

ANNUAL REPORT 2023





We exist because...



Fresh water is a finite resource. We are working to protect it. The Ottawa National Wildlife Refuge Complex is located along the southern shore of Lake Erie, the 11th largest lake in the world. The Great Lakes contain about 20% of the world's fresh water but they are in jeopardy. The wetlands of Ottawa National Wildlife Refuge play a critical role in the Lake Erie ecosystem, acting as the kidneys of the landscape; working to protect NW Ohio's drinking water, work, and leisure. They also provide important nesting and stopover habitat for birds, fish and wildlife. Friends of Ottawa National Wildlife Refuge works to support Ohio's only national wildlife refuge complex through fundraising and volunteerism so that we can be the change that our wildlife and community deserve.

My name is Tajinder Singh, or "TJ" as everyone lovingly calls me. I consider myself relatively a newbie when it comes to enjoying nature and wildlife and especially capturing its beauty through my camera (started in 2020). I have been working from home for the past 10+ years, and evenings were mostly spent coaching a robotics team. Once my kids graduated out of robotics, I discovered Ottawa National Wildlife Refuge and the surrounding marshes where I enjoy spending my time.

Even though I have a 45 minute drive, at the first available opportunity I would be at one of the marshes almost every evening and especially whenever the Wildlife Drive was open. I was fascinated by the variety of birds we have in our area and how many of them find the refuge as their home either throughout the year or as a stopover during migration. I still remember that moment when I saw my first bald eagle flying overhead and my first owl in the sycamore tree behind the Visitor Center. I was hooked: both to birds and to the refuge!

Then, I learned about the work that Ottawa National Wildlife Refuge staff and the Friends group do with so few resources to make sure the refuge is a place for birds, animals, and plants to thrive. I joined the Friends of Ottawa National Wildlife Refuge Board of Directors in 2022 to support the mission of youth development, land acquisition for conservation, and increasing public access around the refuge and its satellite properties.

I am grateful to the wonderful staff of the refuge, especially Jason and Rebecca, who ensure a smooth operation of the refuge, and Aimee and her team in supporting the mission of Ottawa National Wildlife Refuge and the National Wildlife Refuge System. Thank you to all who work, volunteer, donate, or visit Ottawa National Wildlife Refuge.

— *Tajinder (TJ) Singh, 2023 Annual Report Cover Photographer*



Letter from the President

“Leave the road. Take the trails.” - Pythagoras

We took the trails by storm this year, and all because of you. It is because of the support of our donors, volunteers, and partners that Friends of Ottawa National Wildlife Refuge was able to create a legacy for our future generations and give them the tools to continue our conservation efforts in the future. It's been an incredible year for Friends of Ottawa National Wildlife Refuge!



Kendra Foust

2023 Friends Board President

This year marked our 10th year of the Intern Program. Every year we sponsor 6-10 internships, and we have now worked to mentor dozens of future conservation leaders by providing crucial experiences needed to succeed in natural resource careers. Additionally we worked with the refuge to create a scholarship program. This program will allow students from Ottawa and Lucas Counties who are pursuing a degree in natural resources an opportunity to apply for support. We also received a generous bequest from a long-time refuge supporter which allowed us to establish an endowment fund that will allow lasting support of our conservation efforts.

We really couldn't do it without you! This year was a true testament to that! In September, the Friends received the highest honor a Friends group can receive by being named the National Wildlife Refuge Friends Group of the Year by the National Wildlife Refuge Association at an awards ceremony in Washington D.C.

It's been an incredible experience to be the board president of Friends of Ottawa National Wildlife Refuge over the past two years. **Thank you for another amazing year!**

“When enough people come together, then change will come and we can achieve almost anything. So instead of looking for hope, start creating it.” — Greta Thunberg

2023 BOARD MEMBERS

Kendra Foust, *President*
Carol Fingerhut, *Vice President*
Joey Warner, *Secretary*
Ron Overmyer, *Treasurer*
Mary Willoughby
Kris Johnston
Jim Krieger
Michael House
Justin Woldt
Tom Romito
Tajinder Singh
Carolyn McClintock
Jan McDermott
Jacob Price
Pete Schwager
Tara Bostater

FRIENDS STAFF

Aimee Arent, *Executive Director*
Julia Hınca, *Nature Store Manager*
Madison Hinkle, *Seasonal Store Clerk*
Nicole Crofts, *Volunteer Coordinator*



Photo: Congresswoman Marcy Kaptur (left) attended the Refuge Awards in Washington DC to celebrate with Friends Board President Kendra Foust and Vice President Carol Fingerhut.

From the Manager's Desk



Looking to the Past to Inspire the Future

"The conservation of natural resources is the fundamental problem. Unless we solve that problem, it will avail us little to solve all others."
~ Theodore Roosevelt

The U.S. Fish and Wildlife Service started our historical conservation journey in 1871 to address the declining fisheries off our nation's coasts and inland waters. The creation of the United States Commission of Fish and Fisheries gave life and a future to the U.S. Fish and Wildlife Service. Although our agency would go through several name changes over the more than 150 years, what has endured over the years is our unwavering commitment and dedication to conserve, protect, enhance, and restore fish, wildlife, plants, and their habitats.



Our mission has evolved and adapted to the conservation needs of our nation's fish, wildlife, and plant populations, especially as human population growth and demand for natural resources have grown. Our identity as a world leader in science-based wildlife management has been foundational to our work and how we engage partners and the public in meeting our federal trust responsibilities.

We have remained strong in our values and commitment to public service as our purpose has changed to address the ever increasing and evolving threats to species and their habitats.

The purpose (or why) the Service exists is most evident in the Endangered Species Act, Marine Mammal Protection Act, Migratory Bird Treaty Act, and the numerous other laws enacted by Congress that are now paramount to how we deliver our mission. We have been



entrusted to ensure the protection, and when needed, recovery, of fish and wildlife species and their habitats. Central to "why we exist" are the core values that help to define who we are as an agency and shape our behaviors. However, there is more to knowing your values than just knowing what you value.

In 2022 and 2023, the U.S. Fish and Wildlife Service's Values Journey was launched. This journey was to help create a "one" Service centrally focused on our core values by fostering belonging and engagement, stimulating new and different ideas, and heightening transparency, among other things. It was a co-creation process across the Service to generate discussions around our shared purpose and values. What came out of this 'journey' were five core values: **Stewardship, Integrity, Respect, Collaboration, and Innovation.**

These values probably come as no surprise. I think even before this journey, most of these values were front and center to how we conducted ourselves. However, this journey helped us to identify, define, and outline how we want to 'live' these values and share them.



Jason P. Lewis

Refuge Manager

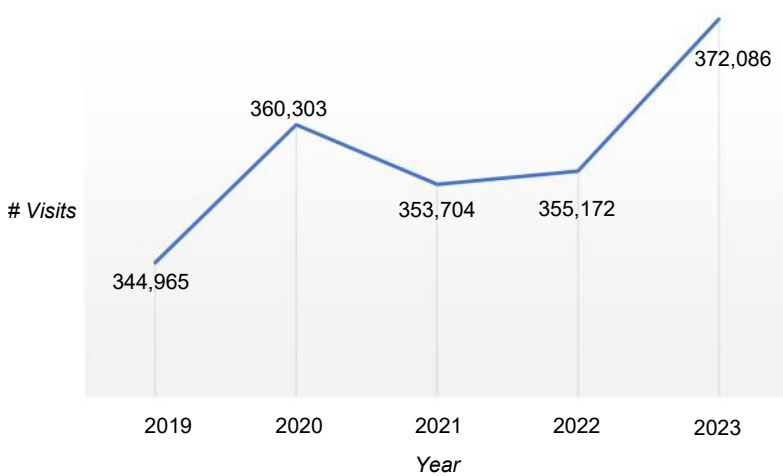
2023 was another phenomenal year for the Ottawa staff, Friends, volunteers, and our partners. We all held true to these newly defined core values as we delivered the Service’s mission in Ohio. Our conservation successes were only overshadowed by our resolve to engage and support our surrounding communities and provide dedicated public service.

Through our stewardship and collaboration, we acquired two parcels of land (Wagner and Velliquette) from the Friends of Ottawa NWR totaling around 27 acres, and Ducks Unlimited acquired the ~64-acre Camp Sabroske East Marsh. Ottawa National Wildlife Refuge initiated a partnership agreement with the Friends of Camp Sabroske to develop a wonderful public recreation area that will benefit the community and the camp for years.

With the support of our partners using a collaborative and innovative process, we enhanced and restored coastal wetlands at Cedar Point Pool 2, Navarre Marsh, Darby Marsh, and other Ottawa Refuge units representing more than 1,392 acres.

Although the refuge saw a further decline in the number of permanent staff, we were fortunate to be able to hire two term positions to support our Great Lakes Restoration Initiative (GLRI) projects. Park Ranger, Barbara (Basia) Gawin and Invasive Biological Science Technician, Alex Cherpes were wonderful additions to our team this year. We are excited about the work they will be able to accomplish conducting youth environmental education programs and managing invasive species.

Annual Visits to Ottawa National Wildlife Refuge (2019 - 2023)



The refuge has great things planned for 2024, none of which can we accomplish without the support of our Friends group, other partners, volunteers, and the communities we serve. I am looking forward to seeing the Sabroske Marsh Recreation Area come to fruition, additional GLRI and H2Ohio wetland acres restored, and numerous acres of native wildflowers and grasses planted to benefit wildlife. I am excited for our visitor services staff as they develop new programs and work collaboratively with our urban partners. I am thrilled for the Friends of Ottawa NWR and what they will accomplish in 2024. They continue to grow and prosper with the support of members and the community. The refuge has been able to lean on our Friends more and more over the last few years as federal budgets have declined. They’ve been so critical to our stewardship, collaboration, and innovation. Thank you for the support you provide to our Friends and to Ottawa NWR.

In the eloquent words of Rachel Carson, “*The balance of nature is not a status quo; it is fluid, ever shifting, in a constant state of adjustments. Man, is part of this balance.*”



REFUGE STAFF

- Jason Lewis, *Refuge Manager*
- Karl Fleming, *Assistant Refuge Manager*
- Ron Huffman, *Refuge Biologist*
- Jeff Finn, *Private Lands Biologist*
- Courtney Lopez, *Wildlife Refuge Specialist*
- Alex Cherpes, *Biological Technician*
- Rebecca Lewis, *Visitor Services Specialist*
- Basia Gawin, *Visitor Services Specialist (starting in June)*
- Chuck Shier, *Maintenance Mechanic*
- Alex Baginski, *Maintenance Worker*
- Ramsay Houze, *Maintenance Worker (through November)*
- Brandon Giesler, *Maintenance Worker*
- Keith (Troy) Atkinson, *Maintenance Worker*
- Keith Findlay, *Maintenance Worker*
- Kenneth Millerschone, *Maintenance Worker (through June)*
- Buck Buchanan, *Laborer (through April)*

Unfortunately, maintenance professionals Ramsay Houze, Buck Buchanan, and Kenny Millerschone all left the refuge this year. These individuals were vital to our operations and mission and they will be missed. Finally, 2023 was another record-breaking year for visitation with the refuge surpassing 372,000 visits. Visitation has more than doubled over the last decade.

At Ottawa National Wildlife Refuge, we are continuously adapting to the fluidity and ever-changing natural world around us and the federal fiscal uncertainties. We will continue our “Values Journey” holding firm to the five core values that give us strength, direction, and focus.

Your National Wildlife Refuge



The Ottawa National Wildlife Refuge Complex consists of three National Wildlife Refuges:

Ottawa NWR:

Located between Toledo and Port Clinton, this 8,369 acre refuge is managed for waterfowl, shorebirds, neotropical migrant songbirds, and a variety of plant and animal species. The three story Visitor Center and hiking trails are located here. A number of satellite properties are also part of this refuge.

Cedar Point NWR:

Cedar Point NWR's 2,675 acres comprise the largest contiguous marsh on Lake Erie (U.S.). Aside from a designated fishing and kayaking area, access is by guided tour or permit only.

West Sister Island NWR:

This 82 acre island is situated in Lake Erie, about 9 miles from shore. It is the largest great blue heron, great egret, and black-crowned night heron rookery in the U.S. Great Lakes. Access is by permit only.

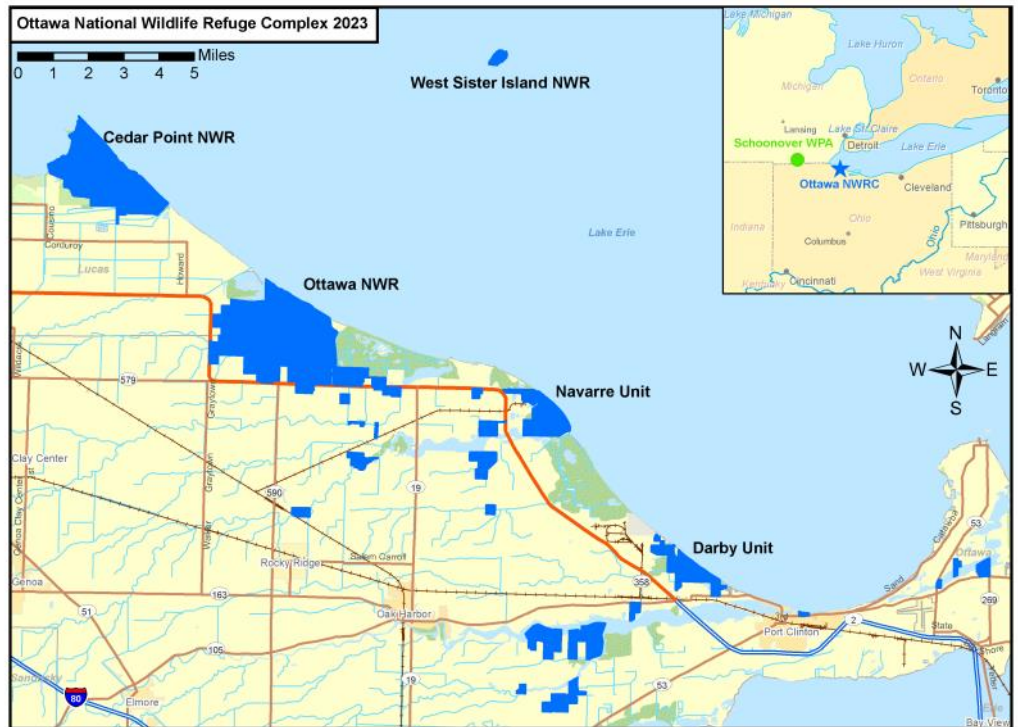
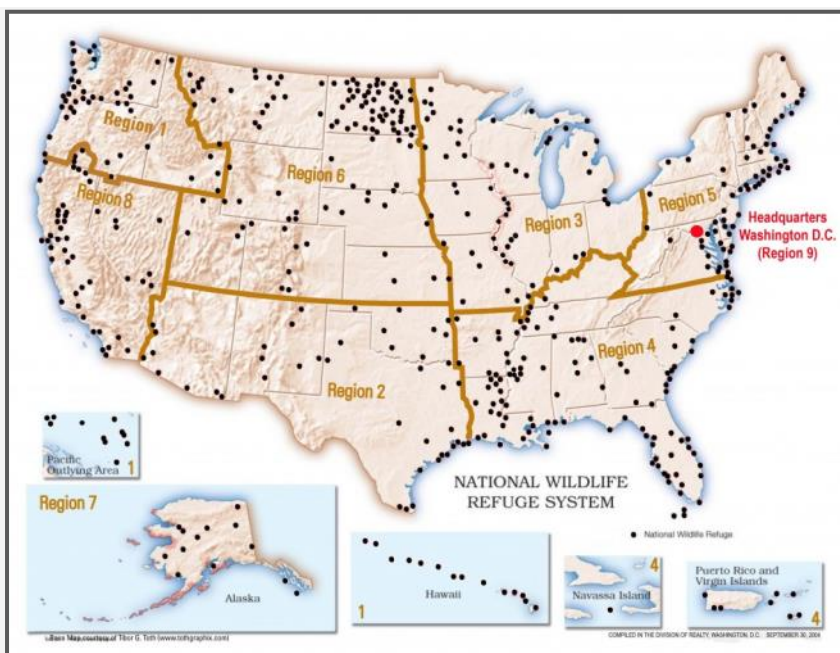


Photo: Summer Landscape by Lori Monska

Part of a Larger System



Ottawa National Wildlife Refuge is part of a much larger National Wildlife Refuge System. Known as one of America's greatest conservation success stories, the system has protected and restored habitats for hundreds of species including fish, plants, animals, and migratory birds.

Ottawa National Wildlife Refuge is part of Region 3 of the United States Fish and Wildlife Service. Also known as the Midwest Region, Region 3 encompasses eight states and four out of five U.S. Great Lakes.

For more information about the National Wildlife Refuge System, the U.S. Fish and Wildlife Service, and conservation priorities, visit www.fws.gov.

Barn Owls!



The nesting boxes in the barn along the Entrance Road were originally installed many years ago and were in very bad shape when refuge volunteer Jack Volker installed new boxes in the early 2000s. Nothing made us happier than to tell him that they were finally being used by barn owls!

New species at Ottawa National Wildlife Refuge with Trevor Zook

By now you may be aware of the pair of barn owls that nested at Ottawa National Wildlife Refuge this past summer. The birds were initially found on April 13, 2023 by Phoebe Jackson and me while we were moving barricades from the barn along the Entrance Road. A single bird flushed from the rafters and flew across the road, landing deep in the shrub lot. We watched for a while in amazement before the bird flew back to the barn and into a hole in the wall; the entrance to a nest box that had never been used. After careful monitoring, I saw the first egg a week later. By the first week of May, there were six!



Trevor Zook

At this point we were trying not to let word of our celebrities travel too fast since the birds seemed to respond somewhat negatively to people during the day. If a bird was flushed when checking the nest, it would return very soon when no people stood outside near the barn, but slower when there were spectators, and sometimes flying across Route 2 instead of towards the shrubs. We did not want to risk losing the birds or the abandonment of the nest to pressure, so we kept monitoring to a minimum and discouraged a strong presence near the barn. The birds seemed to care less about late night or early morning onlookers.



Trevor Zook

Barn owls typically incubate for about a month, and by early June we had six fluffy owlets screeching in the box. It was clear by their size differences which were the oldest, middle, and youngest, since the eggs seemed to be laid in pairs. Since these owls will spend up to two months in the nest after hatching, we got to watch them grow for quite a while. They all seemed healthy and well-fed. On June 30th, Dr. Blake Mathys (shown below) from Ohio Dominican University made the trek to the refuge to band the six young owls.



Trevor Zook

Sometime between the end of July and beginning of August, the birds fledged. For a while, a few people would arrive early in the morning and photograph the birds as they stepped out onto the awning of the barn and took brief flights around. Getting to be a part of this, finding the birds, seeing the first egg, watching them grow for months, and being there for the banding, is a once in a lifetime experience that I am incredibly grateful for.

All this being said, please be respectful of these birds if they return this coming spring. Our choice to keep news of their presence quiet as best we could might not be a popular one, but it was necessary for their eventual success. Seeing barn owls is an



Trevor Zook

amazing experience, and we do want people to have those experiences, but it cannot be at the birds' expense. Please do not trespass near the barn in order to get a better look. Let the birds be and give them space, and hopefully they will keep returning year after year, giving more people those once in a lifetime experiences, and most importantly, raising more screeching owlets.



Tajinder Singh

Learn more online!

Scan the code to visit a special page on our website with more photos and videos of the barn owl chicks as they grew up and explored their surroundings.



Refuge Financials



Ottawa NWR received approximately \$1.07 million in Congressional budget allocations in fiscal year 2023, down from \$1.2 million the previous year.

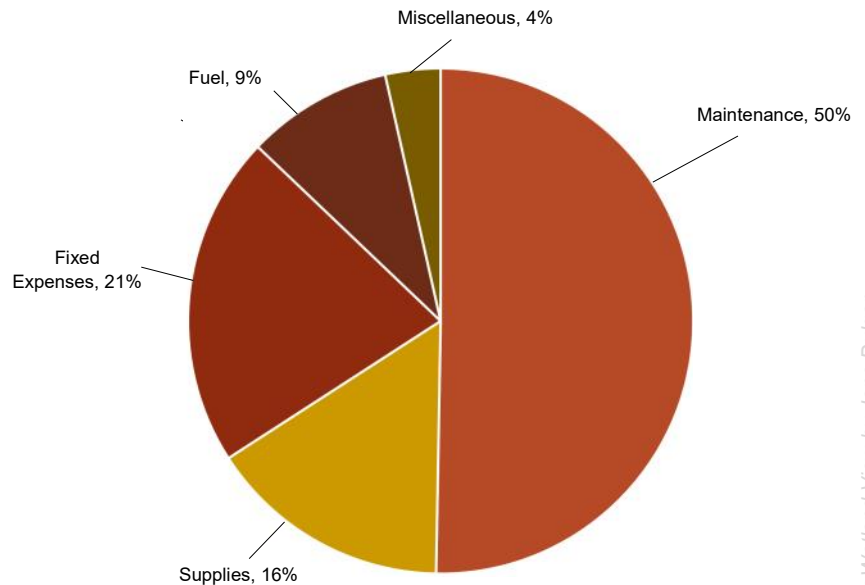
This year has been especially challenging for the refuge. Overall, the FY23 budget allocations were down from last year by over \$100,000. We were able to perform the most essential maintenance projects, but some other projects were postponed. The biggest challenges continue to be declining staffing levels resulting from vacant positions not being backfilled due to regional budget shortages within the U.S. Fish and Wildlife Service. Special project funding for habitat restoration and deferred maintenance from sources like the Great Lakes Restoration Initiative, Great American Outdoor Act, and other agency funding was used for our mission delivery. The Friends of Ottawa NWR were also extremely important to our operational sustainability. The Friends provided funding to support numerous projects and operational priorities outlined on the next page.

The largest utility expenditure is electricity. Most of our water control pump structures are electrically operated, and 60% of our total electricity usage was spent on water management. As you may know, we have a solar array located at the Visitor Center. The Visitor Center solar array supplies 2/3 of our electricity need during peak summer periods. Fuel costs were high again this year, although they were offset by special project funding that didn't impact our base budget. The station only had to spend about 9% of our discretionary funds on fuel.

The largest expenditure for our appropriated funds is salary, which utilized 81% of the allocated funding provided to the refuge. This salary is based on seven full-time employees. The refuge staff declined by one full-time staff person in 2023 compared to 2022.

Photo: Sandhill cranes in the marsh by Tony Everhardt

The Ottawa National Wildlife Refuge Complex had an operating budget of \$203,576, an 11% decrease over 2022.



Here is the breakdown of the expenditures for 2023:

- **Maintenance:** \$101,788, including repairs to properties, structures, vehicles, and equipment
- **Supplies:** \$32,572, including office and field supplies and visitor/volunteer services supplies for all programs
- **Fixed Expenses:** \$42,751, including utilities, phones, water, propane, trash removal, etc.
- **Fuel:** \$18,322 to fuel vehicles and equipment for all programs
- **Miscellaneous Expenses:** \$8,143 for training, travel, etc.



Friends Financials



2023 Revenue & Expenditures

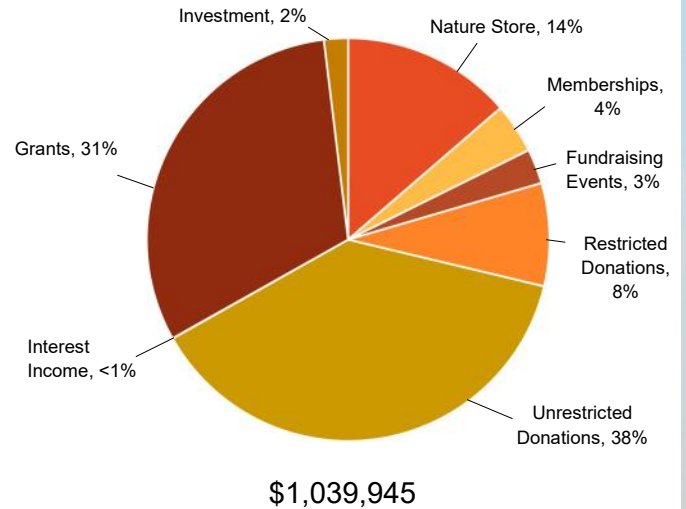
Government funding does not cover all that is necessary to manage a refuge. As a result, wildlife refuges depend on “Friends” groups like Friends of Ottawa National Wildlife Refuge (FONWR) to fill in the gaps, providing financial and volunteer support. In 2023, support of Friends of Ottawa National Wildlife Refuge through all revenue streams totaled \$1,039,945.

About \$422,347 of FONWR expenditures went directly to helping the Refuge Complex and community in the areas of conservation, wildlife protection, research, law enforcement, and education. Refuge support includes items such as visitor access and maintenance projects, intern stipends, and field trip transportation. This year refuge support included \$271,698 from grants and cooperative agreements for projects such as the Career Pathways Program and the restoration agreement through the Partners for Fish and Wildlife Program.

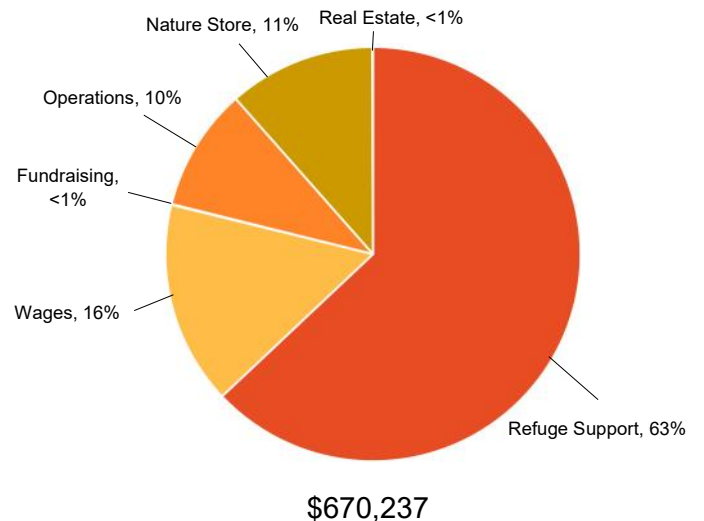
Summary of Friends Accomplishments in 2023

- ◆ Funded 6 internships that assisted refuge staff with a combined total of 2,920 hours of work and provided career development training opportunities for interns
- ◆ Continued expanding the Friends Career Pathways Program to provide additional opportunities to outstanding interns and selected two Level 3 participants who contributed 4,160 hours of work for community engagement, intern recruitment, and invasive species projects
- ◆ Added approximately 27.5 acres to Ottawa NWR through two land sales to the U.S. Fish and Wildlife Service
- ◆ Worked with the Partners for Fish and Wildlife Program to restore 215 acres of emergent wetland and 74 acres of upland pollinator habitat on private lands, and treated 450 acres of coastal wetland habitat for invasive species with an aerial herbicide application
- ◆ Purchased and planted over 250 native pollinator plants
- ◆ Led over 150 refuge tours on the electric shuttle that the Friends purchased in 2022
- ◆ Installed a livestream camera at Cedar Point National Wildlife Refuge viewable on the Friends website
- ◆ Supported the Glass City Bird Crew Collision Monitoring Project in Downtown Toledo through the purchase of supplies and community engagement
- ◆ Sponsored the Earth Heart Farms Fall Field Days event by providing volunteer guides and a tent for participant activities
- ◆ Purchased gravel for roadwork at Nehls and Marinewood Units to improve visitor access
- ◆ Provided funding for facilities maintenance including Visitor Center building repairs, pollinator garden pond replacement, cleaning contract for the Visitor Center and outdoor restrooms
- ◆ Provided funding for trails and grounds maintenance including signs for the Tree Trail and Fox Nature Preserve, a concrete walkway at Nehls Preserve, and pump maintenance

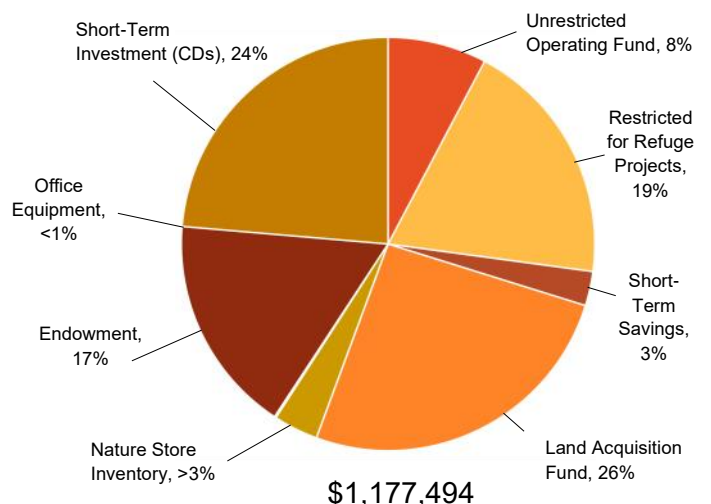
2023 FRIENDS REVENUE



2023 FRIENDS EXPENSES



2023 FRIENDS ASSETS



Friends Priorities



Impact Areas

◆ LAND ACQUISITION

Since 2013, the Friends have managed a growing fund for Land Acquisition and Restoration called the Joan and Richard Kimple Conservation Fund. One of our long-term goals is to establish a \$500,000 revolving fund that will allow us to aid the refuge with the purchase of land from willing property owners and restoration of existing refuge parcels from Toledo to the Sandusky Bay. **To date, we have purchased and conserved 69 acres.** We also entered into an agreement with the Partners for Fish and Wildlife Program to fund restoration projects on private lands.

◆ YOUTH DEVELOPMENT

Making sure that the next generation cares about conservation as much as we do is a priority for our group. Therefore Friends of Ottawa NWR provides life-changing career opportunities through living stipends for interns and field trip grants to bring schools and classes to experience all that the refuge has to offer. We also created an extension of the Intern Program called the Career Pathways Program that provides additional opportunities for outstanding interns. This cooperative agreement with the U.S. Fish and Wildlife Service allowed the Friends to develop scopes of work and priorities for Jessica Duez and Trevor Zook, increasing their responsibilities and impact while providing overextended refuge staff with much needed long-term assistance.

◆ PUBLIC USE PROJECTS

Friends of Ottawa NWR is committed to helping the refuge improve access for its six public uses: Wildlife Observation, Environmental Education, Interpretation, Photography, Fishing, and Hunting. We help to install access points with trails, observation decks and wildlife cameras, help to maintain public facilities, and keep the public updated and connected with what's happening at the refuge.



Photos: Intern Mary Shawaker at an outreach event; Friends staff and board at Howl-o-ween; the Jet Express next to West Sister Island National Wildlife Refuge by Chase Eagleson; a full shuttle ready to roll!

Photo: Summer Landscape by Amy Kocias



Events

We love sharing the refuge with you! Here are some of our favorite events of 2023...

• Boat Cruises for Conservation

The West Sister Island Sunset Cruises held on the Jet Express during May and August helped to raise over \$28,000 for refuge projects! Over 400 people joined us on Lake Erie as we cruised from Port Clinton around West Sister Island National Wildlife Refuge. This is the only federally designated wilderness area in Ohio and the largest great blue heron, great egret, and black-crowned night-heron rookery in the U.S. Great Lakes. Thank you to all who joined us.

• Virtual Program Series

We also continued our virtual program series, hosting 11 programs with 452 participants and 829 recording views! Thank you to our presenters Erika Lyon, Chrissy Mominee, Carrie Brown, Jake Schoen, Jeremy Dominguez, Mary Shawaker, Thomas deHaas, Lori Monska, Rebecca Lewis, and Meteorologist Ross Ellet.

• Shuttle Tours

Special thanks to all of our volunteer shuttle drivers (Lori, Bob, Wanda, Ray, Tajinder, Rick, Charlie, and Dave!) for sharing the refuge with visitors! We had great feedback from our first full year of offering this service to the public. If you are interested in joining or scheduling a tour of the hiking trails, please call the Visitor Center at 419-898-0014.



Creating a Legacy



Meridith R. Beck Memorial Blood Drive

The Friends teamed up with The American Red Cross to host a blood drive in memory of Refuge Friend Meridith Beck who passed away on February 24, 2023. Meridith had a lifelong mission of service to others and to the environment. For five years, she worked with the American Red Cross serving military hospitals, including a one-year assignment aboard the Navy hospital ship *Repose* in the waters of Vietnam. Meridith was the director of the Ottawa County Red Cross from 1972-1975. She was also a conservationist and worked tirelessly to preserve the natural beauty of our county.

Meridith loved the refuge and was always so excited to bring friends for visits to see the eagles and tundra swans and to connect with nature. She volunteered for several years as part of the North American Butterfly Association's butterfly count in remote parts of the refuge. She even created her own little backyard butterfly oasis near Port Clinton where migrating monarchs would flock as they crossed the lake on their journey to Mexico. She was an incredible advocate for wildlife, for youth (especially women) starting conservation careers, and for the conservation of the Lake Erie marshes.



Meridith's life revolved around service to her community. The Friends were honored to keep her memory alive by carrying on her mission of service to the community with 38 units of blood from donors on July 8, 2023.

Fox Nature Preserve Dedication

On June 2, 2013 the Friends went through a strategic planning retreat as we worked to write a 10 year plan. Part of that process involved conversations with Refuge Manager Jason Lewis about what he wished our group would be like in 10 years and the ways we could make a profound impact on the refuge. Jason said, "Wouldn't it be great if the Friends could purchase land for the refuge?" The Friends had an opportunity to purchase the 40 acres directly across SR 2 from the Visitor Center in 2018. Thanks to a bargain sale with Barbara Fox who saw the conservation value of the land, we accomplished that goal in 6 years instead of 10!

Meanwhile, the refuge was in the process of acquiring the adjacent 37 acres owned by Don and Donna Harder Genzman. This land was in the Harder and Nahs families for 75 years. Together, these two parcels and these two families helped to form the preserve.

A small dedication ceremony honoring the two families was held at the Fox Nature Preserve on April 29, 2023. Family and Friends walked the trail together and celebrated with hors d'oeuvres in the Visitor Center followed by the sharing of photos and stories.

On December 6, 2023, Barbara Fox passed away. We are so grateful for the time that we were able to spend getting to know Barbara and her incredible family. Each time we visit, something magical happens: bald eagles fly overhead, dickcissels sing, the entire field blooms yellow and purple, or snow crunches beneath our feet. It is a great honor to have been a part of the creation of this beautiful place and we hope you will honor the families who created it by coming to visit soon and often.



Photos: Meridith Beck with a monarch; Puddles the Blue Goose giving blood; the Fox family at the preserve dedication; Barbara Fox, Donna Genzman, and Diane Genzman Krieger at the preserve dedication

Celebrating 10 Years of the Intern Program

As we celebrated 10 years of the Intern Program in 2023, we reached out to former interns to see how they are doing. Our interns have gone on to do great work for conservation and our community!

"Working in the field of outdoor behavioral health has changed my life for the better in immeasurable ways, by giving me a community that I love and a career that fuels my soul, and I have Ottawa National Wildlife Refuge to thank for giving me the early opportunities to build my resume and my skill set to do what I get to do now." — Mary Jane Walther (2017)



MARY JANE
Walther 2017

NICK
Moore 2016



CARRIE
Miller 2014

MIKAYLA
Peaslee 2017-18



ELYSE
Bowling 2019



THOMAS
Worsham 2017



MATT
Siefert 2018



BETH
Parker 2016



More updates are available online! Scan the code to visit our website. Here you can read more articles, watch video updates, and learn more about the program.

Photo: Foggy Sunrise by Tony Everhardt

"My time at Ottawa National Wildlife Refuge was a driving factor in where I am now. Being able to get my start with the United States Fish and Wildlife Service through the Friends group is something I'll always be grateful for."

—Owen Seggaard (2018)



LOGAN
Sauer 2018



DUSTIN
Braden 2018 -19



BROOKE
Billock 2022



MARY
Shawaker 2023



OWEN
Seggaard 2018



HOLLY
Walp 2018



TREVOR
Zook 2020-Present



PHOEBE
Jackson 2021-Present



CLAIRE
Caryer 2016

"Through the Career Pathways Program, I have been able to experience what I believe to be a more authentic work environment that has truly helped prepare me for my future career in natural resource management, as well as further my training and acquire new certifications. I have always known

that I wanted to pursue a career in wildlife management, and my time at Ottawa National Wildlife Refuge has solidified that in more ways than I expected."

—Trevor Zook (2020 - Present)

"Through my internship at Ottawa National Wildlife Refuge, I learned I love talking with people and introducing them to all of the amazing outdoor spaces and activities in Northwest Ohio. I have enjoyed every one of my environmental education positions and I discovered this field and passion because of my internship at the wildlife refuge."

— Claire Caryer (2016)



TUCKER
Mills 2023

Visitor Services



The Visitor Services team at Ottawa National Wildlife Refuge has had a busy year keeping up with all the amazing projects happening on the refuge and trying to inform, educate, and engage the public about everything going on. At the start of the year, we had the Christmas Bird Count on New Year's Day, Chili Cookoff, Eagle Tours, and Lorax Day. As spring began, more and more groups came out to enjoy the refuge. May was busy as always with two days (May 10th and May 13th) having about as many visitors coming into the Visitor Center in a day as we'd seen all month in March. There were lots of bus tours, tram tours, and hikes offered to visitors from all around the world as they came to experience the spring migration on the refuge. We also had an increase in school groups coming out to participate in the festivities. The electric shuttle sponsored by the Friends made its spring migration debut and was out on the trails every day, connecting people with nature.

The summer brought people out to the refuge to enjoy more outdoor programming such as a Night Sky program, Storybook Trail at Fox Nature Preserve, Moth Nights, and paddling programs. One of our favorite programs was in July. A partnership with H2Ohio brought young conservationists from the Toledo Zoo Conservation Intern Program and the Ohio 4-H Junior Leadership Program and staff of the neighboring Magee Marsh Wildlife Area to Ottawa for a kayaking cleanup event on Crane Creek (photo below of Intern Alexis with a barrel she found). While on the water, naturalists and rangers shared information about the contributions of wetlands, benefits of native species, and research being conducted on the refuge. Afterwards, participants returned to the Visitor Center for a lunch panel on conservation careers where U.S. Fish and



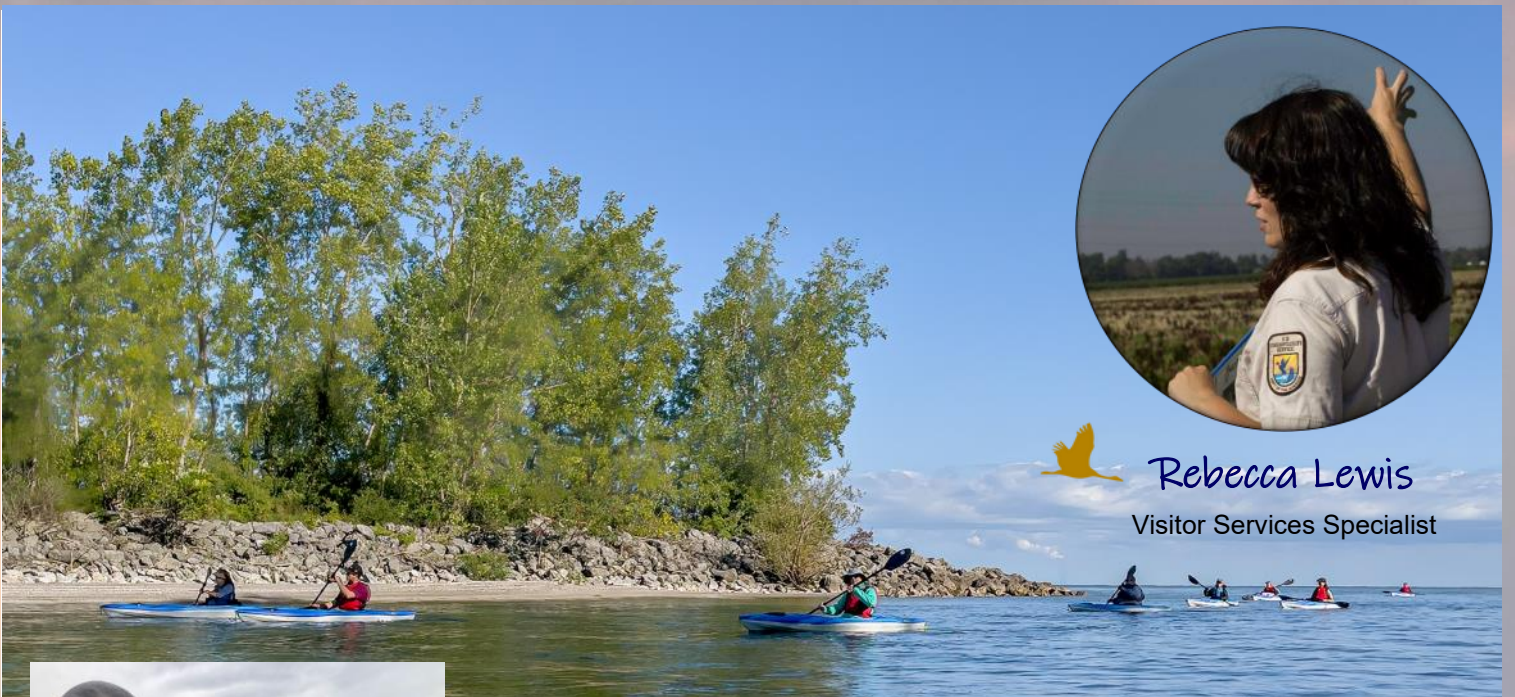
Wildlife Service employees from different divisions shared their experiences and advice with input from leaders in the other programs.

In September, the Friends group and Visitor Services staff collaborated to host an inaugural "Migration Celebration," which was a Friends' walk-a-thon style fundraiser with many free, guided activities throughout the month to celebrate the fall migration of birds, monarchs, and more. The hikes, bike rides (top photo), paddles, tree walk, moth night, yoga, crafts, and other activities were all very popular and well-received. Congrats to Lori Monska (Most Miles Moved at 270.50 miles) and Jennifer Shriver (Most Dollars Raised with \$880). We are hoping to hold the event again next year with even more participation and miles logged! *Photo: The Mobile Field Station was used at a National Public Lands Day celebration.*

Every year, the Ottawa County Soil and Water Conservation District organizes a Fifth Grade Conservation Field Day for all the schools within Ottawa County to develop awareness among middle schoolers by providing them with an immersive outdoor experience where they learn about natural resources and conservation and recognize their role and responsibility in these areas. On September 14th and 15th, students rotated through stations at the refuge to learn about a variety of topics including habitats, bald eagles, wetlands, water quality, and more.

The Believe in Girls Expo is the largest Girl Scout event in northwest Ohio. This year, many community partners came together on September 30th to present over 50 activity stations to scouts, troops, and their families. Visitor Services staff brought an inflatable archery set (shown left), which proved to be very popular. **Throughout the day, there were approximately 1,200 scouts and family members that participated in the lively event!**





Rebecca Lewis

Visitor Services Specialist



At the beginning of October, refuge staff assisted with Field Days at Earth Heart Farms, which is a STEAM-focused outdoor experience. **Over 100 middle school students participated in the environmental education days, learning about data collection through the GLOBE Mission EARTH (GME) program, locally run by the University of Toledo.** Refuge staff served as conservation experts and educated the students about natural resources by addressing a variety of topics such as



wetlands, birds, plants, and more. *Photos (l-r) Private Lands Biologist Jeff Finn shows a caterpillar to the class; Student sketches of the plants found at Earth Heart Farms by Yitong Jiang*



Sturgeon Fest, which took place at the Toledo Zoo on October 7th, is a free, annual event open to the public, where attendees can learn about these incredible fish and even get an opportunity to release one into the river. Refuge staff from Ottawa and fisheries staff from the Detroit River Substation in Gibraltar, Michigan participated in the event this year and interacted with over 700 visitors throughout the day. The highlight of the day was releasing sturgeon from a bucket down some slides into the river. *Photo: Refuge Manager Jason Lewis releasing a sturgeon by USFWS*

In November, a new partnership between Ottawa National Wildlife Refuge and the local brand FromStreamtoBay resulted in a beach cleanup event at two beaches at Cedar Point National Wildlife Refuge, which are usually closed to the public. Over a dozen volunteers came out for the event, and within

two hours, they found multiple tires, a buoy, an anchor, many plastic bins, and lots and lots of smaller plastic items that had washed up on the beaches. **They ended the day with a grand total of 731.45 pounds of trash, which is the highest trash pickup total of the year.** *Photo: Volunteers pose after cleaning up the beach by USFWS*



Basia Gawin

Visitor Services Specialist

In other exciting news, Basia Gawin, the new Great Lakes Restoration Initiative funded Park Ranger in Visitor Services onboarded at the beginning of June. Since then, she has planned and been involved in many community engagement and urban outreach projects, both on and off site. Some examples include guiding paddling programs in the local area and running the BARK Ranger program at the refuge as well as periodically presenting programming on the refuge such as shuttle tours and hikes for visitors, career panels for visiting students, and crafts and activities for kids. She is excited to bring the refuge to Toledo communities and, in turn, bring Toledo communities to the refuge this coming year.

Photo: Marsh Mallow at Dusk by Donna Ay

Eagle Scout Projects



Pollinator Garden Pond Rehab

Alivia Ernsberger helped to restore the pond north of the Visitor Center as her Eagle Scout project. She recruited a large crew to assist with removing all of the rocks and replacing them under the guidance of a consultant who builds ponds.

Photos: During and after pond restoration shown below by USFWS



A special thank you to Alivia, Tyler, and Daemon for their hard work and service to our community!



Little Portage Unit Kayak Launch

Tyler Shadoan completed his Eagle Scout Project at Ottawa National Wildlife Refuge's Little Portage River Unit. Tyler developed the kayak access site in support of the Portage River Water Trail Project. The Portage River Water Trail was a partnership between the Ohio Department of Natural Resources, Park District of Ottawa County, Friends of Ottawa NWR, and numerous other partners to develop and promote recreational paddling on the Portage and Little Portage Rivers. Tyler worked with local businesses to raise funds for the construction of the non motorized boat launch located on the Little Portage East Road in Salem Township. The Little Portage River boat launch provides visitors the opportunity to paddle the scenic rivers in Ottawa County.

Photo: Tyler and Refuge Manager Jason Lewis at the new launch site by the Park District of Ottawa County

Fox Nature Preserve Storybook Trail

The Fox Nature Preserve was further improved in 2023 with the addition of a Storybook Trail. Oak Harbor Public Library developed the project with Ottawa National Wildlife Refuge staff and funding was received from the Park District of Ottawa County.



Daemon Britt worked with the refuge staff and scouts from his troop to install the signs for the Wild Pages story trail as his Eagle Scout project. All of the labor to install the signs was done by the scouts and volunteers that Daemon recruited. A kick-off event was hosted in June. Families were excited to be the first to walk the storybook trail, and of course Puddles the Blue Goose, Refuge System Mascot, was proud to attend. We are grateful for partnerships like this that bring our community together and make the refuge a better place for all.



Photos: Scouts and families and Oak Harbor Public Library staff with Puddles the Blue Goose at the kick-off event by USFWS

Mentoring Future Leaders



Trevor's Tree Trail

I attended school at Hocking College starting in the fall of 2018. During my first semester, I took a Dendrology lab class that largely consisted of four hours of hiking around various parks identifying trees. Along the entire length of the trail in the Land Lab, there were numbered markers placed near certain trees and a map that identified the species. The Tree Trail was a tool to help students go out on their own and study field marks of trees at any point in the year. It highlighted the tremendous species diversity in the forest that Southern Ohio is known for. Ever since I began working at Ottawa NWR, I have thought about bringing this trail idea to the refuge.



This past year, I spent multiple days walking mostly through the two main woodlots on the refuge mapping out every different species I could find. I would usually find new things on each outing and ended up reworking the order and numbers of trees several times before settling on a nice round 40 species across the trail. It takes you through the trailhead parking lot, the South Woods, the gravel trail, and the North Woods. This way, I was able to highlight not only the old mature trees in the forest but also smaller edge species including a handful of shrubs. Truly, it isn't only a "tree" trail, but "woody vegetation" trail wouldn't fit on the signs. The trail is marked by white diamond signs labeled 1-40 with the species name at the bottom.



Of course, I found different species in another section of the refuge that I wanted to highlight, so I will be adding 11 more species for a total of 51, and including the Woodies Roost trail near the Magee Marsh Visitor Center. In addition to this, there will also be a separate trail established in the woodlot on the Fox Nature Preserve just across OH-2 south of the main entrance. I will also be working on the brochure and map which will show the whole trail end-to-end on one side and the species list and their corresponding numbers on the other side.

I hope this trail is enjoyed as much as the one that inspired it. The goal is to help people become more familiar with trees in all seasons, and to celebrate the diversity of species that occur here at the refuge that might be easy to walk past if you don't know where to look.



Trevor Zook

Friends Career Pathways
Wetland & Invasive
Species Coordinator

Internship Program

Making sure that the next generation cares about conservation as much as we do is a priority for our group. Therefore Friends of Ottawa NWR provides life-changing career opportunities by offering living stipends for interns.

In 2023, the Friends sponsored Sam Perram, Phoebe Jackson, Mary Shawaker, and Tucker Mills in a total of six internships. Sam (Operations Intern and Hunt Coordinator Intern; pictured right) helped mow trails and grounds, assisted with invasive species removal, worked with our Fisheries folks to seine fish for contaminate survey work, provided information to hunters, prepared hunt blinds, and posted refuge boundaries. Phoebe (Bio Tech Intern; pictured left in the blue sweatshirt) assisted the biology program with invasive species control, led interpretive tours and programs on the refuge and in the community, and served as the lead for our native plant sale and plantings over the summer. Mary and Tucker (Visitor Services Interns; pictured in the far left photo; middle and right) assisted with Visitor Center operations, special events, and programs at the refuge. The refuge also was fortunate to have Alexis Faul, a Student Trainee through the U.S. Fish and Wildlife Service, aiding the Visitor Services team (pictured far left).



Phoebe (Bio Tech Intern; pictured left in the blue sweatshirt) assisted the biology program with invasive species control, led interpretive tours and programs on the refuge and in the community, and served as the lead for our native plant sale and plantings over the summer. Mary and Tucker (Visitor Services Interns; pictured in the far left photo; middle and right) assisted with Visitor Center operations, special events, and programs at the refuge. The refuge also was fortunate to have Alexis Faul, a Student Trainee through the U.S. Fish and Wildlife Service, aiding the Visitor Services team (pictured far left).

Glass City Bird Crew



Rescuing a wood thrush after it was injured from colliding with glass (USFWS)

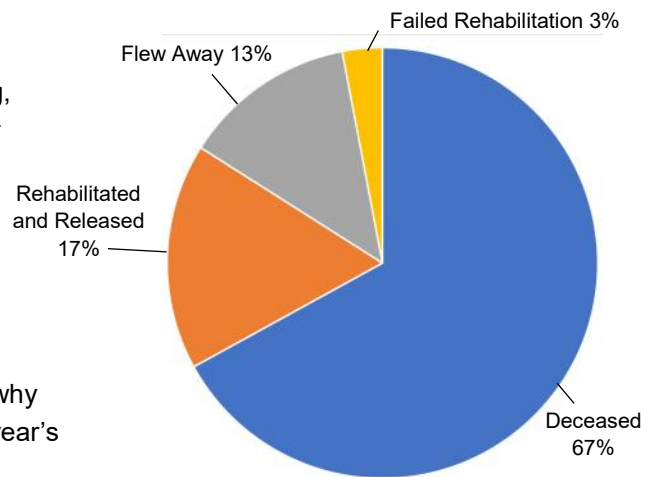
In October of 2022, Ottawa National Wildlife Refuge, the Toledo Zoo, and Nature's Nursery participated in the Fatal Light Awareness Program (FLAP), Canada's annual Global Bird Rescue event; a week-long citizen science event where teams and individuals around the world get outside to search for and rescue birds that have collided with buildings. In seven days, our team (Glass City Bird Crew) searched downtown Toledo and found 69 birds, 53 of which were deceased. This event was a great model for what a collision monitoring program could look like in the Glass City. We quickly began planning a spring season that would extend from April 1 to May 31, 2023, followed by a fall season from September 5 to October 31, 2023. These dates were chosen to coincide with the peak spring and fall migration movements of birds.

Volunteers and coordinators from the refuge and the Toledo Zoo met every morning at 7 a.m. in downtown Toledo. Groups of 2-3 people were assigned a route, given a bag of

supplies, and proceeded to search for window collision victims around buildings for two hours. Live birds were carefully captured (if they didn't fly away!) and were placed into a non-waxed lined paper bag to be transported to Nature's Nursery for rehabilitation. Deceased birds were collected for future scientific study or displays.



Status of Birds Found in Toledo (October 2022— October 2023)



Since we were already out for the fall season of collision monitoring, we participated in the 2023 Global Bird Rescue event from October 2-8, reporting our findings to the Global Bird Collision Mapper database. This year we found considerably less birds than we did during the event in 2022: 69 birds vs 23 birds. Though more birds crossed Lucas County during that week in 2023, they were flying at a greater average altitude based on data from The Cornell Lab's BirdCast Migration Tool. Factors such as favorable weather conditions and greater average flight altitudes could partly explain why less birds were found during this year's Global Bird Rescue.



Jessica Duez

Friends Career Pathways
Community Engagement Coordinator

To date, we have found over 550 birds and 65 different species. The family with the most species found is Parulidae (warblers), followed by Passerellidae (sparrows). Many of the birds we found were deceased (67%). Of the live birds found, 17% were rescued, rehabilitated, and released for a second chance at life: that's almost 100 birds saved! Our next steps include planning for another spring and fall season in 2024, aging and sexing collected specimens, and connecting with building managers to start conversations about bird-safe measures on downtown Toledo buildings.

Volunteers truly drive this program, and we wouldn't be able to accomplish our goals without their dedication to saving birds. Over both spring and fall, 28 volunteers gave 707.5 hours of their time to collect and transport birds that collided with glass. A big thank you to all the volunteers for their support with this program, and for being amazing people to do this work alongside!

Making a difference, one bird at a time...

*Experiencing nature in a place many might consider unlikely. Many mornings, this is where volunteering in the downtown Toledo Bird Collision Monitoring Project has taken us, with the guidance of capable and knowledgeable coordinators. **Finding both the wonder and yet often sadness of discovering the literal impact from buildings on the fate of migratory birds of all kinds. Hoping this leads to both better awareness of and solutions to this problem.***

Chuck and Luann Perzynski, Toledo, Ohio

*In October of 2022, I saw a Facebook post looking for volunteers for bird collision monitoring in downtown Toledo. I came down to help once, and my wife and I have been volunteering now for over a year. As birders, it's been a really life-changing experience. We've learned so much about the timing and nature of bird migration and the hazards that human environments can cause to birds and other animals. **Being able to help birds in trouble is a great feeling, but even when we can't help, knowing that the data we collect can bring attention to the problems migrating birds face is motivating and encouraging.** We'd like to thank the FWS for sponsoring this program and allowing us to help and learn more about our home city in the process.*

Dave and Michelle Rodriguez, Toledo, Ohio

*I had the privilege to work with the Glass City Bird Crew during the Spring '23 and Fall '23 monitoring sessions. As tough as it is to find a dead bird on the ground, there is hope as well! We often find stunned birds that are quickly collected, then treated by our local wildlife rehab facility, Nature's Nursery. I'm pleased to see the release stats and that well over 50% of the birds we drop off are released back to the wild to continue their migration journey! We only need to read about the nearly 1,000 birds that were found in downtown Chicago, on October 5th, 2023, to acknowledge the need exists in cities around the country. The data collection and work being done to study birds that collide with buildings is so important to bird species as a collective group. With all the other pressures birds deal with on a daily basis, if we can help decrease the number of birds that lose their lives to building strikes we must do so! Data collection is an important first step to define a need for change. Jessica Duez helps manage the operation and it's her organization, dedication, and knowledge that has helped this cause to succeed. **While it's heart-breaking to collect deceased birds, it's inspiring to know I'm part of a team that can work for change, real change that matters in the lives of our beloved birds!***

Ken Roshak, Toledo, Ohio

Photos (l-r): Volunteer Dave Rodriguez rescues a northern cardinal (USFWS); Volunteers Chuck Perzynski and Dave Rodriguez document an indigo bunting killed from a window collision (Jeremy Dominquez/Toledo Zoo); Volunteer Luann Perzynski and Jessica Duez rescuing a white-throated sparrow that collided with glass (USFWS).



Conservation Corner



2023 Federal Public Lands Photo Contest

"I retired from Fiske Brothers Refining Company in 2019. I am a novice photographer and love birding and everything else about nature. I am also an Ohio Certified Volunteer Naturalist and board member for Wood County Parks and happily married to Karolyn for 50 years.



Jim Mathews, 2023 Federal Public Lands Photo Contest
Best of Show Winner
Morning Dew and Beauty

Ottawa National Wildlife Refuge is, by far, my favorite park. The variety of habitat, wildlife and the accessibility provided by the Wildlife Drive is unequalled in our region. I was on the Wildlife Drive with my daughter Kari when I spotted this Bronze Copper butterfly. It was a very cool morning for August and it posed for a long time. This is just one of many photos I was able to take. — Jim Mathews



Photo: Late Fall Scene by Jane Dulgar



It has been an amazing year to be a part of the Friends of Ottawa NWR. As Volunteer Coordinator this year I have assisted in organizing and coordinating the administration of the volunteer program. I have also evaluated volunteer applications to match them with the appropriate staff lead and facilitated their onboarding. As I am reflecting on my time with the refuge, I can't help but to think about how fortunate I am.

I feel as if I have come full circle in seeing the Friends group today and how much it has grown over the years! I have the unique perspective of watching what was then called Ottawa National Wildlife Refuge Association be created by a group of people that shared a love of Ottawa NWR. I had the pleasure of seeing the excitement of the members when we raised enough money to buy the first golf cart to be used for tours of the refuge. I was also there to witness all the hard work to help build the new Visitor Center and what an accomplishment that was! **To give an idea of how much we have grown, just this year alone we have doubled the number of volunteers.** Our volunteers have helped the refuge by donating 11,000 hours of their time! My position as Volunteer Coordinator is still evolving, and I am looking forward to all our accomplishments in the upcoming year.



Nicole Crofts

Volunteer Coordinator

Citizen Science



Nest Box Monitoring

Species	Total # eggs	Total # nestlings	Total # fledglings
Purple Martin	441	402	402
Tree Swallow	84	75	75
American Kestrel	7	3	3

2023 Nest Counts on West Sister Island NWR

Species	# Nests in 2023	# Nests in 2022
Great Blue Heron	969	562
Great Egret	823	1,170
Black-crowned Night Heron	283	382
Double-crested Cormorant	1,193	2,458

Maintaining Your Refuge



Marinewood Road Repairs & Kayak Launch

One project that Ottawa Refuge collaborated with the Friends group to complete this year was providing additional kayak access to the Portage River Water Trail at the Marinewood Unit. Marinewood is an area owned and managed by Ottawa National Wildlife Refuge that is located approximately 6.5 miles east of Oak Harbor, OH on State Route 163. Improvements included raising and repairing an existing road, construction of two parking lots, and the installation of a small boat launch. Friends of Ottawa NWR provided about \$22,000 for materials to

raise and repair the existing road. The original road was constructed when the area was a golf course, and portions of it could not support standard vehicle traffic. The existing road was improved by spreading and grading additional aggregate. A concrete mat was placed on the slope of the dike/river to provide a suitable access point to allow kayak placement into the Portage River. Future plans for the same area include the replacement of a failing pump and installation of new power source for the pump so the water in a ditch can be pumped down to prevent water from refuge property flooding adjoining private property and flooding the access road during times of high water runoff.



Deferred Maintenance Updates ~ Great American Outdoors Act Staff

Alex, Keith, and Troy are employed through the Great American Outdoors Act (GAOA). In 2023 they traveled 50% of their time to 7 different states and worked on 8 different refuges. They helped construct roads and parking lots, removed fences, cleared woody vegetation from dikes, and painted buildings as well as other types of required maintenance on the various refuges. While they were at Ottawa they concentrated their work activities on repairing the boardwalk, removing nonfunctioning water control structures from HU6 and MS6, fixing the wall on a cold storage building, and rip rapping 1.25 miles of dike on MS6.



Thank You Volunteers!

Karl Kuenzer, Brad Hemminger, Dave Howell, Jim Krieger and Greg Sanderson were gracious enough to volunteer for another summer of mowing. A huge thanks to these individuals who helped keep the lawn around the Visitor Center, volunteer RV site and trails looking fabulous. Paul DeHoff was a new volunteer this year. Paul had visited the refuge numerous times and wanted to help out, so he volunteered to come help with tree trimming, weed eating, and fixing the windows on the storage shed at the RV site.

Refuge maintenance crew pictured top to bottom: Troy Atkinson, Keith Findlay, Chuck Shier, Brandon Giesler, Alex Baginski



Moving On

A big loss for refuge and Visitor Center maintenance occurred this year when Christopher "Buck" Buchanan left to pursue another job opportunity. Buck worked at the refuge for six years, and his dedication to keeping the Visitor Center clean is greatly missed. A big thanks to the Friends group for working with the refuge and providing financial assistance for a cleaning company to keep the restrooms and building clean until his replacement is found.

Another big loss for the refuge this year was felt when Ramsay Houze left to go work at another refuge. Ramsay worked here for seven years and was an important member of the staff who helped keep the dikes mowed, equipment running, dikes constructed, water control structures replaced and repaired, as well as other activities too numerous to mention. Fortunately, Ramsay was able to move to a refuge close to where he grew up so he will be able to spend more time with his family and continue his great work for the FWS.



Karl Fleming

Assistant Refuge Manager

Great Lakes Restoration Initiative



What is the Great Lakes Restoration Initiative?

The Great Lakes Restoration Initiative (GLRI) was a program that launched in 2010 to accelerate efforts to protect and restore our largest system of fresh surface water in the world. This program provides additional resources for federal partners to target the biggest threats to the Great Lakes ecosystem.

One large threat for our Great Lakes ecosystem is the deterioration of the Maumee River. Through the Great Lakes Water Quality Agreement, the Maumee River was designated an Area of Concern (AOC) due to environmental degradation and pollution. Restorations within the Maumee AOC have been an ongoing process for many years, with the end goal of this AOC to be delisted and the area to be marked as restored.

The GLRI program benefits Ottawa National Wildlife Refuge in a few different ways. The refuge utilizes the funds from this program for restoration projects, land acquisition, treatments of invasive species, and to assist in the delisting of the Maumee Area of Concern. The GLRI program has not only provided the Refuge with the means to restore hundreds of acres of land but has also provided Ottawa NWR with three fulltime term employees and one permanent full time employee. With more boots on the ground, more of your National Wildlife Refuge will be restored and enhanced in the future!



Photos: A prescribed burn on of phragmites on Crane Creek, and a view from the Marsh Master by USFWS



GLRI Restoration Projects Completed in 2023

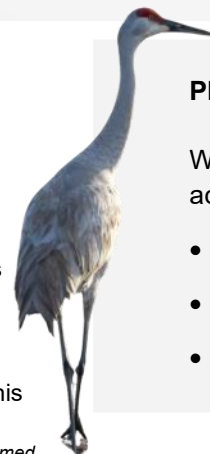
Ottawa National Wildlife Refuge

557 Acres of restored wetland units including MS6, HU6, Smith, Dellinger, and Darby

Cedar Point National Wildlife Refuge

John Gradel Sr. was the landowner south of Cedar Point NWR's Pool 2 Unit. This 210 acre restoration project could not have been completed without the cooperation of John Gradel and his family. John passed away while the project was still ongoing. Thanks to his commitment to conservation, the refuge honored his legacy by dedicating the project to John and the Gradel Family.

Photo: Family during the dedication ceremony where Cedar Point Pool 2 was renamed John Gradel Marsh



Plans for 2024



We anticipate restoring an additional 874 acres of land including:

- Navarre Marsh (779 acres)
- Kontz Unit Oxbow Channel (70 acres)
- Camp Sabroske (25 acres)



Courtney Lopez
Wildlife Refuge Specialist

Managing Phragmites with Alex



As the Ohio winds blow through and into our northern reaches of Ottawa National Wildlife Refuge bringing both waterfowl and songbirds under their wings, the wind also blows against the feather duster-like seed heads of non-native *Phragmites australis* in our marshes... and along our dikes and coasts... and just about everywhere you look. This invasive wetland plant becomes a forest in the water when left unchecked. Phragmites chokes water access for local fish with dense mats that spoil chances for wildlife viewing with their stalks that can reach up to 20 feet. The invasive grass can become so prolific with its ability to spread, not just along the winds and water ways, but also can grow through its collection of rhizomes and underground stems. This shag carpet of phragmites can survive in more unsavory conditions, such as in poor oxygenated water and high saline soils. It also removes resources from native plants in Ohio that compete for space such as *Zizania aquatica* (Southern Wild Rice).



For these reasons, staff and volunteers at Ottawa National Wildlife Refuge have continued to undertake the removal of non-native phragmites using several methods:

- **Prescribed Burn:** Performing a controlled burn reduces the amount of dead plant material and allows for a more effective chemical treatment.
- **Aerial Spraying:** A large area can be treated with herbicide from the air.
- **Mowing:** This mechanical treatment of phragmites about two weeks after a chemical application helps to remove dead phragmites stalks and promote native plant growth. Tilling or disking the soil can disturb the seed bank and actually spread fibrous rhizomes around!
- **Foliar Chemical Treatment:** Spraying chemical to coat the leaves of a specific plant with herbicide. This is a treatment used to target specific plants without spraying an entire area.
- **Injection Chemical Treatment:** Injection treatments target only the plants we want to remove in environmentally sensitive areas.



Alex Cherpes

Biological Science Technician

Phragmites Management through the Seasons



Plumes of smoke swirl in shades of black over the horizon as a sea of phragmites catches fire on an April morning, the scorched earth carving a new haven made of ash and nutrients. A diligent crew works under the heat of battle, drip torches in hand, their minds stay calm and collected.

This is war. A battle fought, lasting only a week, yet taking months of preparations and planning: the allocation of resources and manpower, constant review for new information on weather conditions, and creating plans to ensure the safety of the community, the refuge, and of the dozen individuals who offered their expertise in order to allow for this project to succeed.

The smoke settles, and as the scars that once festered and infected the marshes and prairie within our refuge now, only after a few months, shine; victory and success exteriorized in shades of golds, reds and purples as tickseed, swamp rose mallow, and wild bergamot are welcomed.

After months of coordination with partners and community members, Ottawa NWR was able to aerial spray 280 acres on the refuge for non-native phragmites over a span of three days. Planning, in particular, was the biggest reason we were able to achieve our goal at the refuge to perform the aerial spray. Requiring diligence, strength, and grace, the staff talked with community members about bringing aerial spraying into the area, providing an opportunity for anyone to participate with the treatment, or discuss safety concerns. The community's input helped the staff to formulate and write the environmental assessment. Three days of treatment began with the risk assessments of the sites, being aware of the areas of concern, monitoring changing weather conditions, and following best practices and accurate geographic information systems (GIS) to track the heights and locations of treatment areas.



The winter zephyrs flow through the channels and marsh around Lake Erie, bringing change to the refuge. There is a harmony of leaves rustling that sing the song of reflection, providing a reminder to pause and to take in what has been accomplished. Non-native phragmites will be problematic for a long time, but being able to see the immediate benefits provides hope that there will always be a breeze to carry the refuge further.

Bathymetry at Ottawa NWR



What is it?

By definition, bathymetry (buh-**thi**-muh-tree) is the study of the underwater depth of ocean, river, lake or wetland floors. It can be thought of as an underwater topographic map that uses elevation contour lines to show the shape of the Earth's surface. On topographic maps, the lines connect points of equal elevation. On bathymetric maps, they connect points of equal depth. A circular shape with increasingly smaller circles inside of it can indicate a trench, channel, or an underwater mountain.

Why measure bathymetry on the Ottawa National Wildlife Refuge Complex?

Geographic Information Systems (GIS) are used to record information on a map, and create and analyze maps and types of data. GIS modeling can be used to extrapolate points to elevation contours, water depths, and water volume. The information gathered through GIS modeling and bathymetry in conjunction with a water level gauge, the new fish passage structure and pump stations on Gradel Marsh at Cedar Point National Wildlife Refuge will allow us to much more effectively manage the wetland for a variety of species.

Here are some examples of bathymetric uses for refuge management:

- Determining fill/dewatering time and costs based upon pump capacity
- Determining ideal water depths for flooding out invasive species and identifying potential trouble spots. Our most problematic invasive plant species favor water depths from mudflats to 6-12" for establishment/persistence.
- Determining optimal unit water level to maximize diversity of water depths for species groups, or to target a particular species group such as shorebirds (see image to the right).

How does it work?

Historically, scientists conducted bathymetric measurements of the ocean from a ship with a rope. They would throw the rope over the side of the ship and record how much rope it took to reach the bottom. As you can imagine, these measurements were inaccurate. U.S. Fish and Wildlife Service biologists

at Ottawa National Wildlife Refuge made use of modern technology for their survey and used the Trimble R10 survey grade RTK system at Gradel Marsh in the spring. This equipment connects via cell coverage to the Ohio Department of Transportation (ODOT) network to receive real time corrections to GPS signals. High accuracy readings depend on an unobstructed view of the sky (trees are the biggest obstacle) with best case accuracy of 0.03 ft (5/16") horizontally and 0.05 (19/32") vertically.

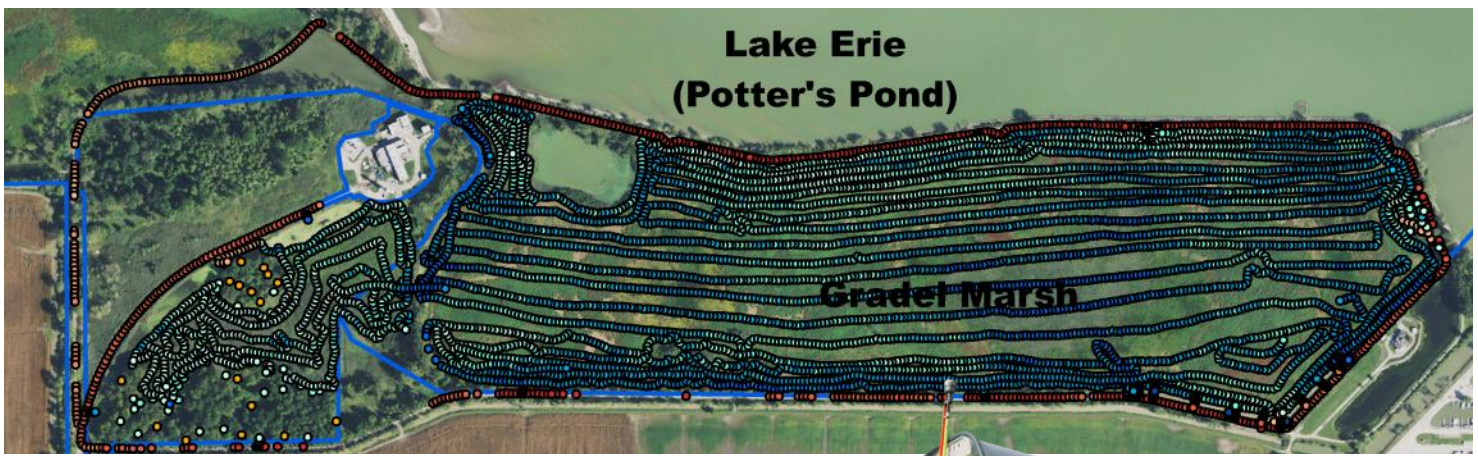
In this case, vertical accuracy is of the greatest importance, with field accuracy ranging from 0.05-0.2 ft. Often other factors affect vertical accuracy more (such as tilt in the survey vehicle) and can be assessed and compensated for by spot checking with hand measurements. For instance, testing of the Marsh Master setup of continuous data collection revealed an approximate increase of 0.15 ft while in motion compared to hand collection, which can be applied as a correction factor to the data.



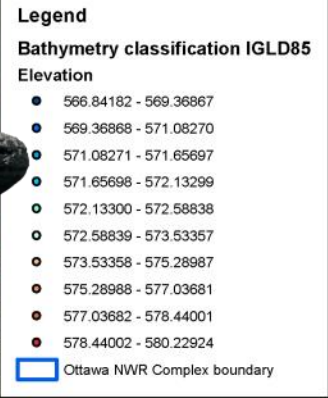
Ron Huffman

Refuge Biologist





Vehicle collection was used on the dike top perimeter, manual collection on dike slopes for a representative profile and in forested areas, and the Marsh Master was used in the wetland. We took 146 elevation points by manual collection, 669 elevation points by vehicle collection, and 5,239 elevation points by Marsh Master (pictured right) collection.



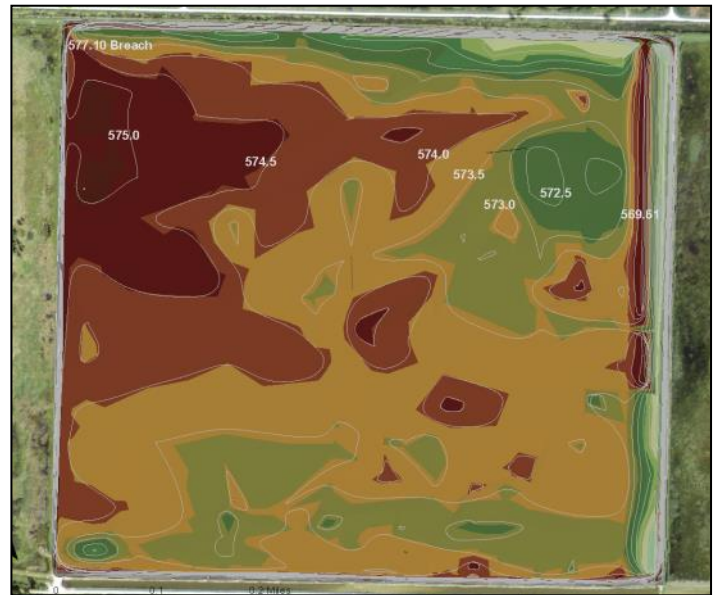
Bathymetry Use - Moist Soil (MS) Unit 3

Here's an example of how refuge biologists use bathymetry to solve problems on the refuge. If biologists need to fully dewater or drawdown MS 3 with current water levels at 575.0, the table below helps us determine that there is 280 acre/feet of water. To dewater -

- A 6" portable pump at 1,400 gpm (gallons per minute) would take 45 days
- The moist soil electric pump at 10,000 gpm would take 6.5 days

The total amount of time it takes to dewater could be increased by factors like rainfall or decreased by evapotranspiration (loss of water from the soil both by evaporation from the soil surface and by transpiration from the leaves of plants growing on it).

The contour map (right) shows that moist soil to shallow water depths will occur in the NW portion of the unit, the most likely zone to monitor for invasive species such as purple loosestrife and phragmites. Water depths across the unit vary enough that all species groups are benefited, but there are always tradeoffs. We can increase benefits to species that prefer shallower water like shorebirds and teal by removing some water, but it is at the cost of increased invasive species monitoring and management.



Ottawa National Wildlife Refuge

Moist Soil (MS) Unit 3 Bathymetry | IGLD 85

557.10' Overflow Elevation | 213.63 Acres at Overflow | 724.39 Acre/Feet at Overflow

	Gage Reading ft.1	569.61	570.00	570.50	571.00	571.50	572.00	572.50	573.00	573.50	574.00	574.50	575.00	575.50	576.00	576.50	577.00	577.10 @ overflow	
		Acre Feet	0.00	0.01	0.19	0.84	2.44	5.31	10.18	20.19	43.11	98.31	182.05	280.12	384.91	490.56	596.59	703.04	724.39
		Acres Dry	213.63	213.54	212.90	211.49	209.33	206.10	200.01	187.01	142.62	69.60	28.61	7.84	2.73	1.95	1.16	0.24	0.00
Water Depth	0.0'-0.5'		0.09	0.55	1.20	1.69	2.67	5.22	9.71	36.71	54.98	29.30	15.58	2.13	0.61	0.61	0.75	0.98	
	0.5'-1.0'			0.18	0.76	1.67	2.24	3.55	8.50	17.39	55.15	66.27	34.51	18.54	2.31	0.78	0.79	0.79	
	1.0'-1.5'				0.18	0.76	1.67	2.24	3.55	8.50	17.39	55.15	66.27	34.51	18.54	2.31	0.78	0.78	
	1.5'-2.0'					0.18	0.76	1.67	2.24	3.55	8.50	17.39	55.15	66.27	34.51	18.54	2.31	2.31	
	2.0'-2.5'						0.18	0.76	1.67	2.24	3.55	8.50	17.39	55.15	66.27	34.51	18.54	18.54	
	2.5'-3.0'							0.18	0.76	1.67	2.24	3.55	8.50	17.39	55.15	66.27	34.51	34.51	
	3.0'-3.5'								0.18	0.76	1.67	2.24	3.55	8.50	17.39	55.15	66.27	66.27	
	3.5'-4.0'									0.18	0.76	1.67	2.24	3.55	8.50	17.39	55.15	55.15	
	4.0'-4.5'										0.18	0.76	1.67	2.24	3.55	8.50	17.39	17.39	
	4.5'-5.0'											0.18	0.76	1.67	2.24	3.55	8.50	8.50	
	5.0'-5.5'												0.18	0.76	1.67	2.24	3.55	3.55	
	5.5'-6.0'													0.18	0.76	1.67	2.24	2.24	
	6.0'-6.5'														0.18	0.76	1.67	1.67	
	6.5'-7.0'															0.18	0.76	0.76	
7.0'-7.5'																0.18	0.18		

Acres Inundated

Partners for Fish and Wildlife



Jeff Finn

Private Lands Biologist

The Partners for Fish and Wildlife Program (PFW) is the United States Fish and Wildlife Service program that assists private landowners with habitat restoration projects. 2023 was a great year for private lands restorations.

With the help of the Friends of Ottawa National Wildlife Refuge, we were able to restore nearly 300 acres of wetland and upland habitat for 11 different private landowners. The majority of these projects were completed in Ottawa County. PFW entered into a cooperative agreement with FONWR to help with restorations and reimburse landowners and contractors for project expenses. This makes the restoration process much quicker and much easier for the landowners.

Although our normal Partners for Fish and Wildlife Program funding has gradually been decreasing, we've also been able to partner with other organizations like Ducks Unlimited, Ottawa County Soil and Water Conservation District, the United States Department of Agriculture, and Ohio Division of Wildlife to leverage \$894,500 from outside sources. The Great Lakes Restoration Initiative has also provided a steady flow of funding that more than makes up for our decreasing PFW funding.

Additionally we worked with FONWR to conduct a large aerial spraying operation that targeted invasive phragmites and a few other invasive plant species. **With help of the Friends, we were able to provide cost share to landowners and treat over 700 acres of invasive species on 10 different properties,** one of which was Ottawa National Wildlife Refuge. Other partners in this operation were the Lake Erie Cooperative Weed Management Area, staff from Ottawa NWR, and the private landowners who participated in the treatment program.

As the Private Lands Biologist, I assist with a wide array of activities both on and off refuge. I trained six people from various refuges on UTV/ATVs throughout the year, presented at several conferences and assisted with prescribed fires at Ottawa NWR and Big Oaks NWR. Partnering with the Wayne National Forest, Courtney Lopez (Ottawa NWR), Andrew Houze (Muskatuk NWR) and I took a Forest Service fire engine to Northern Idaho where we provided wildfire coverage for the Nez Perce-Clearwater National Forest for several weeks. I also managed to squeeze in some time with my family throughout the year.



Hands on Habitat

This outstanding group of conservationists spent some time improving the refuge pollinator habitat in early June. The group includes Pheasants Forever and Quail Forever staff (shown above) from 36 different states as they took part in a "Hands on Habitat" event at the refuge. They planted hundreds of new native flowers in the pollinator areas (left). We thank them all for their work!



Creating Habitat through the Partners for Fish and Wildlife Program

This 50 acre grassland restoration completed just south of Oak Harbor, Ohio was seeded with a pollinator friendly mix.

Photo: Vibrant Light by Amy Bihn

Rare Plants of Ottawa



A Look at Four Special Species with Trevor Zook

Across three refuges and over 11,000 acres, the Ottawa National Wildlife Refuge Complex has documented over 550 species of plants to date. While not all of these are native, the vast majority are, and a handful of those are even more special. My day-to-day job usually consists of handling the non-native species here at Ottawa, but I also have the privilege of working with several state-listed or federally-listed plant species. Whether it's improving habitat, collecting and spreading seed, or working with outside agencies to document new populations, many hours of labor go into protecting these species and helping them thrive.



American Common Reed (*Phragmites americanus*) *Potentially Threatened

One of the most infamous wetland invasive species in Ohio (and beyond) is the Common Reed or Phragmites. Many people don't know that there is a native species of Phragmites as well, American Common Reed. The native species has been almost entirely wiped out in Ohio and replaced by the invasive, with the exception of a few scattered patches in the complex, as well as elsewhere in Ohio. In 2022, we submitted a sample from every known occurrence of this species on our land to a lab at Oakland University in Rochester, Michigan. Through genetic sequencing, they were able to determine that all of our populations are purely native, and none had hybridized with the invasive species. The native species is differentiated from the invasive largely by the color of the stems. Native Phragmites has smooth, bright red to deep maroon stems, while the invasive Phragmites has ridged yellow-green stems.



Autumn Coralroot (*Corallorhiza odontorhiza*)

Earlier this year, biology intern Phoebe Jackson discovered the second species of orchid ever recorded on refuge property; Autumn Coralroot. This species of orchid has no chlorophyll and relies entirely on fungi in the soil for its required nutrients. The term for this fungi-plant relationship is 'mycorrhizal'. Due to its lack of any green pigment and its small growth habit, these plants can be very inconspicuous and difficult to find. While not state listed, this species is still very rare, especially in northern Ohio, and worth highlighting as an exciting find!



Seaside Spurge (*Euphorbia polygonifolia*) *Potentially Threatened

A small, sprawling beach plant, Seaside Spurge was first detected many years ago on the complex, but unfortunately shifts in that site's habitat no longer support the species. However, earlier this year, biology intern Phoebe Jackson found a new population (at a completely different site) that seemed to be thriving. While there are other more common species of beach-dwelling spurge in Ohio, Seaside Spurge has small, narrow leaves that lack any dark marks near the center.



American Three-square Bulrush (*Schoenoplectus americanus*) *Endangered

Potentially the rarest plant on the complex, this wetland species has only been confirmed in one site in the entire state. Reaching heights of up to ten feet, American Three-square Bulrush towers over the more common bulrushes in our marshes, making it easy to find (if you know where to look) among our typical species. While it usually grows in coastal salt marshes, it was found on the refuge by Jim McCormac twenty years ago in 2003, and still persists at the same site. Another potential site was named but it is not known if it still persists there. The most distinct feature of this species, besides the height, is the concave shape of the triangular stem, with three almost completely flat "wings" making up the corners.

There are many ways that we can all help our native plants, including the threatened and rare species. The biggest way is by buying native plants from reputable and ethical distributors that obtain their plants legally and sustainably. Next time you purchase native plants for your garden, take a moment to research local greenhouses and other sellers to be sure they have the proper permits if they are selling rare plants. Always be sure you are purchasing plants that are not only native to Ohio, but native to your region. What is native in one part of the state is not necessarily native in another. And of course donating to local conservation groups and other organizations like the Friends of Ottawa NWR is always a fantastic way to support conservation at a local level and beyond!

Thank you for your support in 2023!



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Susi Brown
Jerry and LuAnne Cooke
Joanne Darr
Martha Dreier
Letha Ferguson
Barbara Ford
Harvey & Scott Galloway
Suzan & Jim George
Gary Hawke
Heather Hodges
Jim and Becky Huebler
James Hullinger
David & Jackie Kwiatkowski
Dan Lea
Karen LeCompte
Carol Leininger
Bill & Caryn Long
Laura McCartney
Swarovski Optik
Ron & Janice Overmyer
Linda Patterson
Charlie Pike
Greg & Stephanie Sanderson
Jack and Susie Solomon
Terry and Lori Totman

SNOWY OWL CLUB

Carol Fingerhut
Lisa Gilgenbach
Janet Gross
Eunice Koebel
Karin McKenna
Sharon and Mia Pesci

EAGLE CLUB

Ruth Ann and Daniel Fraser
Paul Jacyk

OSPREY CLUB

Valerie Fuller

In Memory of Ginger Haar

February 27, 1951 - August 22, 2023

In 2023, we were devastated to lose Ginger Haar who served as a Friends volunteer and board member from 2017 - 2022. She was a fixture at refuge events throughout the years and helped to launch the Friends' license plate program. Ginger once said that her most memorable moment at the refuge was after back surgery when, "I sat on a bench in the woods and felt the serenity help 'heal me'." Thank you to her family and Friends for sponsoring a bench on the trails in her memory.



Another Award-Winning Year!



Local and National Honors Celebrated Friends Group Achievements in 2023

On May 18, 2023, the Friends were invited as an award nominee to the Eastern Maumee Bay Chamber of Commerce Prism Award Ceremony held at the Maumee Bay State Park Lodge. We were shocked to learn that we won the prestigious **Nonprofit of the Year Prism Award!**

The award was presented by hosts Chrys Peterson and Larry Schaffer and accepted by Friends Executive Director Aimee Arent. Friends board members Joey Warner and Tajinder Singh and Nature Store Manager Julia Hinca also attended.



The first week of June, we learned that the Friends had also been chosen as the **2023 National Wildlife Refuge Friends Group of the Year**. This award from the National Wildlife Refuge Association was presented at the Mayflower Hotel in Washington D.C in September.



Board President Kendra Foust and Vice President Carol Fingerhut accepted the award presented by Joan Patterson, President of the Coalition of Refuge Friends and Advocates, and Linda Schnee, National Friends Coordinator for



the U.S. Fish and Wildlife Service. 19 staff and volunteers gathered and attended a small watch party at the refuge to watch the live broadcast of the awards ceremony! Scan the QR code to watch the awards ceremony.



Finally, the Friends were invited to the Gala on the River where we received an award from the Port Clinton Chamber of Commerce **honoring the 10th year of our Intern Program**. Refuge Manager Jason Lewis and Board Treasurer Ron Overmyer accepted the award.



It is thanks to you that the Friends received these honors. Please look for the awards on your next trip to the Visitor Center!

From the Friends Director



Photos on previous page (top to bottom and left to right): Julia Hinca and Aimee Arent with the Prism award; Prism Award and Certificate; Joey Warner, Julia Hinca, Aimee Arent, and Tajinder Singh with the Prism Award; Chrys Peterson and Larry Schaffer presenting Prism Award to Aimee Arent; Puddles the Blue Goose with awards; Cynthia Martinez (Chief of the National Wildlife Refuge System) and awardees of the National Wildlife Refuge Awards: Joyce Atkinson, Mark Ackerman, Rebekah Martin, Kendra Foust (Friends of Ottawa), Geoffrey Haskett (President, NWRRA), Brad Pendley, and host Wayne Hubbard of Urban American Outdoors; staff and volunteers at the Watch Party; Kendra Foust and Carol Fingerhut with the Friends Group of the Year Award; Congresswoman Marcy Kaptur, Carol Fingerhut, Kendra Foust, and Geoffrey Haskett; the Friends Group of the Year Award; Executive Director Aimee Arent on Zoom at the National Wildlife Refuge Awards; Ron Overmyer and Jason Lewis at the Gala on the River; the 10 Year Award for our Intern Program. Background photo by Jack Lavery

What a year! Every time we work with staff to compile articles and photos to pull this report together, we are amazed once again at what we have been able to accomplish at Ottawa National Wildlife Refuge with your support. *Thank you!*

As you've read in this report, refuge visitation has increased by 8% over the last five years. We are excited to be getting the word out about our refuge complex and introducing new Friends to a lifelong passion. Unfortunately, you've also read that federally allocated funds for the refuge complex have decreased dramatically. This "do more with less" attitude is a burden that we see our refuge coworkers take on daily. They continue to work tirelessly for the habitat, for wildlife, and for you.

Friends groups are so incredibly important to national wildlife refuges and national fish hatcheries. Wildlife refuges depend on "Friends" groups like Friends of Ottawa National Wildlife Refuge to bridge the gap. In August, we were honored to receive a generous legacy gift from a person who was deeply passionate about our mission and wanted to make a lasting impact. You and like-minded individuals make land acquisition and restoration, public programming, trail maintenance, and additional manpower possible. We are grateful to have your help in creating a visible impact on your national wildlife refuges!

What we have been able to accomplish together through your support is inspirational. In the coming year, consider how you can become more involved. There are lots of ways to protect Ottawa National Wildlife Refuge from making a donation and volunteering, to purchasing a refuge license plate at Ohio BMVs, or shopping the Rookery Nature Store and the Rookery Online.

Did you know you can now also 'visit us' online with our new livestream camera at Cedar Point National Wildlife Refuge? This largest undeveloped stretch of Lake Erie shoreline is set aside for wildlife habitat.

The camera is viewable on your device, any time of day or night and shows a live look at the wetland or lakeshore (and eagle nests!)

We hope to see you very soon.

View the Cedar Point NWR Camera



Aimee Arent

Friends Executive Director
friendsofottawanwr@gmail.com

Established in 1997, the Friends of Ottawa National Wildlife Refuge works to support conservation of the Lake Erie marshes at Ottawa Refuge.

Contact Us

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Instagram: @FriendsofOttawaNWR
YouTube: @friendsofottawarefuge

Join the **Friends of Ottawa NWR Photo Club** Group on Facebook to get the most up to date wildlife sightings, share refuge photos, get tips, and chat with Friends.

How to Support Ottawa NWR

Volunteer

Have some spare time? Consider a one-time event or an ongoing commitment.

Become a Member

Join over 700 Friends in supporting the refuge year after year!

Donate

Support a program or project or make a general donation to be used where it's needed most. You can even donate from your IRA account or make donations of stock - a quick and easy way to support the refuge.

Monthly Giving

Your automatically recurring gift can help our budget to make a larger impact over time.

Endowment Fund

Contribute to protect refuge priorities in perpetuity. The Friends set up an endowment in 2023 at the Greater Toledo Community Foundation. The principal value is kept intact while investment earnings are used to support our conservation mission.

Legacy Gifts

Including the Friends in your will is a way to create a legacy that protects a place you value for future generations.



Supporting Ottawa NWR through The Rookery Nature Store

written by Julia Hinca, Nature Store Manager

2023 was an exciting year for The Rookery Nature Store. We had our best year ever, raising over \$140,000 in gross revenue to support conservation at Ohio's only national wildlife refuge complex. This milestone was made possible thanks to all of our Friends who shopped to support Ottawa National Wildlife Refuge. If you visited the refuge to hike, bird, fish or take the Wildlife Drive, we thank you for taking time to stop by the Nature Store inside our Visitor Center. The Rookery's friendly staff and volunteers look forward to seeing you and hearing about your experience at the refuge. We are always excited to help you find something special to capture your visit and enhance your appreciation and knowledge of nature.

Friends of Ottawa National Wildlife Refuge strives to create a fun shopping experience for visitors. There are always new items, designs and local artists featured in our store. Our staff seeks out talented local artists who handcraft one of a kind items like stained glass, wood carvings and jewelry. We try our best to bring in items that are made in the USA, support fair-trade or are eco-friendly. Inside our little store, you're sure to be surprised with all of the interesting gifts, guides, and gear. We hope while browsing through the Rookery Nature Store, you find interesting items that you can't find anywhere else that bring a smile to your face.

Like the birds who visit the refuge from other places, we know that our supporters are both near and far from the refuge. That's why we are thrilled to be able to bring The Rookery Nature Store to you, no matter where you live! Almost everything in the store that you can find in-person is available to purchase online. We enjoy getting online orders and seeing where our items are shipped to across the country. Our store is the best place to find a meaningful gift and you can always feel good about shopping with us as sales directly support the refuge. Thank you for your support!

**NATIONAL
Wildlife Refuge
ASSOCIATION**

Founded in 1975 by retired U.S. Fish & Wildlife Service refuge managers, the National Wildlife Refuge Association is solely dedicated to protecting, promoting, and enhancing the National Wildlife Refuge System, the world's largest system of lands and waters set aside for wildlife conservation.

The Refuge Association works to build a strong constituency for wildlife, gives wildlife a voice on Capitol Hill, and protects the integrity of the National Wildlife Refuge System. NWRA's leadership has resulted in an incredible impact on the Refuge System. Learn more online.

www.refugeassociation.org



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