

Transitions to the Future



Detroit River International Wildlife Refuge
Annual Report 2018



Dear Friends,

I am pleased to introduce the annual report of progress and success for the Detroit River International Wildlife Refuge. This year is particularly challenging as I remember the man who was the wind below everyone's wings to make this happen. I miss him every day, but I do know his charge to me was to protect and support this project which he loved so much.

As you know, John passed on February 7. It is impossible to not feel the tug of his passion for the Refuge on my fingers hitting the keyboard. I have many wonderful memories with John at the Refuge and those times will never be forgotten. But the Refuge represents more than memories, it will forever represent his commitment and passion for protecting ecosystems, wildlife, and nature and connecting them to our diverse community while building a strong sustainable economy. We share that passion and commitment, as well as the knowledge that the Refuge is a remarkable resource for our region. It demonstrates the resilience of nature and the people of our community when we come together as partners toward a goal for the common good. I am proud of the work of the Refuge to protect our precious natural resources, instill those values in our community, and share them with generations to come.

2018 was a year of transition for the Refuge. As the year began, John Hartig retired as Refuge Manager after leading its founding and development for 14 years! During his tenure, Dr. Hartig led land acquisition, visioning and planning, treatments of invasive species, built staff capacity, and fostered years of improvements at the Refuge Gateway including habitat rehabilitation and construction. He also excelled at forging and nurturing the many exceptional partnerships that are the hallmark of this amazing Refuge. Dr. Hartig's many accomplishments will bear fruit for decades to come. Mid-year a new Refuge Manager, Susan White, joined the team, returning home to the metro-Detroit area after 30 years working to conserve coastal resources around the country and internationally. We also welcomed a new Biologist and a Transportation Fellow, further expanding staff capacity to conserve wildlife and connect with our community.

During these transitions, the skeleton Refuge crew continued to further its mission -- treating more than 1,000 acres for the control of invasive species like *Phragmites*, buckthorn, and garlic mustard. The team welcomed nearly 12,000 visitors to the Refuge including roughly 750 hunt visits and 1,000 visits to observe and photograph wildlife. The Refuge also hosted 195 volunteers who contributed more than 11,000 hours of work – the equivalent of more than 5 full-time staff at a value of more than \$275,000! I can't wait to see what is accomplished once the Refuge Gateway and John D. Dingell Jr. Visitor Center is completed and open to the public.

These significant accomplishments, and others, are highlighted throughout this report. I encourage you to review it with the pride of knowing that what is done at the Refuge, is done through partnerships in our community. If you haven't already, I encourage you to be a part of it too. Slow down, walk around Gibraltar Bay Unit, participate in the Point Mouillee Waterfowl Festival, take a kayak trip, or watch the eagles – get out there and enjoy your own backyard. This Refuge, this community, is a model for the world of reimagining urban lifestyles and joining cities and wildlife conservation...and we're just getting started!

Sincerely,



Debbie Dingell
Member of Congress



Photo Credit: Office of
Congresswoman Dingell

Refuge Manager Musings by Susan White

I have a sign in my house that reads “Home is where your story begins”. It’s a favorite of mine because it was a gift when my son, now 24, was young and his love of literature began. Today, it means even more to me since coming home – back to the Detroit area – after 30 years of working and learning about wildlife conservation around the world. Part of my reason for coming back was my yearning to apply what I’ve learned to the place where my story began, in the hope that I can encourage a new generation to dream, share stories, and connect with nature. I want to help advance the vision of this Refuge – where everyone has access to the beauty of the Detroit River and ensure everyone has the chance to enjoy a peaceful walk through the forest, fish, hunt, or listen to bird songs. Here, everyone can take pictures, learn about local wildlife, or just sit and watch the graceful flowing water or happy kids playing with bugs. I’m not a skilled birder. I’m not a moist-soils expert. Instead, I’m a seasoned Refuge Manager who knows conservation. I’m also a lot like the 7 million people living within a 50 minute drive from the Refuge – still learning and appreciating being a part of the community of nature. I believe in leaving the world a better place than we found it and the power of partnerships to get things done. I’m grateful to now be a part of the International Wildlife Refuge story that embodies those beliefs.

A lot has changed in 30 years, for me and Detroit; and a lot has changed for the Refuge in its 18 years. That’s why we’re calling this 2018 Annual Report ‘Transitions to the Future’. In 2018 we have a new biology team, new fellow and interns, a new manager, new volunteers continue to sign up with a new volunteer coordinator, new partnerships are being forged, and eventually a new center will open at the Refuge Gateway. New ideas and drive bring changes, and through our transitions we are committed to honoring the years of work of thousands of people and building on it all. Thanks to the amazing history of this Refuge, our partners, and communities the Refuge is successful today. Together with

our International Wildlife Refuge Alliance partners, we have a strong foundation as we continue to build on the Refuge’s vision. It’s great to be a part of and I’m proud to begin my tenure at DRIWR reporting the work of our team in 2018. There is a lot going on and through the transitions you’ll find this team maintaining the Refuge traditions of excellence and progress for the critters and the community. Please enjoy our stories in this annual report and I look forward to seeing you on the Refuge!



7 BAT SPECIES

found in Refuge units

120,712 RAPTORS

*from 15 raptor species
counted during
Detroit River Hawk Watch*

8,000 ACRES MONITORED

for invasive plant species

150 ACRES CLEARED

*of invasive
Phragmites, Alder,
and Buckthorn*

3 REFUGE UNITS OUTFITTED

*with gauges to monitor
changing water levels*



Refuge Biologist Jessie Fletcher

The Refuge gained a new Refuge Biologist in April 2018. Jessie Fletcher is a native Michigander with a Bachelor of Science from the University of Michigan and a Master's of Science in Fish & Wildlife Biology and Management from State University of New York College of Environmental Science and Forestry. Previously, Jessie was a U.S. Fish & Wildlife Service Directorate Fellow at Agassiz National Wildlife Refuge in northern Minnesota. She spent 2018 at Detroit River getting up to speed with Refuge issues, trainings for Refuge biologists, and taking charge of biological monitoring on the Refuge.

Birds, bats, and all things biological monitoring on the Refuge ramped up in 2018. The Detroit River Hawk Watch completed its 36th consecutive year of counting migrating raptors as they cross the Detroit River. Hawk counters spent 551 hours counting 120,712 migrating raptors for a total of 15 different species! This successful citizen science program would not be possible without the Lake Erie Metropark who hosts the Detroit River Hawk Watch every year and the dedicated volunteers who spend so many hours with their eyes in the sky.

The USFWS Avian Radar Team deployed a mobile radar unit during peak bird and bat migration. The radar data they collect gives a broad picture of migration in southeast Michigan and shows how Lake Erie affects animal movement. The team also set up acoustic bat detectors and confirmed seven bat species that forage on the Refuge! Little brown bats (*Myotis lucifugus*) and tricolored bats (*Perimyotis subflavus*) are two species that have been on the decline due to the white-nose syndrome fungus, but were "heard" moving on the Refuge.

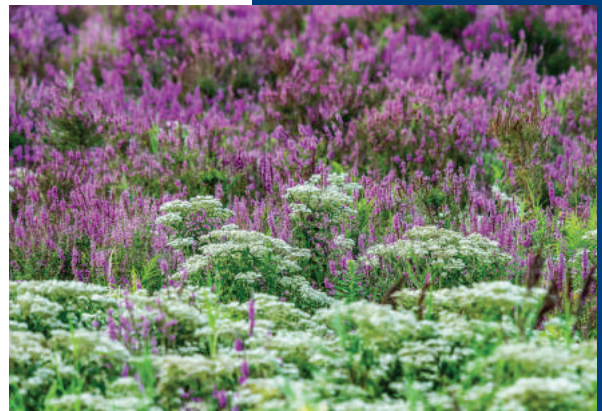
Photo Credits: USFWS

Refuge staff, with help from the USFWS Midwest Regional Hydrology Team, installed instruments to read water levels at three Refuge units. This essential step provides crucial data for managing water in wetland ecosystems and gives the best benefits of waterfowl and waterbirds. 2019 will be the first full calendar year of water level monitoring, establishing a baseline to understand changes in Refuge habitats over time. This data is particularly important for managers to understand and plan for impacts due to global climate changes.

In 2018 the Refuge team welcomed two new technicians to continue grant-funded Early Detection Rapid Response (EDRR) monitoring protocols. The new 3-person crew surveyed over 8,000 acres of coastal wetland, marsh, prairie, and forest habitats, mapping populations of both invasive and rare native plants. Two islands were thoroughly surveyed for the first time (Mud and Humbug Islands). Largely left alone since the USFWS acquired these islands, it proved to be an exciting adventure for the EDRR team, scouring the small river islands for problematic plants. While also keeping a watchful eye out for rare botanical finds.

The technicians treated almost 150 acres of invasive *Phragmites* with herbicide, using the MarshMaster, a tank-looking amphibious vehicle that allows the biologists to get into marshlands and broadcast spray the tall non-native grass. Most of this treatment occurred in coastal wetlands along the Detroit River and Lake Erie. Additionally, 861 invasive glossy buckthorn (*Frangula alnus*) and black alder (*Alnus glutinosa*) trees were treated using methods including hacking, drilling, and herbicide application. Treating invasive species helps managers control the spread of these problematic plants across the landscape and provides room for native plants and the wildlife that depend on them to grow.

Refuge staff worked with partners such as Consumers Energy, Ducks Unlimited, and the International Wildlife Refuge Alliance to engineer and design a replacement water control structure for the Lady of the Lake Unit. Once installed, the structure would allow for passive water level management and allow better fish passage between the unit and Lake Erie.



Technicians Alexa Blankenship,
Jessica Fransted, and Tyler Dolin

Photo Credits, Staff Photo: USFWS; All Others: Tom Kechelmeyer

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Participants

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Participants

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Partners

Partnerships are the hallmark of the Detroit River International Wildlife Refuge. Governments, schools, community groups, businesses, and private organizations all help the Refuge to achieve the shared vision of connecting people with nature, learning about our neighboring wildlife, and building sustainable communities. Refuge staff participate in and support regional collaborations that make that vision a reality.

- The Metro Detroit Nature Network, a collection of environmental and educational organizations in Southeast Michigan (now called SEMIWILD) elected Refuge Visitor Services Manager, Jody DeMeyere, as Co-chair.
- We began a new concept to share interns with other conservation/recreation entities across the region. Intern Rachel Felder, for example, worked for both the Refuge and Detroit Outdoors.
- Refuge staff sit on Detroit's Outdoors Advisory Council to bring camping back to Rouge Park.
- Transportation Fellow Vince Ziols joined the Refuge for a one year fellowship and has been assisting partners in increasing access to metro Detroit's nearby natural areas.
- We're pleased to begin a new partnership with the City of Ecorse, our northern Gateway Community!
- The International Wildlife Refuge Alliance (IWRA) continues to be the "best friend" of the Refuge. Refuge staff introduced the Board, including its many new members, to many Refuge units while providing an overview and context to the work we do together.
- We partnered with DTE Energy for the annual Eagle Tour.
- The Grosse Ile Nature and Land Conservancy hosted monthly events at the Refuge's Gibraltar Bay Unit.
- We participated at numerous festivals and events throughout 2018 to provide community outreach and information about wildlife.



Photo Credits: USFWS

Volunteers

Volunteers continue to donate their time and talents to assist with special events, stewardship crew work, photography, and providing outreach to the local community. We are indebted to their efforts. The volunteer program continues to build and revamp as we transition to new programs and priorities:

- The hardworking stewardship crew volunteers continue to expand the Refuge's habitat management and maintenance efforts at Gibraltar Bay, Gibraltar Wetlands, and Humbug Marsh. Stewardship crews perform trail maintenance, invasive species removal, and a wide assortment of necessary but odd jobs that might otherwise go undone without their dedication and talent.
- The International Wildlife Refuge Alliance (IWRA) hired a part time volunteer coordinator, Shannon Nelson, for the Refuge to provide a central point-of-contact for our growing cadre of volunteers. Shannon hit the ground running to refresh the volunteer program from top to bottom.
- Behind the scenes work to standardize the volunteer program, including standard operating procedures, creation of a volunteer email account (driwr_volunteer@fws.gov), development of a volunteer handbook, and consolidation of Job Hazard Assessments continue.



Refuge Gateway Preparations

Once completed, opening the Refuge Gateway will take more than turning a key. Planning and preparations take months to develop operating protocols, maintenance schedules, acquiring equipment and amenities, and more. In 2018, we focused on those ‘behind-the-scenes’ preparations:

- Wayne County and Refuge staff advanced the partnership agreement for the Refuge Gateway, developing functional protocols for facilities and habitat maintenance and operations.*
- Working with state partners, sampling for the picnic, event, and children’s areas were completed*
- Picnicking for the whole family will be easier with the addition of 18 concrete picnic tables.*
- Students will have a prime location to sample water and identify aquatic critters on a new floating dock at the Monguagon Wetland.*
- Michigan Department of Transportation installed way-finding signage on I-75, directing visitors to the Refuge Gateway.*



Refuge Gateway Update

“Patience is a virtue” and we welcome the patience and understanding of our partners and communities as we all anticipate completion of the Refuge Gateway. Since its initial ground-breaking in 2013, the vision of the Refuge Gateway has been of connecting people with nature at a world-class facility and fishing pier and the rehabilitation of an industrial brownfield to a welcoming riverfront greenspace. With perseverance and a lot of hard work, that vision nears reality.

In 2018, construction continued at the Refuge Gateway and the John. D. Dingell Jr. Visitor Center. “Phase II” work on the loop road was completed, including remediation of previously unknown contaminants that were unearthed. Preparation for a kayak launch also began and planning for a nature play area developed. “Phase I” construction of the visitor center and entrance area has been under the control of the bonding company, Western Surety, since the 2017 default of the original contractor. The Fish and Wildlife Service continues to monitor progress on site and maintains regular communication with the surety and prime contractor. In 2018 landscaping began, asphalt roadbeds were laid, the rainwater collection system became operational, and painting, plumbing, and electric neared closer to completion. As the winter season began, a persistent problem remained unsolved in the gravity-fed sanitary sewer line to the city main. While they prepared to develop a solution for sewer, contractors continued working on other items inside the building throughout the winter. As of this writing, a completion date for the Refuge Gateway remains undetermined as we push for resolution of the sanitary sewer problem and completion of the punch lists. The Refuge Gateway is like an exquisite gem – a diamond – that will shine in its brilliance only after layers of yuck is removed...and it’s getting close.

Photo Credit: USFWS

Connecting to Natural Open Spaces

USFWS/National Wildlife Refuge System’s national strategic plan, called “Conserving the Future”, includes a vision to reach more of the American people by fostering more partnerships and improving connections to urban communities through the Urban Wildlife Conservation Program (UWCP). DRIWR is one of the nation’s 14 priority Urban Wildlife Refuges and a testing ground for programs, projects, and partnerships for the other 101 Urban Wildlife Refuges in the nation.

The UWCP brings increased attention for improving transportation systems to these recreational areas, specifically through alternative transportation, or transportation modes other than private automobile usage. Developing projects and programs in public transit, bicycle infrastructure, recreational land and water trails, and other modes are just some ways public land agencies work with partners to improve access to outdoor areas for everyone.

One goal of the Refuge is for all residents of southeast Michigan to have easy access to open areas and other natural areas on the Detroit River/ Lake Erie. Refuge staff work across agencies to ensure that whether a resident lives in a rural, suburban, or urban environment, they will be able to enjoy our region’s natural open spaces for recreation and learn the importance of conservation and stewardship to protect these resources for future generations.

Access and transportation are important components of how to support people – nature connections. Here at Detroit River IWR we’re working with partners to improve transportation options across the Metro Detroit region. We’re being strategic about alternative transportation, visitor/user safety, and widening the area of accessibility into the Refuge through Greenways and Blueways.

Some of the many projects Refuge Staff collaborate on include:

- W. Jefferson trail extension from Elizabeth Park to the Humbug Marsh Trail
- River Rouge/Ecorse protected bike lanes through the Transportation Alternative Program Grant
- Friends of the Rouge improving access and safety on the Lower River Rouge Water Trail
- Wayne County Community College’s intercampus shuttle with future connector to the Refuge Gateway
- River Raisin Heritage Corridor – East Master Plan
- Non-motorized pathways on the International Gordie Howe Bridge
- Ralph C. Wilson Centennial Park in Detroit
- Joe Louis Greenway, which will provide non-motorized connection through metro Detroit
- Downriver Linked Blueways Kayak Trail



Ralph C. Wilson Centennial Park concept model

Maintenance in 2018

During 2018, John Nicely, the Refuge Maintenance Mechanic applied his significant skills and knowledge repairing dikes at the DRIWR Brancheau Unit due to erosion and muskrat damage. To complete these repairs, an excavator was borrowed from our neighbors at Shiawassee National Wildlife Refuge, requiring oversize load permits to transport to and from Brancheau.

***John hauled over 300 tons of clay and 200 tons of rip rap** to repair both sides of the center dike that connects the two units the **area repaired was 250 feet** in length. He also **hauled over 100 tons of clay** for other dike repairs. The whole project took over three weeks to complete!*

John also took advantage having the excavator at Brancheau. The main ditch pipe had to be replaced and a new flap gate needed to be installed. David Peters, the Shiawassee NWR Maintenance Mechanic, graciously assisted John in replacing both the pipe and the flap gate.

John Nicely also spent significant time preparing for the Refuge's mandatory annual station safety inspection. Due to his meticulous safety planning and preparedness, attention to detail, and the Refuge's overall commitment to ensuring a safe workplace; we passed with flying colors. Throughout the year, many roads were also repaired, dikes graveled, and parking lots and trails maintained.



Maintenance Mechanic John Nicely



Dike Repair at the Brancheau Unit



A new path to the pump station at the Brancheau Unit

The International Wildlife Refuge Alliance (IWRA) is the Friends Organization of the Detroit River International Wildlife Refuge and continues to work towards its goals to foster conservation, increase Refuge visibility, encourage support, enhance quality of life, and build 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 2018 IWRA presented two “John D. Dingell Friend of the Refuge Awards” in recognition of leadership and dedication to conservation on the Detroit River and western Lake Erie Basin. The Individual Award was given to Richard Mills. Richard has been active with DRIWR for over ten years, beginning with building the short boardwalk near the Humbug Marsh Education Shelter. Since then, his contributions include helping build two observation decks at the Gibraltar Bay Unit, the Walnut Grove observation deck at Humbug Marsh, the eagle nest observation platform at Humbug Marsh, and several benches for the Humbug Marsh Education Shelter. He has also provided materials and expertise for many other projects and donated beautiful furniture pieces for the silent auction at IWRA’s Annual Benefit Dinner. Some of his furniture will also be featured in the observation room of the new Visitor Center. Richard is always available to share his knowledge and brainstorm ideas to ensure a project is successful. Richard Mills has helped to make the Refuge a more welcoming and accessible destination for all.

The Non-Profit Award was presented to The Nature Conservancy. The Nature Conservancy (TNC) works with landowners and other partners to protect natural areas and manages 20 preserves in Michigan, including Erie Marsh Preserve. Erie Marsh Preserve is one of the southernmost units within the DRIWR acquisition boundary, where it is cooperatively managed by TNC, USFWS, and other partners. Erie Marsh Preserve contains 11% of the wetlands in Southeast Michigan. It is critical habitat for migratory birds, and state-threatened plants: American lotus and swamp rose-mallow. TNC is also a partner in the Detroit River-Western Lake Erie Cooperative Weed Management Area (CWMA), a team of 13 organizations including DRIWR and IWRA that work together to manage invasive plants in natural areas. TNC Restoration Director, Chris May, is the CWMA Chair and has been crucial to the success of this program in advising, grant writing, and sharing resources. TNC provided financial and technical support to the Refuge, leading to more land acquisitions and habitat restoration. Without TNC’s involvement, the Refuge would struggle to fund biological technicians, have fewer resources to combat invasive species, and have fewer acres of protected land.



Whats Next in 2019?

The Detroit River International Wildlife Refuge will focus on completing construction and opening the John D. Dingell Jr. Visitor Center. The staff will move from our offices at the EPA Large Lakes Research Station, with gratitude to our EPA colleagues for the long-time collaboration. Other Refuge efforts through the year will highlight:

Increasing Access and Wildlife Connections

- Improve access to the Refuge through new transportation alternatives with community collaborations
- Evaluate access opportunities for all Refuge units
- Support community events and environmental education with partners
- Review and update Refuge hunt regulations

Enhancing Habitats for Wildlife, and Inventory and Monitor Refuge Resources

- Complete a Water Level Management Plan
- Coordinate water level infrastructure planning and construction
- Develop inventory and monitoring protocols
- Monitor, treat, and control invasive species within the Detroit River-Western Lake Erie Cooperative Weed Management Area
- Maintain habitat management and access initiatives
- Support annual Hawkwatch events
- Sustain Lake Sturgeon monitoring and Aquatic Invasive Species monitoring through FWS Fisheries

Opportunities for Engagement

- Refresh Refuge social media presence
- Maintain IWRA collaboration
- Develop protocols for operating visitor center with volunteer cadre
- Connect with and support gateway communities to the Refuge

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