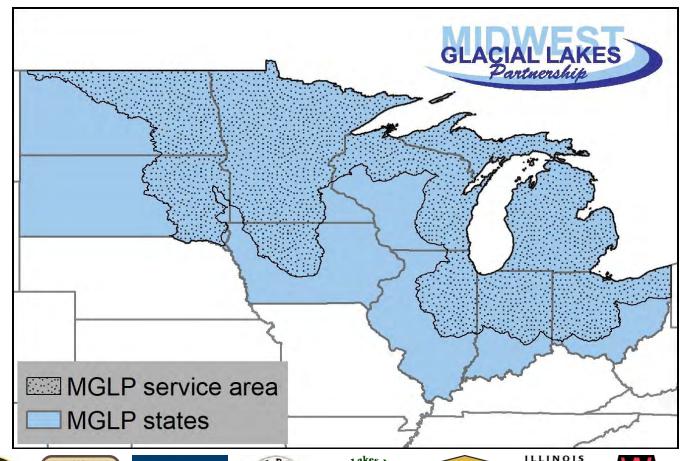


Partnering to conserve your lake: Lessons learned and resources from the Midwest Glacial Lakes Partnership

Joe Nohner



Midwest Glacial Lakes Partnership



9 states
3000+ partners
88,044 glacial lakes
89,307 miles of shoreline
5,951,770 acres of lake
surface area





























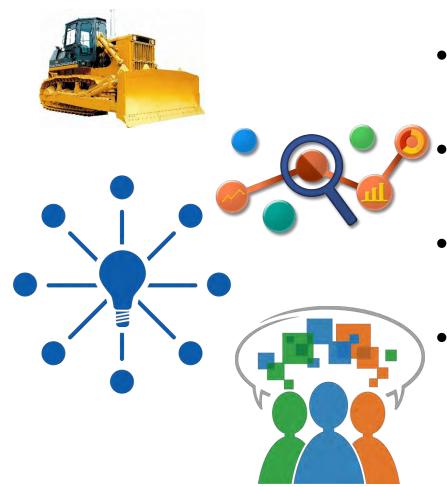








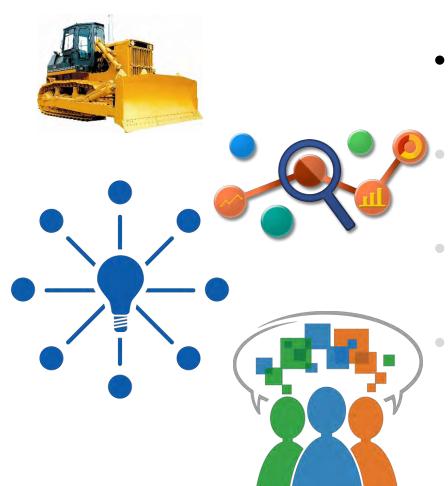
How we work



- Enable partners to complete <u>on-the-ground habitat</u>
 <u>conservation</u> projects
- Conduct scientific assessments to determine the condition of and threats to fish habitats
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Lake Conservation Grant



 Supports conservation, outreach, and assessment

 ~\$300,000 annually through NFHP/USFWS

 Pilot and precedent-setting projects to inspire others



Request for proposals: 2025 Lake Conservation Grant

We are seeking project proposals for funding from the Midwest Glacial Lakes Partnership (MGLP) 2025 Lake Conservation Grant. The MGLP is one of twenty partnerships that span the nation under the umbrella of the National Fish Habitat Partnership (NFHP). The MGLP area of focus is glacial lakes and their watersheds (see figure). Nine Midwestern states, federal agencies including the U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey, and the U.S. Forest Service, tribal governments, and private natural resource entities including The Nature Conservancy, have been integral partners in the development and operation of the MGLP.



Lake Lizzie and Prairie lake fish passage (MN)



Lake Lizzie Dam, photo by Dan Zwilling, Minnesota DNR



Prairie Lake Dam, photo by Joe Nohner, Michigan DNR

River miles restored **10**

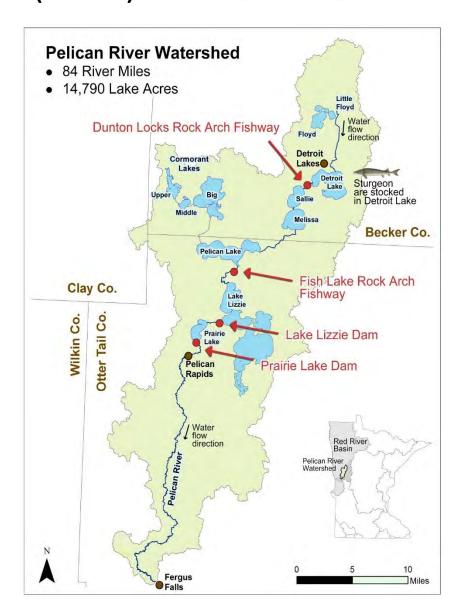
Lake acres reconnected **12,466**

Species benefitted

Lake sturgeon, Walleye,
numerous Catostomids

Partners

Pelican Lake Group of Lakes Improvement District, Minnesota DNR, MGLP





Pickerel Lake shoreline restoration (SD)



Example
rehabilitation
sites at
Pickerel Lake,
SD
Photo
credits: Rhett
Russell, South
Dakota DGFP



Miles of shoreline restored **0.3 (10% of the lake)**

Properties restored **22**

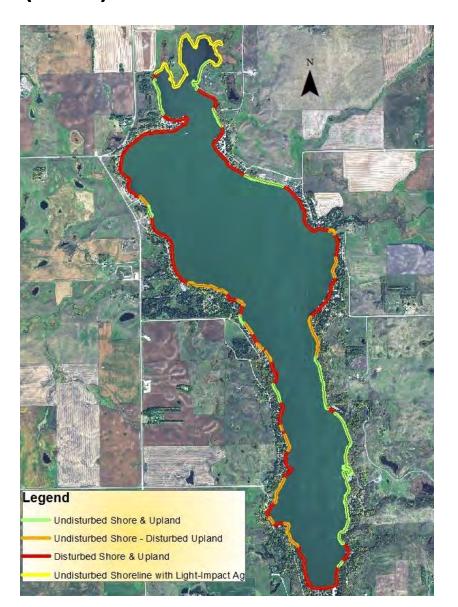
Shoreline erosion and sediment reduction **25%**

Species benefitted
Smallmouth Bass, Black
Crappie, Bluegill, Walleye,
Yellow Perch,
Northern Pike, Black
Bullhead, and others

Partners

South Dakota DGFP; Pickerel

Lake Conservancy









Example fish sticks rehabilitation site. Photo credits: Greg Sass WI DNR (above) and WI DNR (below)



Downed trees installed **600**

Lakes

5: Nelson, Upper St. Croix, Lake Nebagamon, Middle Eau Claire, Upper Eau Claire

Species benefitted

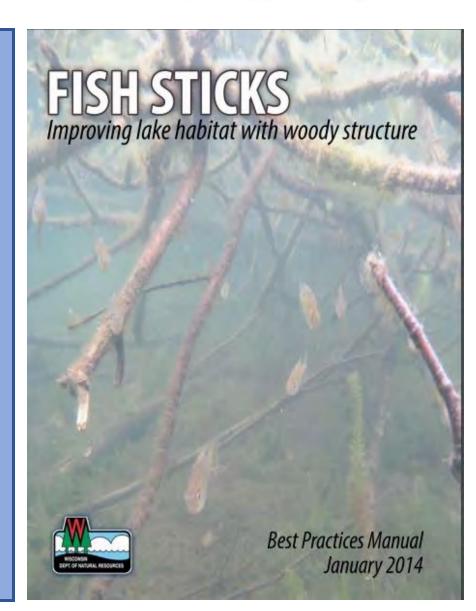
Largemouth Bass,

Smallmouth Bass,

Muskellunge, Northern Pike,

Yellow Perch, Bluegill, and
others

Partners
Wisconsin DNR, numerous
lake associations

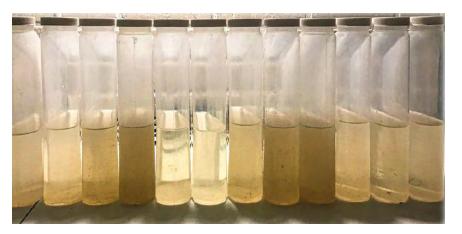








Lake Wawasee sampling locations and samples.
Courtesy of Wawasee Area Conservancy Foundation
(Ecology Committee), Heather Harwood, Ex. Dir.,
Beth Morris, Ecology Comm. Chair, and Joan Syzal



Water samples analyzed **2,945 samples from 6 streams**

Species benefitted

Iowa darter; Least darter; Pugnose

Shiner*; Bluegill; Largemouth bass;

Northern pike; Redear sunfish *Indiana

species of special concern

Partners

Wawasee Area Conservancy
Foundation; Local Producers; Private
donations; Indiana Natural Resources
Foundation; Midwest Glacial Lakes
Partnership; U.S. Fish and Wildlife
Service; Kosciusko Community
Foundation; Natural Resources
Conservation Service; Soil and Water
Conservation Districts



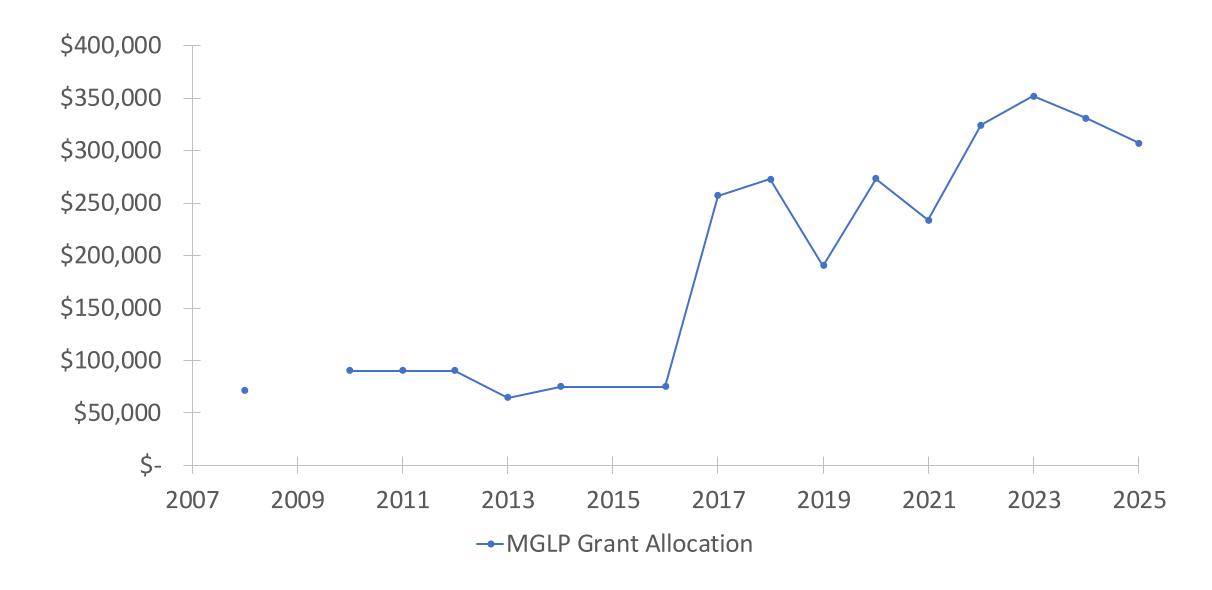
Wawasee Inlets Nutrient Study (IN)



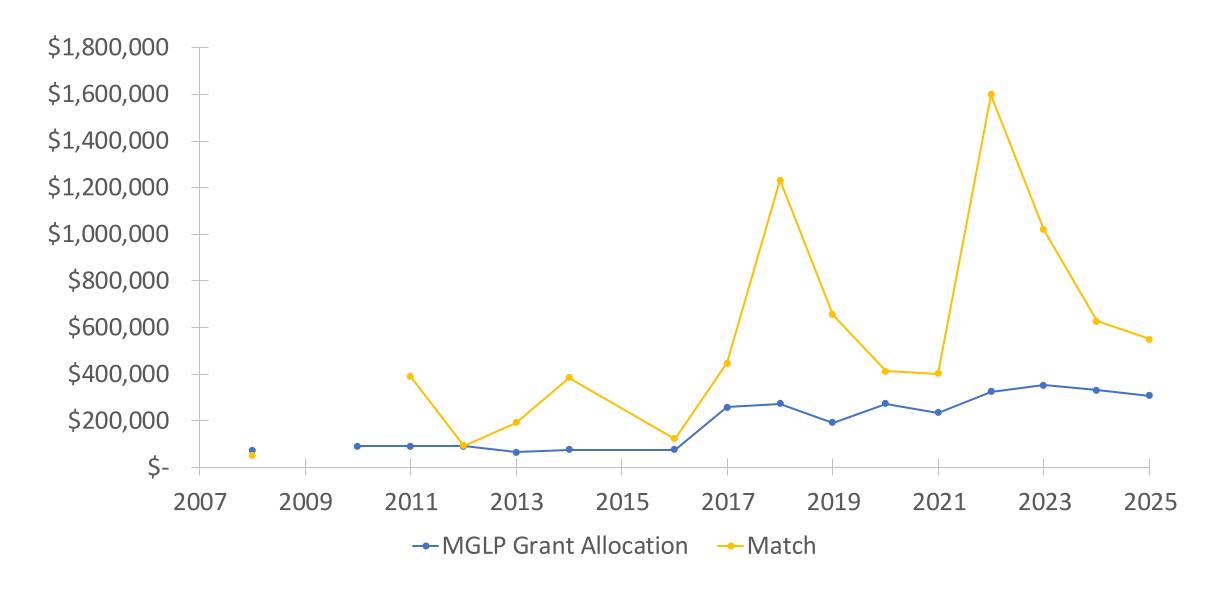


Courtesy of Wawasee Area Conservancy Foundation (Ecology Committee), Heather Harwood, Ex. Dir., Beth Morris, Ecology Comm. Chair, and Joan Syzal

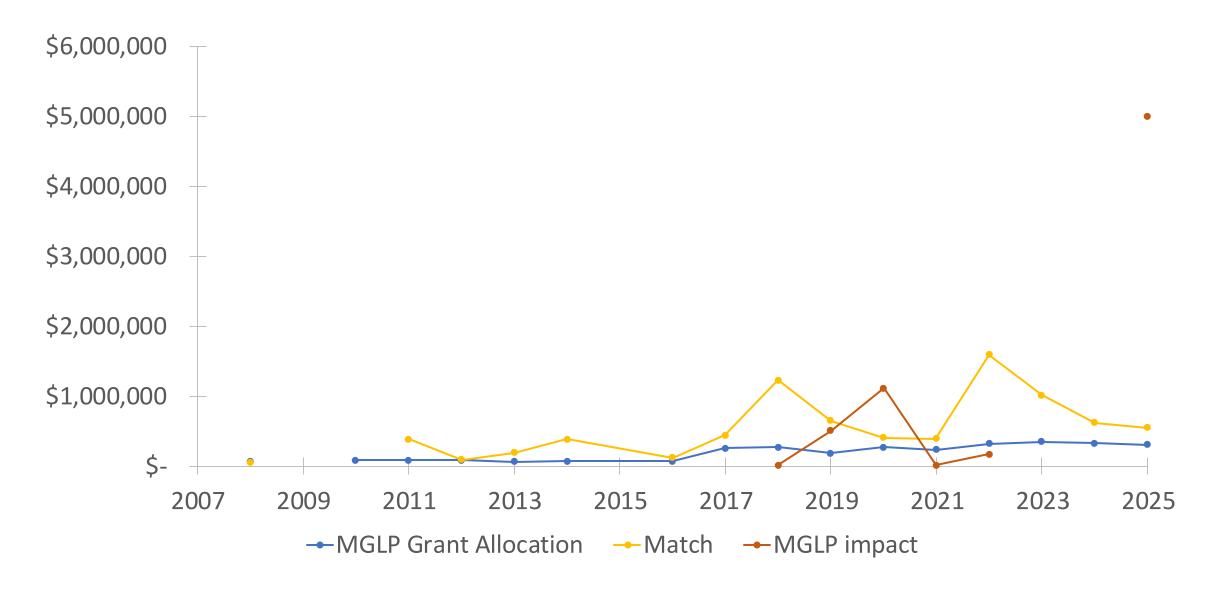
MGLP funding impact

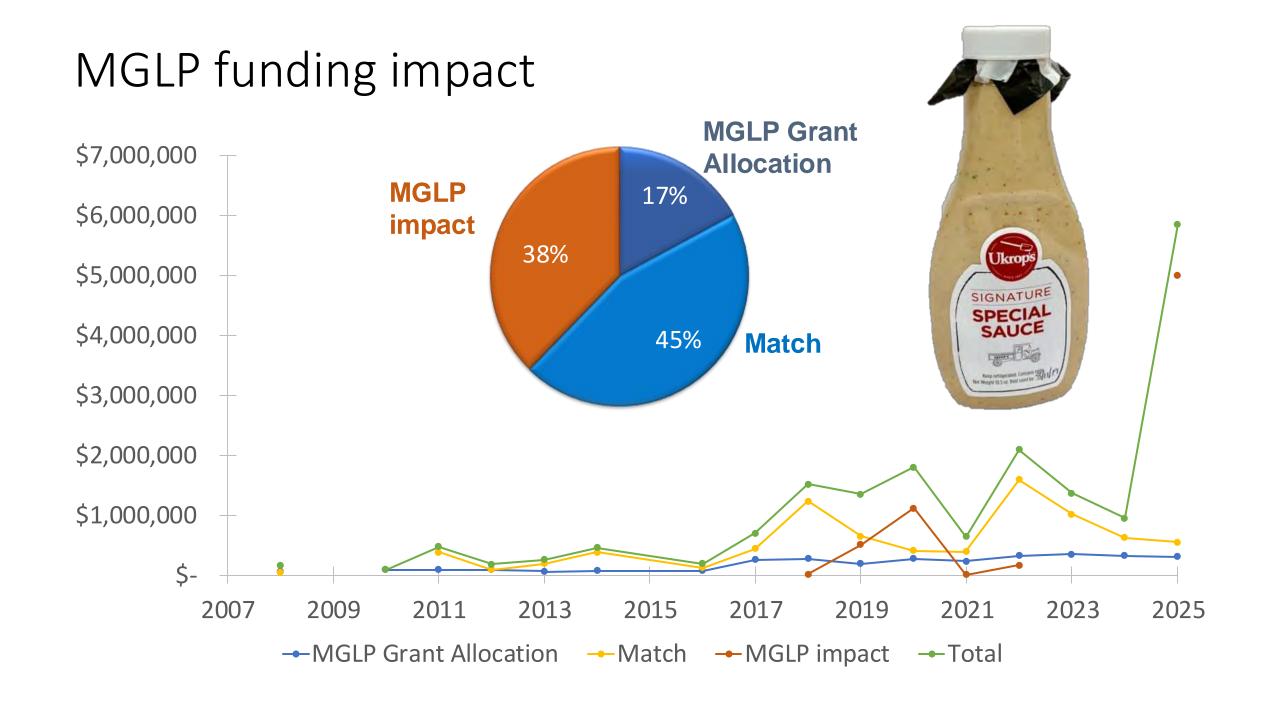


MGLP funding impact



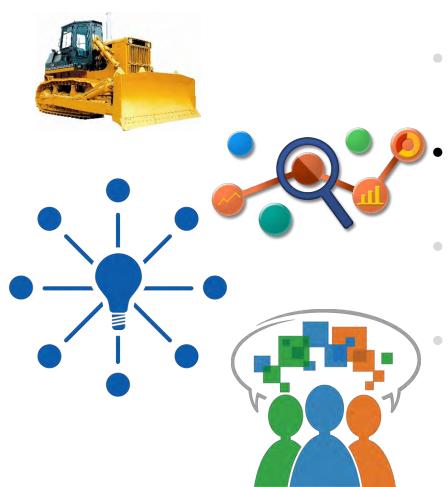
MGLP funding impact







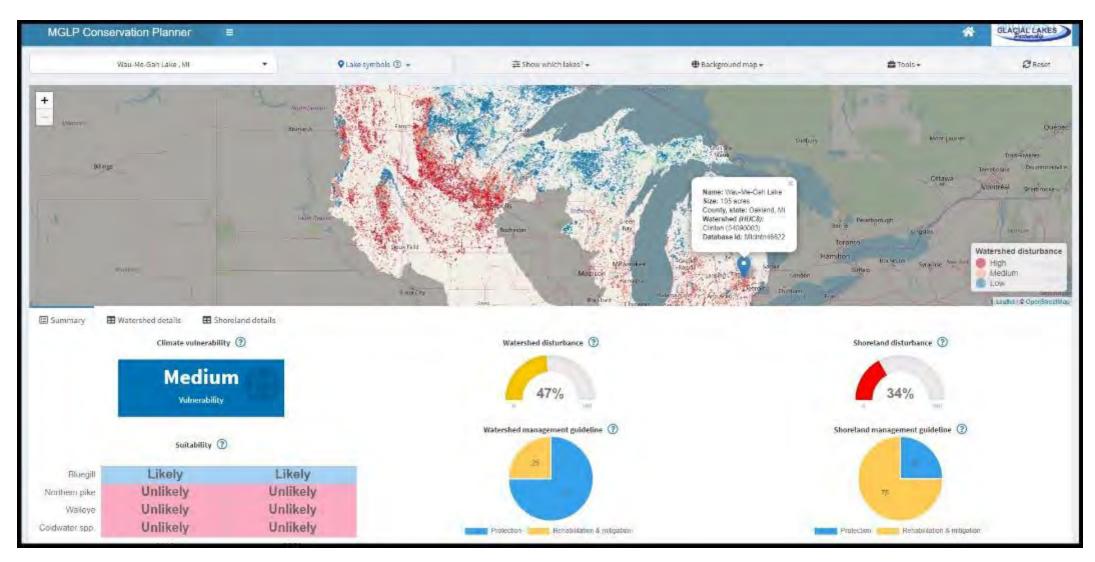
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Science and Data Products: Conservation Planner



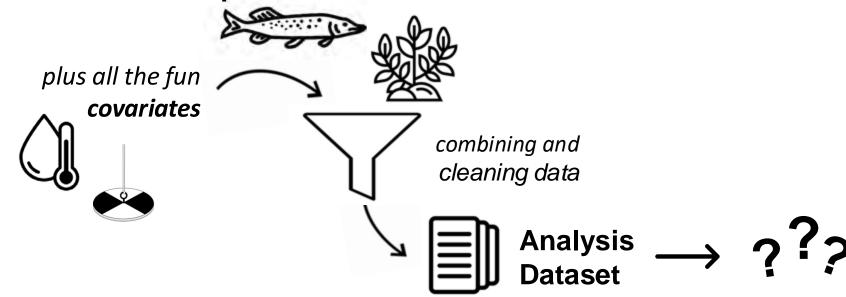
Assessing relationships between fisheries and aquatic vegetation to improve lake habitat management

Study Region

Minnesota, Wisconsin, Michigan



Aquatic Plant and Fish Data



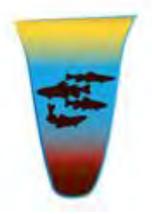
Quantifying resilience of coldwater fish habitat to climate change and watershed disturbance

Gretchen Hansen, University of Minnesota

Jake Walsh, Kelsey Vitense, Kevin Wehrly, Peter Jacobson











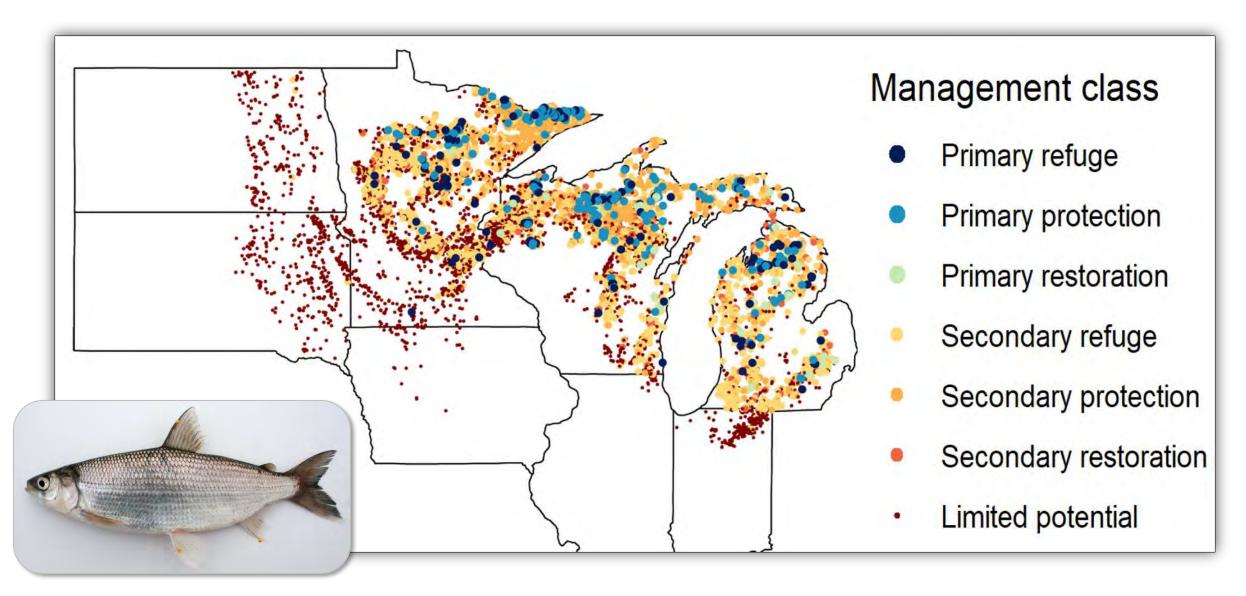




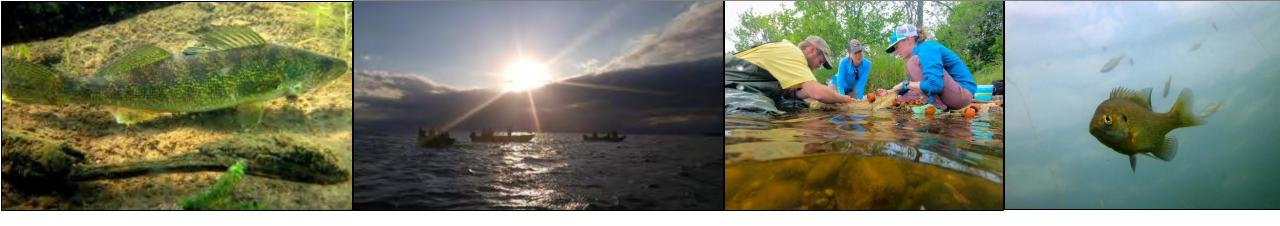




Coldwater lake conservation science



Hansen et al. 2022



Projected warming and fish community responses in lakes of the Midwestern United States

Gretchen Hansen, Chris Custer, Denver Link, Holly Masui, Joshua North, Erin Schliep, Mike Verhoeven, Tyler Wagner



Science Products: Symposia and publications

Adapting to climate change: Tools for managers of inland glacial lakes. Tingley, Paukert, & Jacobson

Large Woody Debris and Fish Habitat Structure Additions: Picking the Right Lakes, Setting Expectations, and How to Best Implement. Sass, Shaw, Rypel, Raabe, S. Toshner, & P. Toshner

Advancing aquatic vegetation management for fish. Radomski

Climate change adaptation recommendations from the Wisconsin Inland Lakes Climate Change Workshop.

Magee, McIntyre, et al.

Evaluating a spatial decision support tool for lake conservation in the Midwest.

Tracy, Nohner, Infante, Wehrly, & Whelan

Using aquatic landscape ecology to inform lake habitat management at multiple scales.

Wehrly, Nohner, Breck, Cross, Jacobson, & Hansen

The influence of lake habitat and landscape context on bluegill growth and population size structure in Midwest glacial lakes. Breck & Wehrly

Walleye habitat: considerations for successful natural reproduction and stocking.

Raabe, VanDeHey, Zentner, & Cross

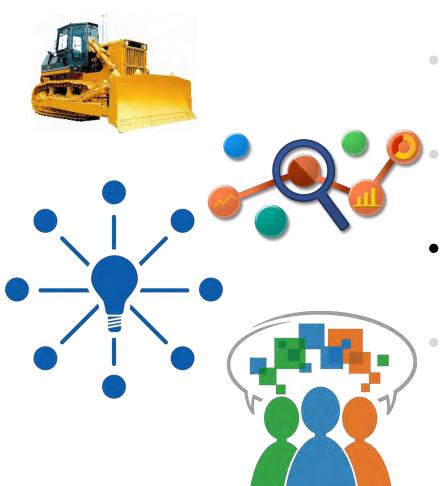
Wisconsin's Healthy Lakes Initiative: working with lakefront property owners to apply best management practices. Goggin & P. Toshner







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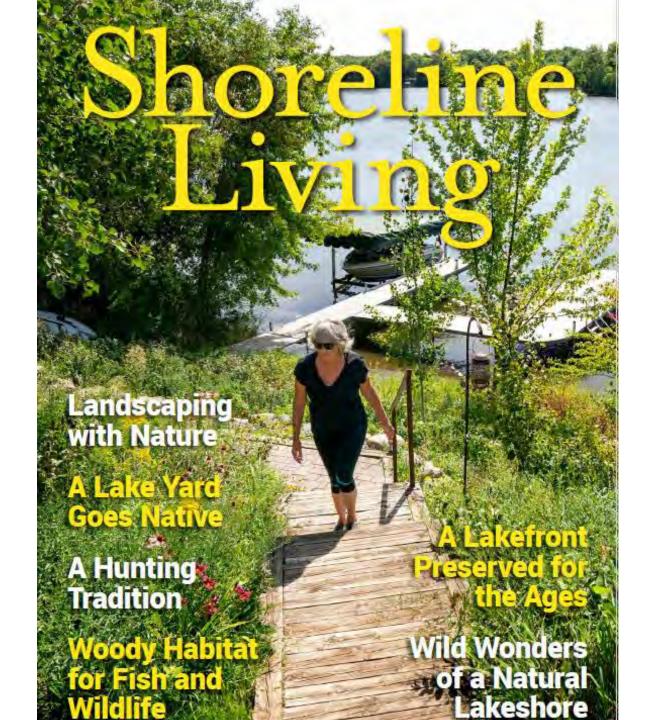


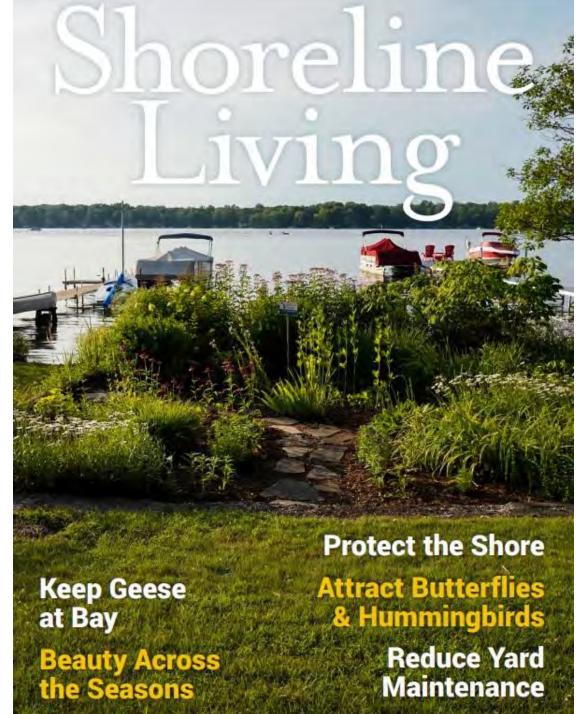
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Shoreline Living publication

- Show real-world examples of natural shorelines
- Promote landscaping with native plants
- Conversation starter









Register for an Account

Registering allows you to return to your survey information at any time, receive a certificate, print your information and more!

Please read our <u>Privacy Statement</u> for more information.

Start Registration

Take the Survey Anonymously

Just want to see what the survey looks like? Your survey will not be saved and a certificate will not be generated unless you register and save. You can register and save your survey at any time. We want you to register as it helps us know more about your lake.

Start Anonymously

Log In

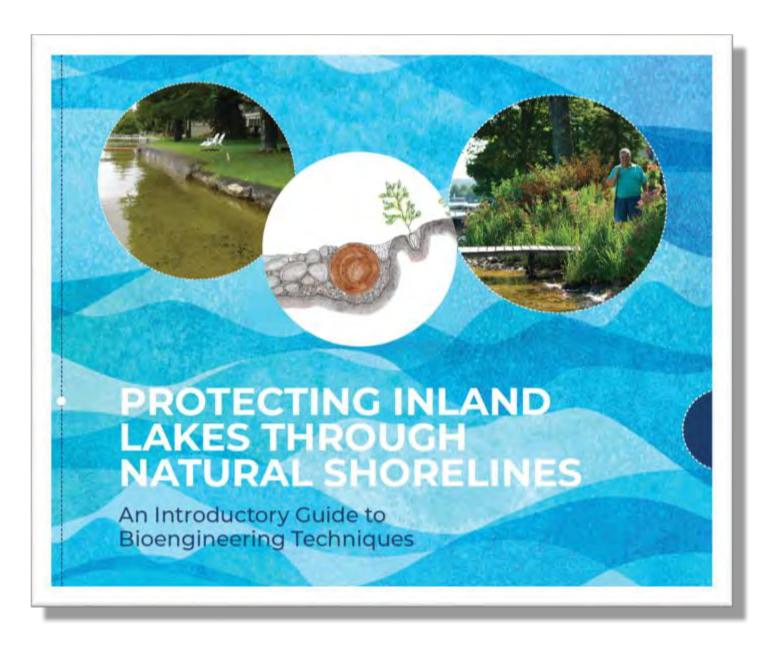
If you already have an account and would like to return to your survey,

Log In



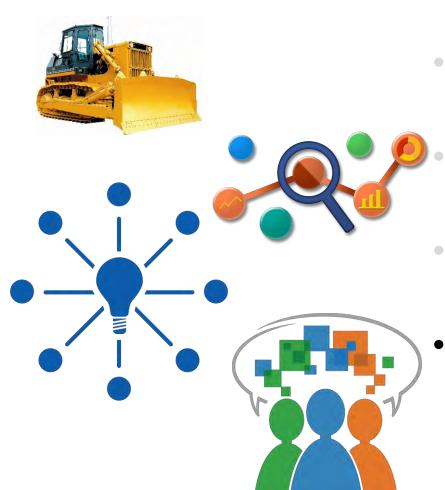
Technical guidance







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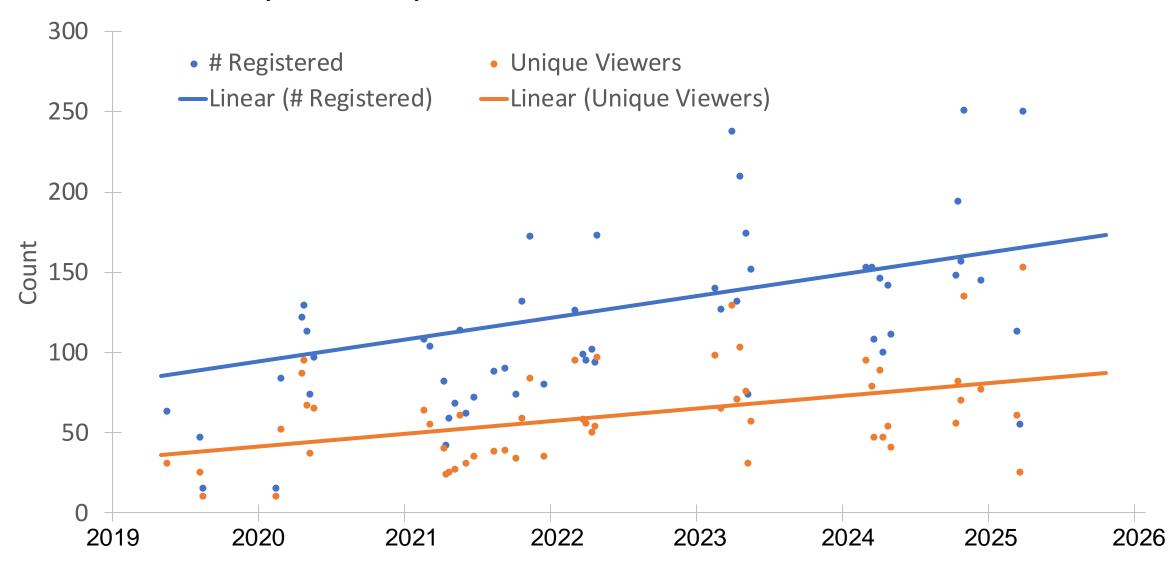
Lake Conservation webinars



- Share science, conservation, and communications advances
- Audience:
 - Primary: Professionals in management, research, outreach, and conservation.
 - Secondary: Stakeholders



Webinar participation



Top 10 MGLP webinars

Subject	Presenter	Audience
Restoration of freshwater fish habitat: What works and what doesn't	Steven Cooke	168
Basics of Shoreline Erosion Control: New Documents to help in design and management	Julia Kirkwood and Jen Buchanan	159
Dissolved oxygen in warming lakes	Steve Jane	146
Phenological whiplash in Midwest US fisheries	Zach Feiner	118
On thin ice: Are lakes feeling the heat?	Sapna Sharma	118
A Field Study of Maximum Wave Height, Total Wave Energy, and Maximum Wave Power Produced by Four Recreational Boats on a Freshwater Lake	Jeff Marr and Andy Riesgraf	114
Common Carp Management and the Lost Island Lake Restoration	Mike Hawkins	112
Top to bottom trophic interrogation of Michigan inland lake communities using eDNA metabarcoding	Kim Scribner	111
Starry stonewort ecology, impacts, and management	Daniel Larkin and Wesley Glisson	110



Much, much more than our on-the-ground projects!







Learn more!

- Sign up for our emails midwestglaciallakes.org
- Follow us on Twitter @MGLFHP
- Email Coordinator Joe Nohner -<u>NohnerJ@Michigan.gov</u>

