

It's time to celebrate Grand Calumet River and Roxana Marsh cleanup

In northwest Indiana, life may just be a little more hopeful than it used to be. The Great Lakes Legacy Act (GLLA) project to remove contaminated sediment from portions of the Grand Calumet River and adjacent Roxana Marsh is done. Unlike before the cleanup, these waterways will now likely attract birds, aquatic life, and people.

"This river was lifeless," said Cameron Davis, senior advisor on the Great Lakes to EPA Administrator Lisa Jackson. "Today, because of this effort, you can see the Grand Cal working and fighting to come back to life, and with it, the community."

A celebration and press event in June to mark this moment brought together many players and partners involved in the process. And, thanks to work done by Caitie McCoy,



Illinois-Indiana Sea Grant (IISG) social scientist, local school children capped off their semester-long learning experience about the restoration project by planting native seedlings along the marsh's shores.

"Legacy Act projects provide opportunities for residents to get involved in the river restoration process and learn about local water issues," said McCoy. "As the Grand Cal project moved forward we have been ensuring that this includes local students too."

McCoy and Nishaat Yunus, a fellow in the U.S. EPA Great Lakes National Program Office (GLNPO), worked closely with students in two northwest Indiana schools, engaging them in hands-on water monitoring activities and other learning opportunities.

At the Hammond Academy of Science and Technology they accompanied about 80 ninth

Continued on page 4

Bringing AIS information to boat ramps Page 2

Yellow perch diet depends on where they are Page 3

Natural lawn care at a retailer near you Page 6

Illinois-Indiana Sea Grant

Two States Caring for One Great Lake

Brian Miller, Director

374 NSRC, 1101 W. Peabody
Urbana, IL 61801
217-333-6444

Lisa Merrifield

Assistant Director

The HELM

Irene Miles

Editor

Michael Peterson

Writer

Susan White

Graphic Designer



Printed on Recycled Paper

IISG online:

iiseagrant.org
lakesideviews.blogspot.com
twitter.com/ILINSeaGrant
facebook.com/ILINseagrant
youtube.com/iiseagrant



Illinois-Indiana Sea Grant is one of more than 32 programs of the National Sea Grant College Program created by Congress in 1966. Sea Grant is a partnership of universities, government, business, and industry that addresses marine and Great Lakes needs to enhance sustainable coastal economic development. Funding is provided by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA Grant # NA10OAR4170068), Office of Sea Grant, University of Illinois at Urbana-Champaign, and Purdue University. The University of Illinois and Purdue University offer equal opportunities in programs and employment.



Volunteers bring AIS information down to boat ramps

Investing in the stock market can be a risky venture, but investing your time to improve the environment has no uncertainty, and benefits everyone. IISG and the Northeast Illinois Invasive Plant Partnership (NIIPP) are seeking volunteers to assist with Stop Aquatic Hitchhikers! Clean Boats Crew, which aims to inform boaters that they may be accidentally transporting aquatic invasive species.

"I think of volunteering as an investment in the future—protecting and preserving ecosystems for future generations of humans as well as native organisms," said Cathy McGlynn, the NIIPP coordinator. "I also think environmental education and outreach are essential to raising public awareness about not only invasive species, but also the fact that everyone's actions can have far-reaching consequences. Humans are interconnected with every other organism on this planet."



Last year, the program started in Lake County, Illinois and Lake County, Indiana. Volunteers talked to boaters on site at boat ramps about how to prevent the spread of AIS. Boaters can easily transport AIS unknow-

ingly in water found in bait buckets, kayaks, canoes, and boat motors. Other species can get caught in boat trailers and fishing tackle and be moved to new locations.



"It's really all about getting out to where the boaters and anglers are, and talking with them about how their actions can make a difference," said Sarah Zack, IISG aquatic invasive species specialist. "Our Clean Boats Crew site leaders are very good at educating people about aquatic invasive species, and how easy it is to stop their spread with a few simple steps."

During the first year, volunteers talked with more than 900 people

Continued on page 7

IISG-12-24

www.iiseagrant.org

Location is key to yellow perch diet and success

Whether Lake Michigan's yellow perch survive their first winter may depend in part on their food source in the fall. And this can depend on where they live.

University of Illinois graduate student Austin Happel studied the diet of juvenile yellow perch. He found



Courtesy of Austin Happel

that those on the rocky western shores along Illinois and Wisconsin have a healthy diet of invertebrates whereas perch on the sandy east side have a skimpier diet of zooplankton.

"Perch are generalists—they eat what is available," said Happel. "The rocky habitat along the western coast provides a better environment for invertebrates to thrive than the sandy eastern Michigan shores."

Happel's study is part of a much larger research project to document the food web in the coastal zone of Lake Michigan using a comprehensive approach. Scientists at several institutions in the region are exploring food web linkages by analyzing the diets of a number of fish using three techniques: stomach contents, fatty acid signatures, and stable isotopes.

"Each of these methods reveals a different time frame of information about a fish's diet," said Happel. "Stomach contents reveal what the fish are eating at the exact moment of capture while fatty acid signatures allow us to tease apart what they have been consuming over several weeks. Stable isotopes provide a picture of an even longer time frame."

"All these approaches have unique advantages, which, when combined, provide detailed information on the nearshore food web structure," said Sergiusz Czesny, Lake Michigan Biological Station director.

Most food web studies in the past have focused on the open waters of Lake Michigan—this one is designed to describe the nearshore region. There, the food web has undergone dramatic changes in

recent years. Invasive species, such as the round goby have been introduced and native species, including yellow perch, mottled sculpin, longnose sucker, and various invertebrate prey, have declined.

"Our objective is to describe the nearshore food web structure and how this varies with location, season, and bottom substrate," said Czesny. "We are also interested in how invasive species interact with native biota, which will ultimately help us manage this unique ecosystem that is Lake Michigan," added Czesny.

The larger results of the study are still to come, but smaller aspects of the project, such as Happel's work with yellow perch, are beginning to tell a story. For example, Happel found that there isn't much overlap in the diet of yellow perch and round goby, but that, again, is location dependent. "On the west side of Lake Michigan, zooplankton is limited so the perch and gobies are more likely to both prey on invertebrates."

The nearshore food web study is a collaboration of researchers at the Illinois Natural History Survey, Purdue University, State University of New York, and the University of Wisconsin-Milwaukee Great Lakes Water Institute (through Illinois-Indiana and Wisconsin Sea Grants, and U.S. EPA Great Lakes Restoration Initiative).



Researchers are getting ready to sample in the nearshore of Lake Michigan as part of a Great Lakes Regional Research Information Network research initiative. (Photo courtesy of Sergiusz Czesny)

Cleanup celebration for all ages

continued from page 1

grade students from Amanda Miracle's science classes on a field trip to the river. Students took water samples to monitor water quality in restored sites—the results were shared with EPA and GLLA project partners. The students have gone back to the river to view progress on the restoration project. They have also learned data analysis, data reporting, and how scientists use data to make project-level decisions.

At the East Chicago Lighthouse Charter School, about 50 fourth grade students from Andrea Bock's science classes grew native plants, provided by EPA. These plants were brought to Roxana Marsh to put in the ground as part of the celebration. McCoy and Yunus engaged students in key concepts associated with habitats and restoration projects. The children designed their own Roxana Marsh habitat by constructing a colorful classroom mural.

McCoy is working with IISG's education team—Robin Goettel and Terri Hallesy—to package the classroom programming developed through these efforts. This programming will be ready to apply at other GLLA sites, hopefully in conjunction with Sea Grant programs in other states.

Altogether, more than 600,000 cubic yards of polluted sediment were remediated from 2.5 miles of the Roxa-

na Marsh and Grand Calumet River. The project's \$52 million cost was shared by U.S. EPA and the state of Indiana. But there are many players in this project—EPA GLNPO, the U.S. Fish and Wildlife Service, the Indiana Department of Environmental Management, the Indiana Department of Natural Resources, the U.S. Army Corp of Engineers, and community activists cooperated in the cleanup.

At the project celebration, U.S. Rep. Pete Visclosky commented on the restoration project. "What we used to call an industrial ditch—for 100 years—will be a grand river and a tremendous asset for all of us and our nation."





Natural lawn care—at a retailer near you

As lawn care season kicks into high gear, many of us find ourselves at the local hardware or garden supply store buying products that will help us attain or maintain a perfect lawn. But, depending on the products we choose or how much of them we use, we can play a role in contributing to the health of local waterways.

The Lawn to Lake program was established to spread the word about how to maintain healthy



and attractive lawns and landscapes while, at the same time, protecting the water quality of the Great Lakes and other waterways. At workshops and other events, Lawn to Lakers have been training lawn care professionals, municipal landscape managers, master gardeners, and homeowners about the benefits of natural lawn care, which includes reducing the use of pesticides and other chemicals. Now, the team has turned its attention to spreading the message to local retailers.

Over 170 retailers in the greater Chicago area have received information packets about the program including cards on specific lawn care products such as phosphorus-free (p-free) fertilizers. Through a survey and follow up contact, training sessions and outreach events are being scheduled for individual stores. As of June, 30 retailers have decided to participate in the program.

“We are hoping to conduct outreach and in-person training at the stores. We will teach them about different ways to use the materials, as well as train their employees,” said Leslie Dorworth, IISG aquatic ecology specialist.

The retailers also have the opportunity to be a “partner” with Lawn to Lake and be listed on the program webpages as a natural lawn care provider. You can find the list of Lawn to Lake natural lawn care providers in northeastern Chicago and northwestern Indiana regions at lawntogreatlakes.org.

continued on next page

Seeding healthy lawns, reaching many audiences

- ✓ Lawn to Lake is informing Indiana lawmakers about the importance of keeping phosphorus out of local waters. Indiana currently is the only Great Lakes state that doesn't regulate the use of phosphorus-based fertilizers.
- ✓ Demonstration sites put the program's philosophy of natural lawn care into action. “They show homeowners that you can have a nice lawn, naturally,” Dorworth said.
- ✓ Through University of Illinois Extension, master gardeners are learning about natural lawn care. “The idea is to train the trainers. The people they train will keep spreading the program messages,” Dorworth said.
- ✓ On Earth Day in Valpariso, Indiana, 225 people visited IISG's table to learn about lawn and landscape care. Enviroscope, a watershed activity, provided a fun way for kids to learn about how their actions around their home impact water quality.



Staff update—new sustainability specialist

Kara Salazar is IISG's new sustainable communities extension specialist, located at Purdue University. She will assist communities in identifying issues that impact sustainability and help them in making informed land use and policy decisions. Kara has a M.P.A. in natural resource management and nonprofit management from the Indiana University School of Public and Environmental Affairs. She also received a M.S.Ed. degree from the IU School of Education at Indiana University-Purdue University Indianapolis (IUPUI) as well as a Certificate in Fundraising Management from IU. She came to Sea Grant from an education outreach position in the Center for Earth and Environmental Science at IUPUI.



Volunteers hit the boat ramps

Continued from page 2

about the issue. Now, the Clean Boats Crew program has received a grant from the Illinois Department of Natural Resources that, combined with funding from the Great Lakes Restoration Initiative, will allow it to expand to Cook County, Illinois, as well as LaPorte and Porter Counties in Indiana. Zack believes this expansion could allow the program to quadruple the amount of people they reached last year.

"Programs like this have no longevity without volunteers. Unless the public supports this, we won't

be able to continue with the program." Zack said. "It doesn't matter if someone can only help out for one weekend. Getting involved on any level is beneficial."

If you would like to see this program set up in your county or are interested in becoming a volunteer please contact Cathy McGlynn at 847-242-6423 or cathy.mcglynn@niipp.net or Sarah Zack at 847-242-6440/szack@illinois.edu. Or, go to protectyourwaters.net for more information.

Natural lawn care—at a retailer near you

Continued from previous page

Lawn to Lake, which began more than a year ago, is funded by a grant from the U.S. EPA Great Lakes Restoration Initiative. The three-year project aims to reduce the amount of toxins entering

Great Lakes Basin waters. For this project, IISG has partnered with Safer Pest Control Project, Lake Champlain Sea Grant, University of Illinois Extension, Chicago Metropolitan Agency for Planning, and Northwestern Indiana Regional Planning Commission.



For more information on the program, go to lawntogreatlakes.org. To learn more about retailer publications, turn to page eight.

University of Illinois at Urbana-Champaign
Illinois-Indiana Sea Grant College Program
374 NSRC, MC-635
1101 W. Peabody Dr.
Urbana, IL 61801

Non-Profit Organization
U.S. Postage Paid
Permit No. 453
Champaign, IL 61820

Lawn care retailers: Spread the word!

Natural lawn care products can help protect local waters from pesticides and fertilizer nutrients that run off the land as a result of lawn and landscape care. Retailers that sell natural lawn care products and phosphorus-free fertilizers can inform their customers and promote these products through free Lawn to Lake rack cards and posters. These publications explain the benefits of natural lawn care and phosphorus-free fertilizers, and provide simple tips for having a healthy, natural lawn.



You can find these products at lawntogreatlakes.org. There, retailers can also sign up to be listed as natural lawn care and phosphorus-free fertilizer providers, and consumers can find their nearest supplier.

