Detroit River International Wildlife Refuge

2011 Annual Report

Celebrating Our Refuge

Investing In Our Future

America's

Welcome!

Dear Friends,

It is a great honor this year to be working with President Obama, Secretary of the Interior Ken Salazar, and all federal agencies in celebrating America's Great Outdoors, which is creating a 21st Century conservation and recreation agenda. We all should take great pride that both of Michigan's America's Great Outdoors' priorities address the Detroit River – improving public access to the Detroit River through parks and trails, and engaging youth in Detroit River restoration. For me this acknowledges and validates the fine work all of you have been doing. I look forward to celebrating with all of you and the Administration on many great achievements in 2012.

This 2011 annual report clearly captures another amazing year of accomplishments for our Refuge. In total, we have leveraged together over $33 million for Refuge projects since its creation in 2001. I want to commend all of you for helping create a new model for conservation, one that emphasizes public-private partnerships for conservation, close-to-home outdoor recreation, and quality of life. I hope you are as proud as I am in what we are accomplishing for conservation and the benefit of future generations.

In 2012, I want to challenge each of you to take time out of your busy schedules and lives to tell our compelling story to three new people who don't know our Refuge story and to invite them to one of our stewardship, education, or outreach events. Think of what that will mean for our Refuge and for building our capacity to help inspire the next generation of conservationists.

As always I look forward to what lies ahead, including the complete restoration of the Refuge Gateway site in 2012, the construction of a Visitor's Center in the near future, the addition of more Refuge land, and the continued successful cooperation between the Canadian and the U.S. governments toward the development of the Refuge.

From the bottom of my heart, thank you for your most significant contributions!

With every good wish,

Sincerely,

John D. Dingell
Member of Congress

Lake Erie Metropark 10.2011 J.Jourdan

Crosswinds Marsh 06.2011 USFWS

Front Cover Photo Credits: USFWS, G. Smith, Eastern Michigan University (EMU)
Above: Indigo Bunting, S. Purvis

Great Outdoors

Introduction

The Detroit River International Wildlife Refuge (DRIWR) includes 48 miles of shoreline along the lower Detroit River and western Lake Erie. Nearly seven million people live within a 45-minute drive. The watershed supports a great diversity of wildlife and habitats which provide many world-class, close-to-home, outdoor, recreational opportunities that enhance quality of life and increase community pride.

Many environmental improvements have occurred over the last 40 years, laying the foundation for one of the most remarkable ecological recoveries in North America, including a return of bald eagles, peregrine falcons, osprey, lake sturgeon, lake whitefish, walleye, and burrowing mayflies. Yet much remains to be done.

Our region is now a national leader in public-private partnerships for conservation, sustainability, and outdoor recreation. Land acquisition remains a top refuge priority, as well as developing the next generation of conservationists and sustainability entrepreneurs. The U.S. Fish and Wildlife Service (USFWS) and the International Wildlife Refuge Alliance (IWRA) present this annual report to celebrate our progress and inspire more citizen, business, and community involvement.

A Presidential Initiative

In 2010, President Obama launched the America's Great Outdoors Initiative to develop a 21st Century conservation and recreation agenda. America's Great Outdoors builds on our nation's long history of actions taken to conserve our natural heritage. America's Great Outdoors takes as its premise that lasting conservation solutions should rise from the American people.

In 2011, Interior Secretary Ken Salazar and many senior Interior officials held 50 meetings with Governors and other state officials to solicit ideas on how to best implement the America's Great Outdoors Initiative in each state. U.S. Department of the Interior then prepared a 50-state report outlining two locally-supported outdoor projects per state that will protect special places and increase access to outdoor spaces. Each project identified represents what states believe are among the best investments in the nation to support a healthy, active population, and create travel, tourism, and outdoor recreation jobs across the country.

In Michigan, both America's Great Outdoors' projects focus on the Detroit River: improving public access to the Detroit River through parks and trails; and engaging youth in Detroit River restoration. In 2012, we will see much emphasis on celebrating America's Great Outdoors along the Detroit River and throughout our nation.

Gibraltar Bay Unit 09.2010 USFWS

Free Fishing Day Detroit River 06.2011 USFWS

Lake Erie Metropark 10.2011 J. Pagano

Habitat

2011 ACCOMPLISHMENTS

- Following expansion of common tern habitat on Belle Isle in 2010 (in partnership with Detroit Water and Sewerage Department and Detroit Zoological Society), 12 common tern nests were initiated in 2011, representing the first nesting there since the early 1960s.

- The Detroit River-Western Lake Erie Cooperative Weed Management Area and *Phragmites* Strike Team were created in 2011 to promote efficiency in invasive species removal, with enhanced communication, monitoring, and resource sharing. In 2011, partners helped The Nature Conservancy obtain a grant from the Great Lakes Restoration Initiative to treat over 1,200 acres of *Phragmites* along western Lake Erie in the coming years.

- ITC Holdings Corp donated $70,000 for *Phragmites* control efforts in the Refuge.

- Volunteers pulled garlic mustard and removed invasive woody plants at the Humbug Marsh and Gibraltar Bay Units through summer and fall. Visitors will see dramatic decreases in buckthorn and honeysuckle in these areas in 2012.

- The 28-acre Blanchett Tract, adjacent to Brancheau Unit, was added to the Refuge in 2011.

- The Refuge contracted with Niswander Environmental, LLC to treat all invasive woody plants within 15 acres of the Humbug Marsh Unit. The two zones that comprise the 15 acres show dramatic decline in invasive plants and exhibit high quality conditions.

- The 30-acre Sugar Island, part of the "conservation crescent" surrounding the southern end of Grosse Ile, was added to Refuge in 2011.

- Over $1.1 million of brownfield cleanup and shoreline habitat restoration work was completed at Wayne County's Refuge Gateway in Trenton – the future home of the Refuge's Visitor Center.

- Ducks Unlimited worked with Refuge staff to treat approximately 175 acres of *Phragmites* at the Humbug Marsh, Gibraltar Wetlands, Brancheau, Fix, and Plum Creek Bay units, and some private land. The Refuge entered a partnership with the Michigan Department of Natural Resources to treat and map *Phragmites* at Ford Marsh Unit. The Nature Conservancy provided resources to treat *Phragmites* at the Holloway Unit.

- The Brancheau Unit dikes were repaired from muskrat damage and an aged and unused storage building was permanently removed.

- Mute Swan control was conducted on the Refuge and surrounding waters in partnership with the USDA Animal and Plant Health Inspection Service.

- Ducks Unlimited worked with Refuge staff to complete a survey and design for restoration of the Ford Marsh Unit, which will allow water level control and a net gain in emergent wetlands.

- 45 soft shoreline engineering projects have been completed in the watershed (www.stateofthestrait.org; under "soft shoreline engineering" tab).

Above: Common Tern, J. Jourdan
Banner: Owlet, S. Purvis

Conservation

Gabriel Richard Park 2011 Smith Group JJR

Before and after images of the soft shoreline engineering project along Gabriel Richard Park in Detroit. Soft shoreline engineering projects restore critical coastal habitat for willdlife and improves the aesthetic appearance for visitors.

Soil augers at the Strong Unit 06.2011 EMU

Refuge Gateway shoreline restoration 07.2011 USFWS

Lake Erie Metropark 07.2011 EMU

Dead Phragmities at the Strong Unit 08.2011 Hamilton Helicopters LLC

Sugar Island Unit 09.2011

Community

Banner: Rudbeckia, M. Sissinger

Environmental Education

- Nearly 2,000 students participated in World Wetlands Day at Gibraltar Carlson High School that included a wetlands expo and educational program.
- A Sacred Land Ceremony was held by the Wyandot of Anderdon and included local school groups.
- DRIWR again hosted a Youth Conservation Corps crew, employing five students for eight weeks, during the summer of 2011.

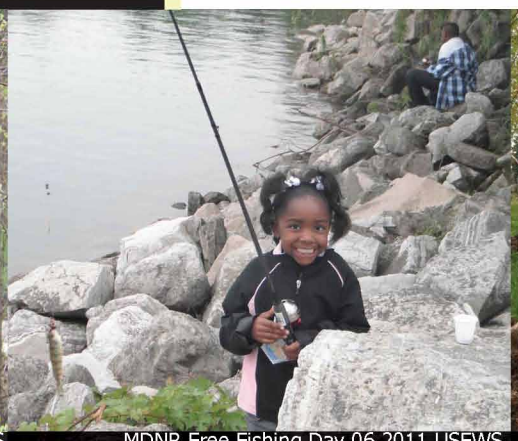
Huron High School Ecology Club Refuge Gateway 11.2011 USFWS

Volunteering

- In total, IWRA and USFWS organized and held 21 stewardship events for invasive species removal and habitat management in 2011.
- This year, over 8,000 volunteer hours were logged in support of the Refuge.
- Ford Volunteers helped install a refuge sign, enhance habitat along the Humbug Marsh greenway trail, helped construct a resting stop along the greenway trail, and helped plant trees and shrubs at the Refuge Gateway.

Refuge Staff with River Rouge Students, World Wetlands Day 02.2012 USFWS

Tree Planting with Detroit Public Schools 05.2011 USFWS



MDNR Free Fishing Day 06.2011 USFWS

Volunteers at the Refuge Gateway 05.2011

Engagement

Outreach and Events

- Over 8,000 people attended the Pointe Mouillee Waterfowl Festival (USFWS and IWRA helped make this event a major success).
- Eagle tours were again a major success at DTE Energy's Monroe Power Plant.
- Over 5,000 people attended Hawkfest at Lake Erie Metropark.
- A Refuge Bike & Hike was held to celebrate a greenway trail linking Humbug Marsh and the Refuge Gateway with Lake Erie Metropark.
- In 2011, the USFWS completed a Refuge hunt plan that was submitted to Washington, D.C. for publication in the Federal Register. It is hoped that the Refuge will open selected lands for hunting in 2012.
- In total, the IWRA and USFWS hosted 37 Refuge outreach events and 19 open houses in 2011.

Boyscouts installing fascines at the Refuge Gateway 03.2011 USFWS

Wayne State Ecology Class visits the Refuge Gateway 09.2011 USFWS

Research &

2011 Research Accomplishments

Gibraltar Bay Unit 06.2011 EMU

- The second full field season of invasive species research conducted by Eastern Michigan University and the Institute for Geospatial Research and Education was completed in 2011. Accomplishments included: detailed habitat maps of 2009 plant communities in each Refuge Unit and surrounding areas; on-the-ground plant community and physiographic data and photo points for 19 transects within the Refuge Units and State Game Areas; maps and website application of invasive *Phragmites australis* distribution and recent treatment history along most of the western Lake Erie basin; geodatabase construction for a Geographic Information System available to Refuge staff; development of a high resolution LiDar elevation database to prepare detailed large scale topographic maps; collection of spectral signature database to ensure remote classification; results on nutrient and carbon storage and release, and physical characteristics, at plots within areas of different levels of *Phragmites* invasion; and near completion of a Spatial Decision-Support System for invasive species management.

- Christmas Bird Counts continued to be conducted at Humbug Marsh.

- Insect surveys continued to be conducted at Humbug Marsh and the Refuge Gateway by Julie Craves of the Rouge River Bird Observatory and Darrin O'Brien.

Grosse Ile Tern Colony 07.2011 USFWS

- In 2011, a remedial investigation study was performed on Grassy Island with $2.8 million of funding from the Great Lakes Restoration Initiative. Data analysis is underway and a final report is expected in 2012.

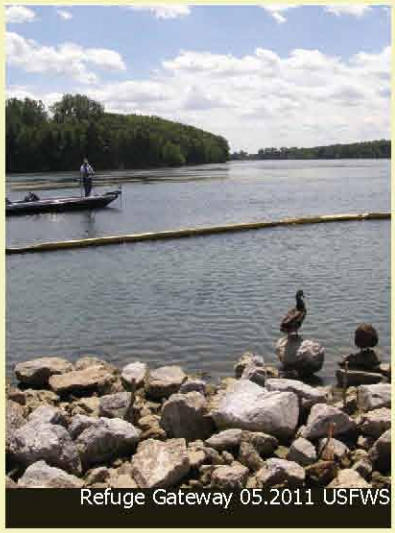
- Recommendations from the 2010 Detroit River-Western Lake Erie Common Tern Roundtable were implemented in 2011, which improved habitat management, predator control, and increased productivity to 70-80 chicks at the Grosse Ile Free Bridge (in cooperation with Wayne County).

- The Refuge worked with the Michigan Natural Features Inventory to conduct an invasive species early detection-rapid response survey at the Gibraltar Bay Unit of the Refuge.

Great Blue Heron, J. Jourdan
Ducks: USFWS
Golden Eagle: G. Smith
Banners: USFWS

Monitoring

2011 Publications


Refuge Gateway 05.2011 USFWS

- Two research publications on common terns were completed in 2011 (Norwood, G., T. Schneider, J. Jozwiak, A. Cook, and J. H. Hartig, eds. 2011. Establishing a quantitative target for common tern management at Detroit River and western Lake Erie. Final report to Environmental Protection Agency; and, Norwood, G. 2011. Detroit River Area of Concern: Restoration of the common tern (*Sterna hirundo*) population in the Detroit River International Wildlife Refuge using an adaptive management framework. Final report to Environmental Protection Agency).

- The restoration work at the Refuge Gateway was published in the proceedings of the First World Sustainability Forum (Hartig, J.H. and A. Krueger. 2011. Transformation of an industrial brownfield into an ecological buffer for Michigan's only Ramsar Wetland of International Importance. In, Proceedings of the 1st World Sustain. Forum, 1-30 November 2011; Sciforum Electronic Conferences Series, Basel, Switzerland. www.sciforum.net/presentation/602).

- Soft shoreline engineering research and monitoring data were published in 2011 (Hartig, J.H., M.A. Zarull, and A. Cook. 2011. Soft shoreline engineering survey of ecological effectiveness. Ecological Engineering. 37:1231-1238).

- The Detroit River Hawk Watch continued systematically collecting fall raptor migration data at the mouth of the Detroit River. All analyses and reports are available at www.drhawkwatch.org. (e.g., Stein, J., and G. Norwood. 2011. Detroit River Hawk Watch 2011 Season Summary, Detroit River International Wildlife Refuge). The Raptor Population Index Project completed trend analyses for Detroit River Hawk Watch data.

- In 2011, the Refuge and numerous partner organizations convened the biennial State of the Strait Conference at Eastern Michigan University. Nearly 200 people attended. The theme of the 2011 conference was "Use of Remote Sensing and GIS to better Manage the Huron-Erie Corridor."

Capacity Building

The Comprehensive Conservation Plan for the DRIWR calls for fostering partnerships to deliver the mission of USFWS for the Refuge. To help achieve that goal and build capacity, the Refuge has established a Friends Group called the International Wildlife Refuge Alliance (IWRA). IWRA's mission is "to support the first International Wildlife Refuge in North America by working through partnerships to protect, conserve, and manage the refuge's wildlife and habitats, and to create exceptional conservation, recreational and educational experiences to develop the next generation of conservation stewards."

Both the Refuge and IWRA have experienced growth in the past year. IWRA and the USFWS were saddened with the loss of Dr. Bruce Jones in 2011 and IWRA has established an environmental education fund in his memory. He will be truly missed. IWRA is ably served by Joann Van Aken who is their Executive Director. IWRA was very fortunate in 2011 to receive financial support from The Erb Family Foundation for expanding outreach activities. IWRA board members during 2011 included: Mr. Dick Micka (chairperson), Ms. Andrea Kline (Vice Chairperson), Mr. Jack Liang (Secretary), Mr. Tim Bowman (Treasurer), Ms. Anita Twardesky, Dr. Bruce Jones, Mr. Dick Whitwam, Mr. Thomas O'Hara, Mr. Fred DeLisle, Mr. Steve Beachum, Mr. Ryan Werder, Ms. Molly Luempert-Coy, Mr. Jamie Kryscynski, Ms. Mary Bohling, Mr. David Shefferly, and Ms. Yvette Pugh.

During 2011, Greg Norwood was converted to the permanent Refuge Biologist and Jamie Lanier joined the staff as Visitor Services Manager. Anna Cook continued as a Student Temporary Employment Intern and Allison Krueger as the Landscape Designer. Jeanette Bowles provided administrative support to the Refuge from the USFWS's Michigan Private Lands Office. Steve Dushane continued to oversee Refuge operations as Assistant Refuge Manager and John Hartig as Refuge Manager. EMU continued to provide Geographic Information System support in 2011, Metropolitan Affairs Coalition continued to provide financial support for Refuge projects, and U.S. Environmental Protection Agency continued to provide office space for Refuge staff. Many others provided financial support to IWRA, including for the Annual Benefit Dinner, trail maintenance, cleanups, invasive weed removal, and outreach activities.

IWRA Benefit Dinner Fighting Island 05.2011 USFWS

Bruce Jones and Friends 10.2010 USFWS

IWRA Annual Benefit Dinner 05.2011 USFWS

Humbug Marsh Unit 03.2012 USFWS
Ast. Refuge Manager Steve Dushane with new pole barn

Fisheries Biologist Jim Boase
2011 USFWS

Our newest Refuge fan!
Welcome Jude, son of Anna & Casey!

Visitor's Service Manager Jamie Lanier
USFWS 10.2011

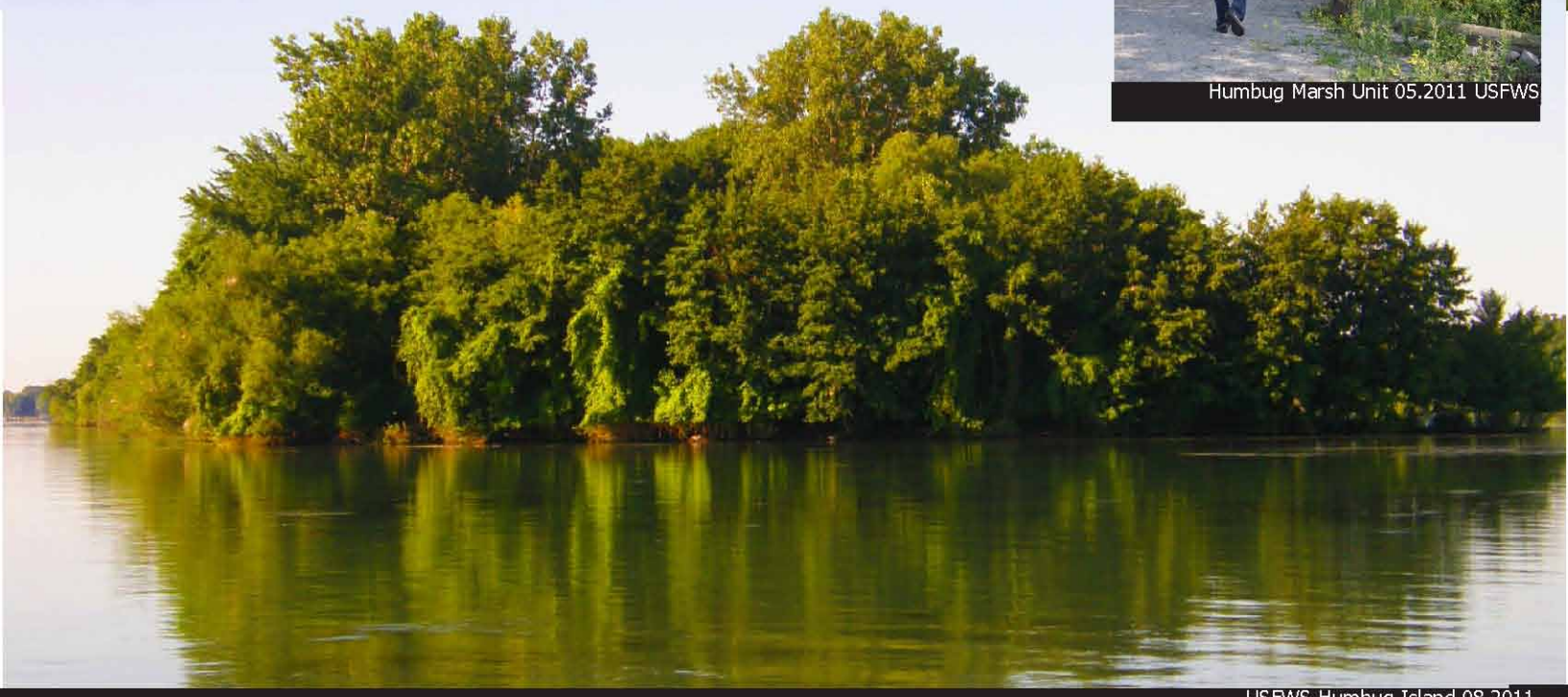
Refuge Biologist Greg Norwood
USFWS 09.2010

Whats Next...

The DRIWR will continue to place a high priority on growing the Refuge, while opportunities still exist. A list of refuge priorities for 2012 is presented below:

- Acquiring at least three new refuge tracts with $1.8 million of funding from U.S. Department of Transportation or through donation
- Working with Canadian partners to add high quality habitat lands to the Canadian portion of the DRIWR
- Completing a Refuge Visitor Services Plan
- Implementing the Refuge hunt plan
- Securing full funding for a boat dock and fishing pier at the Refuge Gateway as called for in the master plan
- Continuing to support the Capital Campaign for the Refuge Gateway and visitor center
- Completing all brownfield cleanup and habitat restoration work at the Refuge Gateway, excluding the footprint of the parking lot and visitor center, with $1.3 million of funding from U.S. Environmental Protection Agency, National Fish and Wildlife Foundation, and U.S. Forest Service
- Completing the investigative study of Grassy Island and identifying the proposed remedial option
- Continuing invasive species management at Refuge units, including undertaking a prescribed burn at the Strong Unit
- Convening three Cooperative Weed Management Area public forums in 2012
- Continuing research and monitoring of common tern nesting sites
- Supporting another IWRA fundraiser in spring 2012
- Hosting another Youth Conservation Corps Crew in 2012
- Continuing to support established events such as International Migratory Bird Day, World Wetlands Day, National Public Lands Day, Kids Free Fishing Day, the annual HawkFest, Pointe Mouillee Waterfowl Festival, Eagle Tours, and a Lotus Tour
- Expanding Refuge educational outreach activities
- Sustaining Detroit River Hawk Watch
- Collaborating on necessary research with EMU, University of Windsor, USFWS Fisheries, U.S. Geological Survey, and others
- Updating Refuge and IWRA websites, and communicating through Facebook

Humbug Marsh Unit 05.2011 USFWS



USFWS Humbug Island 08.2011

The Transformation of the Refuge Gateway

Refuge Gateway Master Plan, Hamilton Anderson Associates

Since the adoption of the Refuge Gateway Master Plan in 2006, much work has been accomplished, including: daylighting Monguagon Creek; shoreline and riparian restoration; completion of all public access roads; and construction of two wildlife observation decks and an education shelter in Humbug Marsh. In 2011, the Refuge Gateway received $1.39 million in funding to complete all cleanup and restoration work in 2012. This 'Extreme Makeover' of the Refuge Gateway landscape will restore over 41 acres of land for wildlife habitat and outdoor educational and recreational experiences.

Welcome to the future home of the Refuge Visitor Center

View from the restored shoreline at the Refuge Gateway, showing Humbug, Celeron, Calf Islands, with Pt. Mouilee in the distance. J. Jourdan 2011

View of the completed Mongaugon daylighted wetland J. Jourdan 2011

Detroit River International Wildlife Refuge

DRIWR
U.S. EPA
Large Lakes Research Station
9311 Groh Road
Grosse Ile, MI 48138

For More Information:
Jamie Lanier
Refuge Visitor Service Manager
Phone: 734-692-7649
Jamie_Lanier@fws.gov
DetroitRiver@fws.gov
http://www.fws.gov/midwest/detroitriver/

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