

Office of the Great Lakes E Newsletter



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Five Ways to Become a Great Lakes Steward

by Patty Birkholz
Director Office of the Great Lakes

In today's technological age, there is a documented societal disconnect from nature known as the "nature deficit." As a result, this disconnect has the potential for unfortunate and adverse effects on the Great Lakes in many respects from an environmental and societal standpoint. In order to counteract these adverse effects, it has become more important than ever to seek out and build new collaborations to "create a culture of environmental stewardship by providing people of all ages especially our young people with relevant knowledge that builds excitement for learning and instills a commitment to improving local communities." *Great Lakes Stewardship Initiative.*

We need to prepare current and future generations, leaders, and decision-makers to become Great Lakes stewards.

The Great Lakes are socially, economically, and

environmentally critical to the region, the nation, and the planet. Therefore, it only follows that public agencies, private and nonprofit organizations, and local communities have a vested interest in fostering an environmental stewardship ethic to preserve this unparalleled resource.

These are our Great Lakes - they belong to us. We have a responsibility to be their stewards. There are five simple things that anyone can do to be a Great Lakes steward:

1. Become Great Lakes literate – Great Lakes literacy is an understanding of the Great Lakes' influences on you and your influence on the Great Lakes. It is important to understand the characteristics, function and value of the Great Lakes. This understanding enables people to make informed and responsible decisions regarding the Great Lakes and the resources in their local watershed.

2. Connect with nature - Experience a connection to nature in your local community. Visit, or better yet, take a child to a lake, river, park, or natural area. People who [Read more >](#)

what's new

- [Manistique River Selected for NOAA Habitat Blueprint](#)
- [Lake Sturgeon Rehabilitation Strategy Available](#)
- [New Report on Michigan's Tributary Protection and Restoration Priorities for Lake Huron River-spawning Fishes](#)
- [Canadian Study Conducts Risk Assessment of Bigheaded Carps for the Great Lakes Basin](#)
- [The Costs of Aquatic Invasive Species to Great Lakes States](#)

features



Michigan Sea Grant

What are Great Lakes Coastal Wetlands and Why are they Important?

Wetlands are complex ecosystems. Each wetland is a product of its unique hydrology, geomorphology and climate of its location in the landscape. Great Lakes coastal wetlands are wetlands that are directly influenced by the waters of the Great Lakes. The temporary, seasonal and multi-year water level fluctuations play a key role in maintaining biodiversity in coastal wetlands. [Read more >](#)



Julie Champion

Restoring Lake St. Clair Great Lakes Marshes

Great Lakes Marsh ecosystems are coastal wetlands that are dominated by emergent vegetation, have high physical and hydrological connectivity to their associated Great Lake. They are strongly influenced by them and their processes, such as wave action, seiches, seasonal and interannual water level fluctuations. [Read more >](#)

Michigan's Office of the Great Lakes leads policy development and implements programs to protect, restore, and sustain the world's premier freshwater lakes.

in the news

- [Great Lakes Restoration Initiative Grants Announced to Make Michigan Beaches Safer](#)
- [Canada Joins Obama Administration's Asian Carp Coordinating Committee](#)
- [Latest Reports on Asian Carp eDNA](#)

opportunities to engage

- [Great Lakes Adopt-a-Beach, September 15, 9 a.m. to noon](#)
- [Great Lakes Week, September 10-13](#)
- [Clinton River Watershed Council Events](#)
- [The Stewardship Network](#)

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Friends of Sleeping Bear Dunes



Alliance for the Great Lakes

Five Ways to Become a Great Lakes Steward *continued*

experience nature at a young age have been shown to be more likely to appreciate the natural environment and become future stewards.

3. Make wise choices in your landscape -

What we do on the land affects the Lakes and our future is intertwined with that of the Lakes. Plant buffer strips along streams and lake shores to control runoff of nutrients. Minimize use of non-porous surfaces like pavement. We all have a duty to act responsibly. Our ability to effectively balance protection and wise use of our Great Lakes resources is key.

4. Be a part of the solution – Become empowered and take action. Take steps to protect the quality of our air, land and water. When recreating on Michigan waters: clean, drain, and dry all recreational equipment to prevent the introduction and spread of aquatic invasive species. Dispose of unwanted pharmaceuticals at a collection facility or in the trash. Reduce energy and water use to reduce the impacts on the environment. Recycle.

5. Get involved in your community to protect and restore natural places - People care most about the places where they live and the destinations that they love. There are many organized programs (e.g., Clean Boats, Clean Waters; Cooperative Lake and Stream Monitoring Program; Adopt-a-Beach™, etc.) that provide volunteer opportunities to meet individual interests and can also be fun. Organizations like The Stewardship Network help to develop local leaders to facilitate community conservation.

Ultimately, we have a huge responsibility to create and continuously promote an enhanced awareness of the critical role the Great Lakes and our coastal resources play in our social well-being and economic prosperity. We should always remember, “We do not inherit the earth from our ancestors; we borrow it from our children.” *Author unknown*

We hope you enjoy this newsletter and find it to be informative on how you as an individual can take action to protect the Great Lakes and help others in your community do so as well.

Join in the Fun! Participate in a Local Beach Clean-up

Michigan's Coastal Zone Management Program (CZM) invites you to celebrate the Coastal Zone Management Act 40th anniversary by participating in the world's largest shoreline cleanup on September 15, 2012. Join thousands of volunteers in Michigan and beyond for the September Adopt-a-Beach™ event, part of the International Coastal Cleanup. The official date of the event is September 15th from 9:00 a.m. to noon (times and dates may vary depending on location).

Volunteers that participate not only remove debris but record their findings to be used for pollution prevention and education. To register for a location near you visit www.greatlakesadopt.org.

For more information on this event, contact Ms. Jamie Cross, Alliance for the Great Lakes at 616-850-0745. To participate at Lake St. Clair Metropark, Belle Isle or Sterling State Park, contact Ms. Margi Armstrong, Clean Water Action, at 586-493-0672.



Dave Kenyon

Enjoy Michigan's Great Outdoors!



Michigan's Tributary Protection and Restoration Priorities for Lake Huron River-spawning Fishes

Lake sturgeon, yellow perch, walleye, and many other native fish that live in the waters of Lake Huron migrate to rivers and tributaries to spawn. These species are ecologically important components of Great Lakes ecosystems and several are commercially valuable. Spawning habitat for lake dwelling fish is often blocked by dams and improperly installed road-stream crossings block. Therefore dam removals and projects to provide fish passage are a common focus of conservation and restoration efforts that can benefit these species.

These projects often come with a high price tag. One simple measure resource managers use to prioritize proposed fish passage projects for funding is the number of river miles that would be reconnected to the lake. Yet this measure alone does not answer the question, "how much spawning habitat will be made accessible for which species?" With support from a Michigan CZM (CZMP) grant, The Nature Conservancy (TNC) recently developed species-specific and multi-species, watershed-based priorities for informing strategic decisions on the conservation of river-spawning fishes in Michigan's Lake Huron Basin.

TNC ecologists were able to access and rely on the professional experience and expertise of fisheries biologists, published literature, and unpublished records to piece together and map the distribution, current spawning habitat, and historic and potential habitat for more than two dozen native fish species. Many of these species that live in Lake Huron for part of their life cycle and spawn in tributaries are well-known to commercial fishermen and anglers, including whitefish, channel catfish, and muskellunge. Others have lesser commercial value, or are important links in aquatic food chains such as white sucker, freshwater drum, and trout-perch. Finally, a number of species are listed as threatened or endangered in Michigan, specifically, lake sturgeon, channel darter, river darter, sauger, and mooneye.

The project team took a comprehensive approach, one that had not been pursued before. They integrated data from 11 published and unpublished sources, collected for diverse purposes and under different protocols. Participation of the fisheries experts was critical to the success of the integration and interpretation of the data and subsequent analyses, and many of the experts were involved in the collection

of the source data within their respective organizations. The fisheries biologists represented the U.S. Fish and Wildlife Service, U.S. Geological Survey, NOAA – Great Lakes Environmental Research Laboratory, University of Michigan, Michigan State University, Central Michigan University, Michigan Department of Natural Resources, and Ontario Ministry of Natural Resources. Ultimately, the integrated data allowed the biologists and ecologists to evaluate and rank the importance of individual tributary systems at the level of 10-digit hydrologic unit code (HUC-10) watersheds.

The result of the project is the best available assessment of priorities for protecting and restoring currently accessible spawning habitat and riparian lands in Michigan's Lake Huron HUC-10 watersheds, and for reconnecting historic, potential spawning habitat to Lake Huron through barrier removal. The map-based assessment and prioritization is presented for each species individually, as well as for the collective guild of 26 fish species.

For additional information contact Mr. Matt Herbert, TNC at 517-316-2283, or Ms. Mary Khoury, TNC at 312-580-2172.

features continued

What are Great Lakes Coastal Wetlands and Why are they Important? - continued

Coastal wetlands provide many of the same functions and values as inland wetlands. They provide water quality improvements to the Great Lakes by reducing nutrients, settling sediments, and decreasing contaminants through vegetative uptake. Importantly, coastal wetlands play an essential role in maintaining the water quality of the Great Lakes.

Coastal wetlands also provide habitat for hundreds of birds, fish and amphibian species. More than two-thirds of all lake fish species spawn in coastal wetlands. Fish utilize coastal wetlands at all stages of their life cycle including egg, larval, immature and adult stages. Birds, reptiles, and amphibians also utilize coastal wetlands for all or parts of their life cycles. Coastal wetlands provide critical habitat for migration, feeding and nesting of waterfowl and shorebirds. Migrating birds often stop in river mouth

coastal wetlands for days or even weeks during both spring and fall migration. Coastal wetlands also provide significant recreational opportunities for canoeing, hiking, bird watching, hunting, and fishing.

Coastal wetlands are often threatened by sedimentation, contamination, invasive species and development. Approximately 50 percent of Michigan's coastal wetlands have been lost in the last 150 years.

What can you do to protect coastal wetlands?

- Conserve and restore wetlands on your property.
- Maintain buffer strips adjacent to wetlands on your property.
- Reduce the amount of fertilizers, herbicides, and pesticides utilized on your property.
- Support local wetlands and watershed protection activities by donating materials, time and/or money.



There are many federal, state and local programs involved in protection and restoration of coastal wetlands including the CZMP which is currently administered by the Office of the Great Lakes. The CZMP is committed to protection and restoration of sensitive coastal resources, including coastal wetlands. The CZMP provides funding and technical assistance to support on the ground restoration projects; feasibility studies for restoration and resource management; and outreach components that improve public understanding of coastal habitats.

For more information contact Ms. Alisa Gonzales Pennington, CZMP, 517-241-8280.

www.michigan.gov/deqog1

features *continued*

Restoring Lake St. Clair Great Lakes Marshes - *continued*

Great Lakes Marshes are now considered rare and imperiled, since many have been converted to housing and other developments, drained for farming, or dredged for shipping.

Macomb County, Huron Clinton Metropolitan Authority (HCMA), Clinton River Watershed Council, and Wayne State University received a grant through the U.S. Environmental Protection Agency's Great Lakes Restoration Initiative to restore nearly 500 acres of coastal Great Lakes marsh along Lake St. Clair at Lake St. Clair Metropark (formerly Metro Beach) in Harrison Township, Michigan. This imperiled wetland complex has been severely degraded over time by hydrological manipulation, filling, dredging, and invasive species infestation. This has led to monocultures of invasive *Phragmites australis* (tall reed) and *Typha angustifolia* (narrow leaved cat-tail) and decreased sightings of rare flora and fauna. The open water portions are disappearing, as flow has been cut off and as the emergent species trap and build up sediments.

The project area is one of the few remaining coastal wetlands within the

Detroit suburban county of Macomb. Over the last 10 years, Macomb County has experienced the greatest concentration of development in the Southeast Michigan area. Due to this rapid growth and development, there has been unprecedented degradation of the Clinton River and Lake St. Clair from an aesthetic standpoint, as well as a significant compromise of the natural systems. The coastal wetlands in the Lake St. Clair Metropark are regionally "well known;" however, the degradation of this area is not obvious to the general population.

The overall vision for this project is to restore the nearly 500-acre coastal marshland within Lake St. Clair Metropark to provide enhanced wildlife habitat value, including Lake St. Clair's important fisheries. More specifically, the purpose of this restoration project is to:

- Restore the hydrology of the wetland, such that the typical zonation of a Great Lakes Marsh can be re-established.
- Educate the public on the benefits of wetland, the importance of our coastal wetlands and the invasive species issues facing Lake St. Clair ecosystems.
- Augment current *Phragmites* removal



Paul Muelle

efforts undertaken by HCMA.

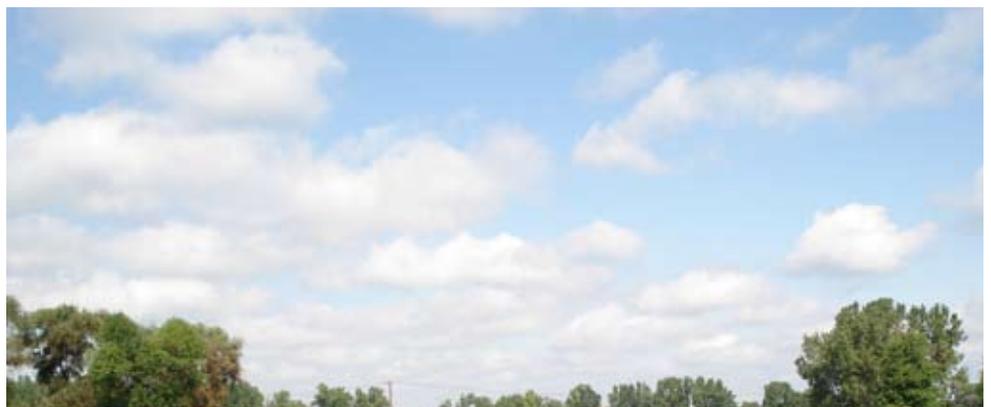
- Enhance existing habitat for native fauna, especially those that are rare, such as the Eastern Fox Snake, common moor hen, and Forster's tern.

This project supports many initiatives, including the Clinton River Area of Concern Remedial Action Plan, the Lake St. Clair Comprehensive Management Plan, the Lake St. Clair Coastal Habitat Assessment, and Macomb County's Blue Economy Initiative, among others.

For more information, contact Ms. Diane Martin at 810-225-2800.



Diane Martin



Penelope Bristol



Penelope Bristol



Julie Champion