experiences they are having. I can't wait to see what happens when the Visitor Center opens soon.

This annual report captures another incredible year of progress for the Detroit River International Wildlife Refuge. I encourage you to read it and share it with your friends. The accomplishments that are chronicled in this annual report are very impressive by anyone's standards. As you read this report, please think about what we are trying to do together to bring conservation to Metropolitan Detroit. I also hope you will consider getting involved in one of the many stewardship, environmental education, and natural resource interpretation opportunities right in our backyard. With all of us working together we can truly inspire a new generation of conservationists in urban areas because that is now where 80% of all U.S. citizens live.

Sincerely,  
  
Debbie Dingell, Member of Congress



Photo Credit by the Office of Congresswoman Dingell

# Introduction



The U.S. Fish and Wildlife Service's Urban Wildlife Conservation Program had this to say about the importance of bringing conservation to cities:

*The future success of conservation lies ultimately in our ability to inspire Americans to connect with the outdoors and nature, and to become stewards of the environment. With over 80% of Americans living in urban areas, spending less time outdoors, and becoming more ethnically and racially diverse, our challenge is to become relevant in their daily lives. Without public awareness and support, our conservation mission will not succeed.*

The Detroit River International Wildlife Refuge (DRIWR) is proud to be one of the 14 priority urban refuges charged with reaching and engaging new audiences in conservation in an effort to inspire the next generation of conservationists. The DRIWR 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 in area waters. 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 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.

The Detroit, Michigan-Windsor, Ontario metropolitan area is also considered the industrial heartland and the automobile capital of North America. Nearly seven million people live within a 45-minute drive of our refuge. To many, that seems like a paradox. But outdoor recreation in these continentally-significant 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 purpose of this annual report is to document Refuge accomplishments of 2017, encourage greater participation from citizens, students, businesses, and communities in our work, and help inspire a new generation of conservationists. 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.

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# Habitat Conservation

Despite the departure of Refuge Biologist Greg Norwood in 2017, the Refuge still achieved significant accomplishments. From the addition of new Refuge Units to the continued management of *Phragmites*, the Refuge has continued to establish new partnerships while putting science first to accomplish its goals in southeast Michigan.

## Land Acquisition and Funding:

- Two new Refuge Units totalling 240 acres were acquired through donation: the Lady of the Lake Unit and the North Maumee Bay Unit in Monroe County.
- USFWS and U.S. Silica signed a cooperative agreement to include an additional 95 acres at the mouth of the Huron River in the Refuge.
- \$269,147 was awarded from the National Fish and Wildlife Foundation to the Detroit River-Western Lake Erie Cooperative Weed Management Area for the purpose of monitoring and managing invasive species in the Western Basin of Lake Erie and the Refuge.

## Habitat Restoration:

- Over 366 acres of *Phragmites* was treated on Refuge and partner lands.
- Woody invasive species continued to be treated by the Refuge's stewardship crews in the Humbug Marsh, Gibraltar Wetlands, and Gibraltar Bay Units.
- The Fix Unit wetland restoration project was completed with funding from a North American Wetlands Conservation Act grant, in cooperation with Ducks Unlimited.
- The first drawdown of the Ford Marsh Unit after the completion of the restoration project (see photos at right) has led to a substantial increase in the amount of native vegetation, including the state threatened Giant Arrowhead (*Sagittaria montevidensis*).

## Refuge Research, Surveillance and Monitoring:

- A total of 8,588 acres were surveyed for invasive species in 2017, with 2,593 data points collected (these data were shared with the Midwest Invasive Species Information Network and are available on-line at [www.misin.msu.edu](http://www.misin.msu.edu)).
- The 2017 Detroit River Hawk Watch was successfully completed, marking the 35th consecutive year monitoring diurnal raptor and turkey vulture migration at the mouth of the Detroit River.
- Three Refuge Units were enrolled in the *Phragmites* Adaptive Management Framework.
- Yellow-headed blackbirds (*Xanthocephalus xanthocephalus*) were confirmed in the Refuge's constructed wetlands, as well as Bobolinks (*Dolichonyx oryzivorus*) and Dickcissels (*Spiza americana*) within some of the newly restored prairies.





## *Alpena Fish and Wildlife Conservation Office – Waterford Substation:*



- Fisheries staff continued to partner with agencies in the Detroit and St. Clair Rivers to restore fish habitat. Since 2004, three reefs comprising over 10 acres of spawning habitat 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. The Fort Wayne Reef is scheduled for construction in spring of 2018 and will be approximately four acres in size.
- Fish assessments were conducted to monitor the success of reef restoration projects in the Detroit River and also to document the status of Lake Sturgeon, an indicator of ecosystem health for the Detroit River and western Lake Erie.
- Staff assisted with improvements to the Great Lakes Acoustic Telemetry Observation System (GLATOS) by providing acoustic receivers and field support for telemetry projects monitoring Lake Sturgeon, Grass Carp, and Lake Whitefish movements throughout the Detroit River and Lake Erie.
- Staff participated in outreach events, including the third annual Detroit River Sturgeon Day, seventh annual Detroit River Kids Fishing Festival, and Detroit River Restoration Tour highlighting restoration activities in the Detroit River.
- Staff searched for previously undocumented invasive species as part of an early detection program in Lake St. Clair 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 Carp).
- Fisheries biologists collaborated with U.S. Geological Survey scientists to detect non-native species in western Lake Erie by identifying larval fish using microscopic analyses and molecular genetic techniques.
- Water samples were collected for microchemistry analysis for a project led by the U.S. Geological Survey. Tributary water chemistry will help biologists link captured Grass Carp in Lake Erie to their potential spawning locations.
- Fisheries biologists from multiple offices (U.S. Fish and Wildlife Service La Crosse WI, Michigan Department of Natural Resources, and Dean Electrofishing, LLC) partnered to participate in an electrofishing study that will determine the optimum settings for the capture of Grass Carp.
- Staff assisted with an exploratory project led by the U.S. Geological Survey to detect larval Grass Carp and determine their habitat use at the mouth of the Sandusky River.

# Visitor Services and Community Engagement

- In January 2017, the Refuge Visitor Center was officially named after former U.S. Representative John D. Dingell, Jr. Over 100 guests were present to help the U.S. Fish and Wildlife Service honor Congressman John D. Dingell for all he has done for conservation throughout North America, the United States, the Great Lakes Basin Ecosystem, and in the Detroit River International Wildlife Refuge. Congresswoman Dingell's staff has mentioned that Mr. Dingell said that "this will live in my heart forever."
- 2017 resulted in more progress on the construction of the Refuge Visitor Center. A quick look inside shows that paint is progressing, along with tile work, cabinets, fixtures, front desk counters, door/window trim and water and electrical hook-ups. We know this has been a long process for everyone and there have been some stumbles along the way, but all signs are pointing towards a 2018 Grand Opening! In addition, the school ship dock and fishing pier were completed in 2017, and a thank you event was held for all funding partners.





- In late June, three Refuge staff traveled to Atlanta, GA to see the Visitor Center’s exhibit fabrication in person. Exhibit themes focus on “Everyone Can Be a Conservation Hero” and “Hone Your Wildlife Observation Skills.” These exhibits will be accessible to all, regardless of existing nature knowledge and should appeal to repeat visitation due to their interactive nature.

- In 2017, The Detroit Institute of Arts hosted their Inside|Out program at the Refuge and surrounding communities. This program brings reproductions of great treasures from the Detroit Institute of Arts into the local community. Replica artwork was displayed at the Gibraltar Bay Unit of the Refuge, Elizabeth Park, Lake Erie Metropark, Hy Dalka Park in Gibraltar and Carlson High School. Visit [dia.org/insideout](http://dia.org/insideout) for maps of other communities and information on upcoming programs.

## *Metro Detroit Nature Network (MDNN)*

- Over 25 organizations signed the partnership agreement to join the MDNN that was established in 2015 – two projects were completed in 2017 and a third one was begun.
  - Metropolitan Detroit became the 29th Urban Bird Treaty City in the U.S. on May 22, 2017.
  - Building upon this designation, MDNN co-hosted an Urban Bird Summit at the Detroit Zoo on November 9, 2017 with Canadian partners from the State of the Strait Conference. A variety of presenters spoke on the theme of “Status, Trends, and Risks to Species that Call the Corridor Home.”
  - The third project involves work on compiling existing information on recruiting urban youth into conservation and recreation career fields. mParks and the Refuge split the cost of a 10-month “Public Ally” to work on the project. Project goals range from developing a broad understanding of entry level career opportunities to developing a resource center to determine overlapping competencies and skills required for employment to recruiting urban youth into these fields, and eventually working with partners to develop certificate programs that will teach the required competencies and skills necessary for employment.

# Visitor Services and Community Engagement

## Volunteers

- In June 2017, another 13 volunteers began their training to become knowledgeable Visitor Center Front Desk Greeters. Since we are not in the new center yet, training has involved tours of four Refuge Units and background on aspects of the Visitor Services Program. These trainings will continue into 2018 and will include a variety of interactive group outings to keep everyone engaged and interested until the center opens. The goal is to have the Visitor Center open seven days a week, with two volunteer-shifts (two people per shift). So we need at a minimum of 28 people, plus a number of fill-in volunteers to be trained and available. Another 15 volunteers were trained in 2016, so we are getting close to our goal!
- Be sure to check the Refuge web site at [https://www.fws.gov/refuge/detroit\\_river](https://www.fws.gov/refuge/detroit_river). Many additional volunteer position descriptions have been added. Trail Upkeep and Refuge Maintenance Volunteer and Fishing Pier Monitor are two of the newly created positions. Contact Visitor Services Manager Jody DeMeyere, directly at [jody\\_demeyere@fws.gov](mailto:jody_demeyere@fws.gov) to get involved.
- Crunching volunteer numbers led to an interesting discovery this year. Although the total number of volunteers dropped to 225 people (compared to 421 in 2016), the number of volunteer hours greatly increased to 12,654 hours (up from 7,228 hours in 2016). This indicates we have been getting a large number of repeat volunteers. We are so pleased volunteers have had positive experiences donating their time and energy to the Refuge. We are always looking for ways to improve our program, so let us know your comments.

## Hunt

- The second annual Humbug Marsh lottery deer hunt took place from October to December, 2017. The unseasonably warm weather and high duck hunting pressure near the Humbug Marsh Unit shoreline caused less than expected harvest levels. Refuge staff is currently discussing strategies to ensure the hunt is more effective in upcoming years.





## *Special Events, Interpretation and Environmental Education*



- Over 6,700 people attended 21 Refuge special events, including Eagle Tours at the Monroe Power Plant, World Wetlands Day at Carlton High School, film screenings at the Trenton Theatre, Hawk Fest at Lake Erie Metropark and the Point Mouillee Waterfowl Festival. Over 15,274 visits were made to the refuge as a whole, including educational programming, hunting/fishing visits, and wildlife observation!
- Over 4,200 people came away from Refuge-sponsored interpretative programs with more insight into specific wildlife species and recreational opportunities in southeast Michigan natural areas, and how the Refuge is managed.
- Students from Munger Middle School in Detroit attended the 3rd Annual Sturgeon Day on the Detroit RiverWalk at Milliken State Park to learn about Lake Sturgeon that thrived when dinosaurs were at the height of their development. Partners in the event were the Alpena Fish and Wildlife Conservation Office, Detroit River International Wildlife Refuge, Detroit Riverfront Conservancy, Michigan Department of Natural Resources, Michigan Sea Grant, and the U.S. Geological Survey's Great Lakes Science Center.
- 2017 began the Refuge Partner Teacher Program and has already yielded positive impacts on the Refuge's environmental education program. Thirteen Partner Teachers attended a two-day teacher workshop to learn how to use Refuge created curriculum and materials, with more waiting in the wings for the opportunity. This type of partnership with teachers, where we ask them their needs and then deliver materials developed specifically for them, is a shining example of how the Refuge can be a community asset. Congrats Park Ranger Jennie Braatz, on creating an incredible program!
- In addition to beginning a Partner Teacher Program, the Refuge's Partner School Program was evaluated and tweaked for increased enjoyment and learning by Ralph J. Bunche Preparatory Academy students in Detroit. 2017 is the second year of the program and is proving to be a cornerstone of the Refuge's environmental education program.



Photo Credits: Tandem/USFWS (background photo), Michigan Sea Grant (sturgeon), Mike Grosso (deer and duck decoy), all others USFWS

# Maintenance

Maintenance is a critical part of Refuge operations and stewardship. In 2017, much of our efforts were still dedicated to tackling some of our maintenance backlog that has built up over several years. Many of the new Refuge Units we received through donation required maintenance. Multiple repairs had to be made to the Ford Marsh Unit, including repairing serious erosion on the north dike and the rock dike protecting the marsh from Lake Erie. At the Brancheau Unit, another section of the seawall required repair due to the extended period of high water in Lake Erie.

This year Maintenance Mechanic, John Nicely was able to address many of the roads throughout the Refuge. Many were repaired, re-graded, and re-graveled, including rehabilitation of Blanchett Road multiple times throughout the year. The new dike tops at the Fix Unit were graveled with a base layer of gravel, and large stone was placed around the newly installed pipes and gates at the Refuge Gateway. This year the refuge maintenance shop received new gutters, downspouts, and ice guards, as well as a new rainwater collection system.

Once again John Nicely assisted Visitor Services with priority projects such as work on the Orange Trail, construction of a hunt parking lot at the Fix Unit, and design and construction of an apparatus to install an entrance sign at Sugar Island. John Nicely and Visitor Services Manager, Jody DeMeyere also worked together to provide the Stewardship Crew with a day of safety training and a refresher of standard procedures.



The Renovated Dike at Ford Marsh



Patching a hole at Ford Marsh



Path improvements at the Brancheau Unit



Road improvements at the Brancheau Unit



Stewardship Crew Safety Training

# Capacity Building and New Initiatives

The International Wildlife Refuge Alliance (IWRA) is the Friends Organization of the Refuge and continues to achieve its goals to foster conservation, increase Refuge visibility, encourage support, enhance quality of life, and build the capacity of the U.S. Fish and Wildlife Service 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 2017, IWRA was honored to present the Individual award to Dr. Russell G. Kreis, Jr., an award-winning Great Lakes scientist whose career included the past 20 years with the U.S. Environmental Protection Agency’s Office of Research and Development in Grosse Ile, Michigan. Michigan Sea Grant received the non-profit award for their work through research, education, and outreach dedicated to the protection and sustainable use of the Great Lakes and coastal resources. Michigan Sea Grant has been involved with the Refuge and IWRA since their inception. CN (Canadian National Railway) received the corporate award. They have gone from a business focused primarily in Canada to a full-fledged North American railway serving customers across North America and provide compelling experiences meant to inspire and educate the next generation of conservationists.

## *IWRA Launches Endowment*

In support of the Refuge’s mission, IWRA has created an endowment with the Community Foundation for Southeast Michigan to help sustain and deliver quality conservation and outdoor recreation in the Refuge. Considerable funds will be needed to operate, maintain, and program the Visitor Center, school ship dock and fishing pier, trails, environmental education shelter, and wildlife observation decks with quality. This endowment also helps protect the initial investment (i.e., land acquisition, restoration work, the Visitor Center building) and ensures a long-term mechanism to operate, maintain, and program these facilities and habitats with quality. For more information contact the IWRA office at (734) 692-7671 or [iwr\\_alliance@yahoo.com](mailto:iwr_alliance@yahoo.com)

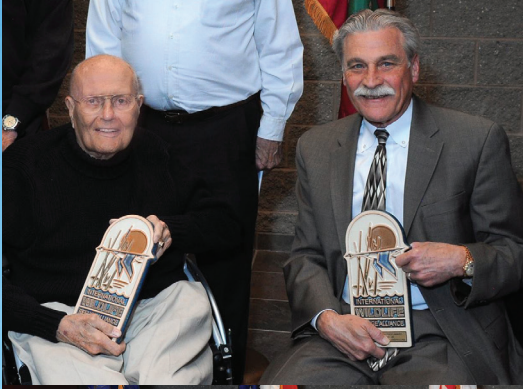


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# What's Next

In 2018, the Detroit River International Wildlife Refuge will open its Visitor Center, while continuing with habitat restorations and visitor services to engage our urban audience. The Visitor Center will be open daily. Considerable staff and volunteer time will be needed just to run the Visitor Center. Recognizing this reality, a list of 2018 Refuge priorities is presented below:

- Holding a grand opening for our Visitor Center at the Refuge Gateway
- Ensuring that all visitors have a quality experience and want to return
- Welcoming a new Refuge Biologist to the station
- 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 the Detroit River-Western Lake Erie Cooperative Weed Management Area
- Improving the Refuge's hunting program based on feedback from the 2017 season
- Continuing invasive species management at specific Refuge units, including undertaking prescribed burns
- Completing habitat projects, 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 and their hours of service
- Supporting another IWRA fundraiser in April 2018
- 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 RiverWalk
- 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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