# 2011-2012 Annual Review

The Midwest Glacial Lakes Partnership (MGLP) is focused on conserving aquatic habitats in naturally formed Midwestern lakes. With approximately 40,000 lakes, the region is known for the quality and quantity of its lakes. Our partnership has developed a lake-based fish habitat condition assessment. While not yet in final form, the assessment will aid in prioritizing where conservation dollars should be invested and what threats or stressors must be addressed to ensure sustainable aquatic habitats in the future. Dollars have already come through the partnership for on the ground projects and partner organizations have a long track record of lake conservation. This partnership furthers lake conservation by serving to work across jurisdictional lines, sharing successes and learning from the experiences of our partners. Collective learning is perhaps our greatest asset.

© Engbretson Underwater Photography

The following pages highlight some of the lake conservation accomplishments by **MGLP** and its partners in 2011 and 2012. Note this is not an exhaustive list. Sharing this information is one way to learn from each other's strategies to ensure we have sustainable lake habitats in the future.

## THE MISSION

**of the Midwest Glacial Lakes Partnership** is to work together to protect, rehabilitate, and enhance sustainable fish habitats in glacial lakes of the Midwest for the use and enjoyment of current and future generations.

## GUIDING PRINCIPLES

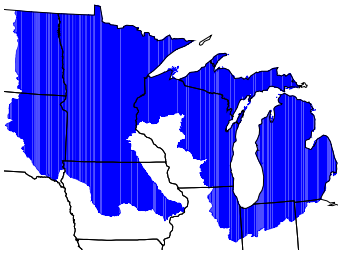
- **Habitat protection is the most cost-effective long-term conservation strategy.** The statement that it is "cheaper to protect than to restore" will guide our partnership to identify high-quality lakes and prioritize them for protection.
- **Healthy watersheds are fundamental to clean water and fish habitat.** Fish are indicators of the ecosystem health of the lakes and streams in which they live. Therefore, improving watershed conditions and sustaining ecosystem services improves fish habitat and benefits a multitude of other aquatic and terrestrial organisms.
- **Good investments equal good returns.** Money spent on rehabilitation, if done correctly, is a wise investment that will give positive return on that investment.
- **Partnerships are critical for improving aquatic habitat.** The experience, knowledge, and skills of all partners are needed to improve aquatic ecosystem management. **MGLP** will be an effective partner with federal, tribal and state agencies, local governments, non-governmental organizations, sporting groups, lake associations, and others. These strong partnerships will facilitate the sharing of habitat protection and restoration methodologies, programs and policies.

# BACKGROUND

The National Fish Habitat Partnership (**NFHAP)** http://www.fishhabitat.org/ is an unprecedented attempt to address an unseen crisis for fish nationwide: loss and degradation of their watery homes. The partnership was formed in 2001 when an ad hoc group supported by the Sport Fishing and Boating Partnership Council explored the notion of developing a partnership effort for fish on the scale of what was done for waterfowl in the 1980s through the North American Waterfowl Management Plan. The waterfowl plan has worked wonders during the past two decades to boost waterfowl populations by forming strong local and regional partnerships to protect key habitats.

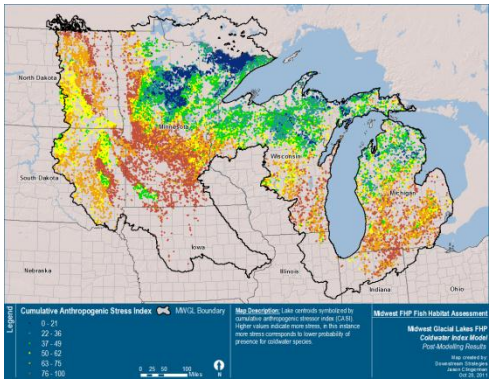
As part of the Action Plan, Fish Habitat Partnerships (**FHPs**) are voluntarily forming across the country. Organized around a particular species, geographic area, or aquatic system type, FHPs include a group of state, federal, local, nonprofit, tribal, Alaskan Native or private individuals or entities that coordinate to implement the Action Plan at a regional level. Fish habitat conservation projects sponsored by these FHPs are eligible for funding as Action Plan projects.

Recognized as an FHP in 2009, the **Midwest Glacial Lakes Partnership** is working to conserve fish and aquatic habitats in naturally formed lakes. From small lakes that are important for wildlife as well as fish to the large lakes with miles of open water, lakes are a prominent feature on the Midwestern landscape. The partnership's geography includes approximately **1/3 of the nation's lakes and 24 percent of its freshwater anglers**. Recreational opportunities abound- fishing, swimming, boating and other forms of water recreation take place year round. Tourism on many lakes supports local economies. The region's freshwater fishing supports more than **115,000 jobs** and exceeds **$7 billion in retail sales**. It is clear that healthy lakes lead to healthy economies.



A lake is more than a low point that collects water; it is a reflection of its watershed, from its shoreline to those distant points that drain to the lake. Watersheds and lakeshores that remain in a relatively undisturbed state tend to have lakes that support sustainable aquatic communities. Watersheds and lakeshores with altered land use tend to have compromised lakes. In the Midwest, lakes and their corresponding watersheds range from pristine (primarily in the north) to severely compromised (most common in the south). The Midwest Glacial Lakes Partnership is working with partners to **protect**, **restore and enhance fish habitats in lakes**. To do this, we work together to assess the status of lakes in this region and identify and address the root causes of habitat decline. The results are lake habitats that sustain fish and aquatic communities for the use and enjoyment of current and future generations.

# 2011-12 Partnership Highlights




**Assessment Products Released!**

The culmination of three years of work by the **MGLP** GIS group, the initial products from the **MGLP** Assessments (five models) were completed by the consulting firm Downstream Strategies. These models provide an important first step in being able to prioritize lakes for conservation across our wide geographic area.

**Other highlights : MGLP** received $90,000 in 2011 NFHAP funds for habitat projects and submitted eight projects requesting $750,000 with more than $1 million in partner match to the U.S. Fish and Wildlife Service for funding consideration in 2012 and beyond. Projects funded in 2011 included;

1)Large woody habitat rehabilitation in the N. Lakes and Forests Ecoregion of **WI**

2)Protection for sensitive fish habitats in Cass County, **MN**

3) Working to meet **NFHAP** goals and objectives trhough the **MGLP** (coordinator salary)$25,000

4) Landscape Demonstration Riparian Area project on glacial lakes in E. South Dakota.

- Received $100,000 in 2012 **NFHAP** funds for habitat projects. Projects approved in 2012 include:
  1)**MGLP** Fish Passage Restoration Project , PortageLake,MN. This project involves theUSFS/Chippewa National Forest and other partners in Cass County, MN. It is designed to improve fish passage between Portage Lake and Leech Lake by removing a dam on Portage Creek and improving a culvert.
  2)MGLP Near Shore Woody Habitat Restoration-Long Lake Chippewa County/WI. This project is designed to add a woody habitat component to the near-shore of this important lake in Wisconsin.
  3) MGLP Greenbelt workshops for Lakefront Property Owners in N. Michigan. Two workshops will be held by Tip of the Mitt Watershed Council, in the N. part of lower Michigan. These workshops will be held in 2013 and include a hands-on installation component.
  4) Working to Meet **NFHAP** goals and objectives through the Midwest Glacial Lakes Partnership. This pays for a portion of the FHP Coordinator's Salary. An additional $10,000 was received and was used to produce outreach products for the six midwest FHP's; Fishers and Farmers, MGLP, DARE, Ohio River Basin, Great Lakes Basin, and Great Plains FHP's. These outreach products include "rack cards" and display banners for each FHP (if requested).
- The **MGLP** Website has been re-designed and updated.
- North American Fisherman host Steve Pennaz filmed a telelvision show in northern Minnesota with MGLP coordinator Pat Rivers. Fish habitat, and the Midwest Glacial Lakes Partnership were featured. The program aired in early 2012 on the Versus Network.
- New **MGLP**Coordinator Katie Haws hired in June 2012.
- Jim Breck (MI DNR) gives **MGLP** Assessment Paper at AFS Meeting Assessment Symposium( 8/22/12)
- A new website, featuring all of the midwest **FHP's**, was rolled out, and it will be used as an information/data portal http://midwestfishhabitats.org

# Illinois Highlights

**The Lake Calumet area** in Chicago is a site of former landfills and abandoned industrial facilities. With multiple partners, the lake and associated areas is being restored as a "Millennium Reserve. "The work in the Lake Calumet area also involves the establishment of an Eco-toxicological Roundtable. Some funds are available for this project through the Great Lakes Restoration Initiative. The Millennium Reserve is built upon strong partnerships, community planning and the work of active citizens and organizations who have sought to transform an economically challenged industrial region into a re-envisioned community landscape that is economically, environmentally and culturally vital to the region. "When Governor Quinn first announced the Millennium Reserve initiative last December, we recognized a vision built on previous community efforts for what this area could be with hard work and strong partnerships," said Illinois Department of Natural Resources Director Marc Miller. "This first round of model projects announced today are tangible results that define the potential of the Millennium Reserve. They represent real actions that will improve the local economy, community and the environment."

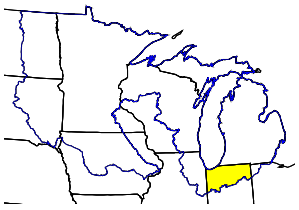
**Two new laws** were passed in Illinois; IL HB 388-Boats-Aquatic Life Transport Bill provides that no person may transport a car or watercraft or other object if it has aquatic plants or animals attached to the exterior. The other bill Illinois HB5642 amends the Environmental Protection Act and establishes NPDES discharge and sludge permit fees for Concentrated Animal Feeding Operations. Both of the bills are very beneficial to watersheds.

**Lake County** is part of the Chicago metropolitan area and home to 181 inland lakes, in addition to being adjacent to Lake Michigan. Many communities are built around lakes and the land management practices of these communities affect the quality of the water. The Lake County Health Department Environmental Services (LCHD-ES) monitors the county's surface water in order to maintain or improve water quality and alleviate nuisance conditions, promote healthy and safe lake conditions, and protect and improve ecological diversity. The majority of Lake County Lakes do not meet Illinois Environmental Protection Agency (IEPA) water quality standards, resulting in a decline in aesthetic and recreational values. Phosphorus concentrations have increased over the past twenty years. 67% of lakes within the county have a total phosphorus concentration that exceeds the applicable standard and are listed as impaired waters on the IEPA 303(d) list. Concentrations above the impairment level can support high densities of algae and aquatic plants, which can reduce water clarity and dissolved oxygen levels.

LCHD-ES provides lake reports to the management entities and other concerned citizens. Reports include the analysis of data collected, a list of threats occurring in or around the lake,

and recommendations on how to reduce or eliminate these problems. To maintain or more importantly improve the water quality of Lake County lakes, a more robust interpretation of physical and biological monitoring data, watershed characteristics and socioeconomic parameters must be developed. The ultimate goal is to identify significant sources of phosphorus to Lake County inland lakes originating from morphological and anthropogenic sources in an effort to prioritize management strategies.

**Lake monitoring** continued in Illinois lakes in 2012. The sentinel lake monitoring program which has monitored some lakes since 2005 includes Bangs, Cedar, Cranberry, Long and Wooster Lake within the MGLP region of Illinois (the NE corner of the state); the primary issues in the past two years have concerned lake levels and harmful algae blooms.



# Indiana Highlights

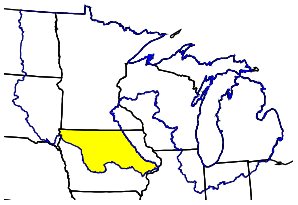
**LARE program funding -** One of the main goals of the DNR's Lake and River Enhancement program is to protect and enhance aquatic habitat for fish and wildlife. This program is funded through fees paid with Indiana boat registrations and provides cost-share grants for planning, implementation, and monitoring of a wide variety of habitat-related projects. In 2012, LARE funds provided $1.7 million to assist partners in funding critical work that includes: water quality monitoring, invasive species control, wetland restorations, stream stabilizations, sediment removal, and shoreline enhancement and restorations. For more information see www.in.gov/dnr/fishwild/2364.htm.

**Village Lake Stream Restoration** - LARE partnered with the Wawasee Area Conservancy Foundation to restore 2,000 feet of Village Lake Stream to address erosion problems that have caused the filling-in of at least one acre of the 11-acre lake. Prior to restoration, design studies conservatively estimated that these erosion problems contributed approximately 40 cubic yards of sediment to Village Lake annually. Aspects of this project included increasing the size of the flood-plain, stream bank stabilization using soil encapsulated lifts, installation of 27 rock grade controls, and removal of 600 cubic yards of eroded sediment to restore 12,000 square feet of wetland at the stream outlet. Final construction was completed in May 2012.

Before and after photos of restoration work completed on Village Lake Stream, a tributary to Village Lake.

**TWF Healthy Shorelines Initiative** - In 2011-12 the Tippecanoe Watershed Foundation (TWF) developed an innovative and wildly successful program to benefit habitat in one of Indiana's priority watersheds. Cost-share funds were available for lakeshore stabilization and the establishment of native plant buffers to reduce runoff from lawns, stop shoreline erosion, reduce sediment resuspension (internal loading) in lakes, and deter waterfowl loitering. TWF funds were used to complete thirty-two lakescaping and shoreline projects in a period of only 15 months! Improvements to water quality based upon the EPA Region 5 model include the reduction of phosphorus by 125 pounds per year, nitrogen by 267 pounds per year, sediment by 122 tons per year, and total suspended solids by 2,744 pounds per year. The program will expand in the coming years as the MGLP and LARE program have both decided to contribute additional dollars for this ongoing initiative.

Before, during and after – 20' Bioengineered Seawall and Native Plant Buffer on Loon Lake, in the Tippecanoe Watershed.



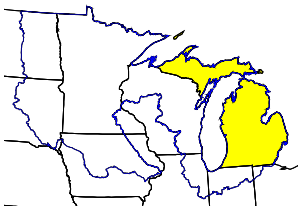
# Iowa Highlights

**The way it was and is now** a study by Iowa State University funded by the Iowa DNR set out to find what conditions were like in thirty four natural lakes just prior to European settlement and compare this information to current conditions. Utilizing sediment cores and the radio-isotope Lead-210, sediment composition was assessed through loss-on-ignition (LOI) to determine the contribution of in-lake and watershed sources of Iowa natural lakes. Changes in total phosphorus (TP) were evaluated by examining historic changes in the algal diatom community. Qualitative changes in the diatom communities were also examined.

Results determined that natural lakes in Iowa have filled up an average rate of 0.1 inches per year over the past 150 years. Since European settlement there has been an 8-fold increase in sediment accumulation primarily due to the increasingly large input of erosional material from terrestrial sources as well as rising in-lake sediment deposition from algae and aquatic plant production and decomposition. This modern rate of sedimentation in Iowa natural lakes is over double the average sedimentation rates found in other regional studies during the same time period. Iowa's natural lakes have shown a consistent pattern towards increasing nutrients and sedimentation. The average difference between reconstructed historical conditions and current nutrient conditions indicated an average total increase of about 60 ppb TP. Generally an increase in TP of this magnitude would be sufficient to push a lake from a mesotrophic to a eutrophic system. While in general these lakes began to show evidence of a decline in water quality shortly after European settlement in the early 1800's, the most dramatic changes in most of these systems occurred post-1940.

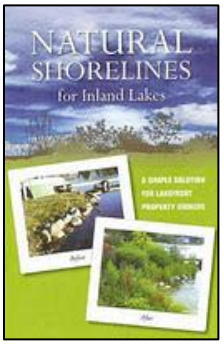
**A Drought Positive** One of Iowa's larger shallow lakes, Trumbull Lake (Clay Co.), will be the focus of a water quality improvement project that was born out of the historic drought of 2012. The 1,200 acre natural lake and its 1,000 acres of connected marsh are nearly dry, which is unusual for a system with an almost 50,000 acre watershed. Plans are to hold the lake down for at least another year to allow plants to germinate and grow on the lake bed. The restoration plan includes stocking yellow perch and northern pike in the spring of 2014. Trumbull Lake has been in a dismal state for years. It has a history of mostly poor fishing and poor water quality. This project will benefit both fishermen and hunters, and it is a unique opportunity to provide for the first time in over 100 years a common carp free system.

**Another Drought Accelerated Restoration Project** a fish restoration project has been accelerated due to persistent drought conditions. The 922 acre glacial formed Black Hawk Lake in Sac County is over 30 inches below crest and the associated wetlands and sloughs are dry. A total fish renovation to eliminate a common carp dominated fishery is scheduled for later this fall, followed by an aggressive fish re-stocking program. A comprehensive lake/watershed renovation plan was approved and initiated in 2009 with aggressive nutrient and sediment reduction goals set. This watershed was selected as one of three watersheds in Iowa for inclusion through the USDA-NRCS National Water Quality Initiative. Strong local community support has accelerated implementation of this restoration project and is serving as a model for future restoration efforts in Iowa.



# Michigan Highlights

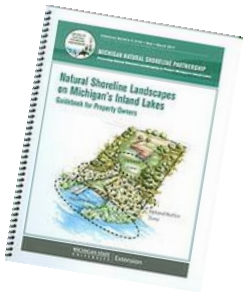
**Spreading the Word about Natural Shorelines** Two new publications were released that promote the benefits of natural shorelines for inland lakes:




- Michigan Sea Grant and the Michigan Department of Environmental Quality partnered to create a new brochure touting the environmental and aesthetic benefits of natural shorelines to lakefront property owners. **"Natural Shorelines for Inland Lakes: A Simple Solution for Lakefront Property Owners"** explains the basics of lakeshore ecology and bioengineering for erosion control, and describes the negative impacts that sea walls and bulkheads can have on fish and other aquatic and riparian life. The brochure is available online at www.mishorelinepartnership.org.

- A new book, **"Natural Shoreline Landscapes on Michigan's Inland Lakes: Guidebook for Property Owners"** was published by the Michigan Natural Shoreline Partnership and Michigan State University Extension. Developed as a companion to the Michigan Natural Shoreline Partnership's Natural Shoreline Workshops for Homeowners, the guidebook provides lakefront property owners with a broad understanding of healthy inland lake ecosystems, and ideas for creating an attractive, more natural shoreline. The Guidebook is available for purchase at http://bookstore.msue.msu.edu.

**Back to the Classroom** The Michigan Natural Shoreline Partnership (**MNSP**) developed its Property Owner Education Network. Professionals from non-profit/conservation groups were trained to use new materials, including a property owner guidebook (mentioned above), slide presentations, and educational and marketing materials to conduct workshops statewide for lakefront property owners. Three trainings were held for professionals in 2011, resulting in a network of nearly 80 professionals prepared to conduct property owner training about the value of natural shorelines. Visit the **MNSP** website, www.mishorelinepartnership.org, to learn more about this program.




**"Michigan Natural Shoreline Partnership" Trainings held** Homeowner/Profession Educator Workshops were held on October 25th, 2012 in Waterford, MI, and November 8th in Roscommon, MI ,the topic of which was Healthy Lake Ecolosystems, and the benefits of natural shorline landscaping, bioengineering and erosion control on inland lakes. https://sites.google.com/site/mishorelinepartnership/home

2013 workshops are planned for Paw Paw and Brighton, as well as several workshops Funded by **MGLP** to be held in the Northern. Lower peninsula of Michigan, sponsored by the Tip of the Mitt Watershed Council http://www.watershedcouncil.org/

**Partnering for Protection** Over 300 acres and 6,000 feet of stream frontage were protected through permanent conservation easements in the Prairieville Creek watershed in southwest Michigan through an EPA Section 319 Grant. Prairieville Creek is the major surface water source to Gull Lake, a 2,000 acre lake that supports a significant sport fishery. This project, led by the Four Townships Water Resources Council (www.ftwrc.org), is the culmunation of a successful collaboration between several state, regional, and local partners and will result in significant annual load reductions in the watershed:

Fish seen enjoying in-lake natural habitats.

E. Engbretson Underwater Photography

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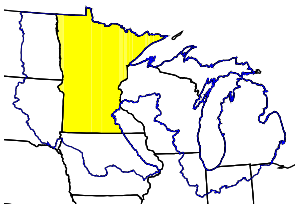


# Minnesota Highlights

2011/2012 saw many challenges as well as accomplishments for Minnesota's glacial lakes. One monumental new initiative seeing results is the 3/8 of 1% sales tax passed by voters in 2008, which funds a variety of habitat projects throughout the state. The Legacy Amendment was passed…"for the benefit of Minnesotans, to restore, protect and enhance wetlands, prairies, forests and habitat for fish, game and wildlife, to protect, enhance and restore water quality in lakes, rivers and streams, and to protect ground water from degradation." In fiscal years 2010-2012, $13 million was appropriated for Aquatic Management Area (AMA) acquisition, $856,000 for stream restoration, $582,000 for shoreline habitat, and $853,000 for cold water streams. Midwest Glacial Lakes Partnership was involved through direct funding as well as endorsement of projects as described below.

**Acquisition/Shoreland Protection**

- **La Salle Lake SNA and Recreation Area** This unique parcel surrounding the 2nd deepest lake in MN protects 1000 acres of land around La Salle Lake, and the Mississippi River as both a Scientific and Natural Area (SNA) and a Recreation Area managed by MN DNR. The 221 acre deep lake has no development, other than the camp ground and cabins which will be run as a satellite area from Itasca State Park, located 6 miles to the South. The project was approved and funded by the Lessard Sams Outdoor Heritage Council, as well as the Legislative Citizens Commission on MN Resources, and the Parks/Trails Fund. The acquisition was completed in 2010-2011.
- **The Nature Conservancy (TNC)** has helped protect 2 new properties on the northeast side of Mille Lacs Lake near Garrison, an area that has been identified as having outstanding biodiversity significance by the Biological Survey and other conservation planning efforts in the Brainerd Lakes area, thanks to a large number of rare and unusual native species and ecological communities. With the help of other organizations, **TNC** was able to buy a 318 acre tract near Garrison that resulted in protection for more than 1.2 miles of shoreline, including all of Sunfish Lake and portions of three other lakes. The Conservancy has also helped facilitate establishment of the 585 acre Mille Lacs Moraine SNA, the first SNA in Crow Wing County This SNA protects small lakes and wetlands embedded in steep moraine ridges covered with high quality red oak-basswood forest, and associated rare species, including red-shouldered hawk, cerulean warbler, and several plant species, as well as portions of the watersheds of Borden Lake and Lake Mille Lacs.
- **Camp Lake**—in May, TNC closed on a 2,751 acre acquisition from Potlatch Corporation Northeast of Brainerd, which will ultimately be transferred to the state of Minnesota. The final acquisition in the Forest Legacy project, the property includes a small lake that was included in TNC's statewide conservation portfolio, largely because of its high quality aquatic plant communities including the rare purple bladderwort, which has been found at less than 24 lakes in the state.
- **Snake River** Also in 2012, **TNC** partnered with the MN DNR to provide gap funding necessary to acquire a critical 406 acre inholding in the Snake River state forest through

an allocation of Reinvest in Minnesota-Critical Habitat Match credits that **TNC** had generated. The property provides proection for 1.5 miles of Snake River shoreline as well as downstream lakes in the Snake River watershed, a **MGLP** priority watershed.

**Conservation Easements** With **MGLP funding**, several conservation easements are in process on Child Lake in Cass County. The landowners donated the value of the conservation easement, funding is being used for the court and document costs associated with establishing the easements.

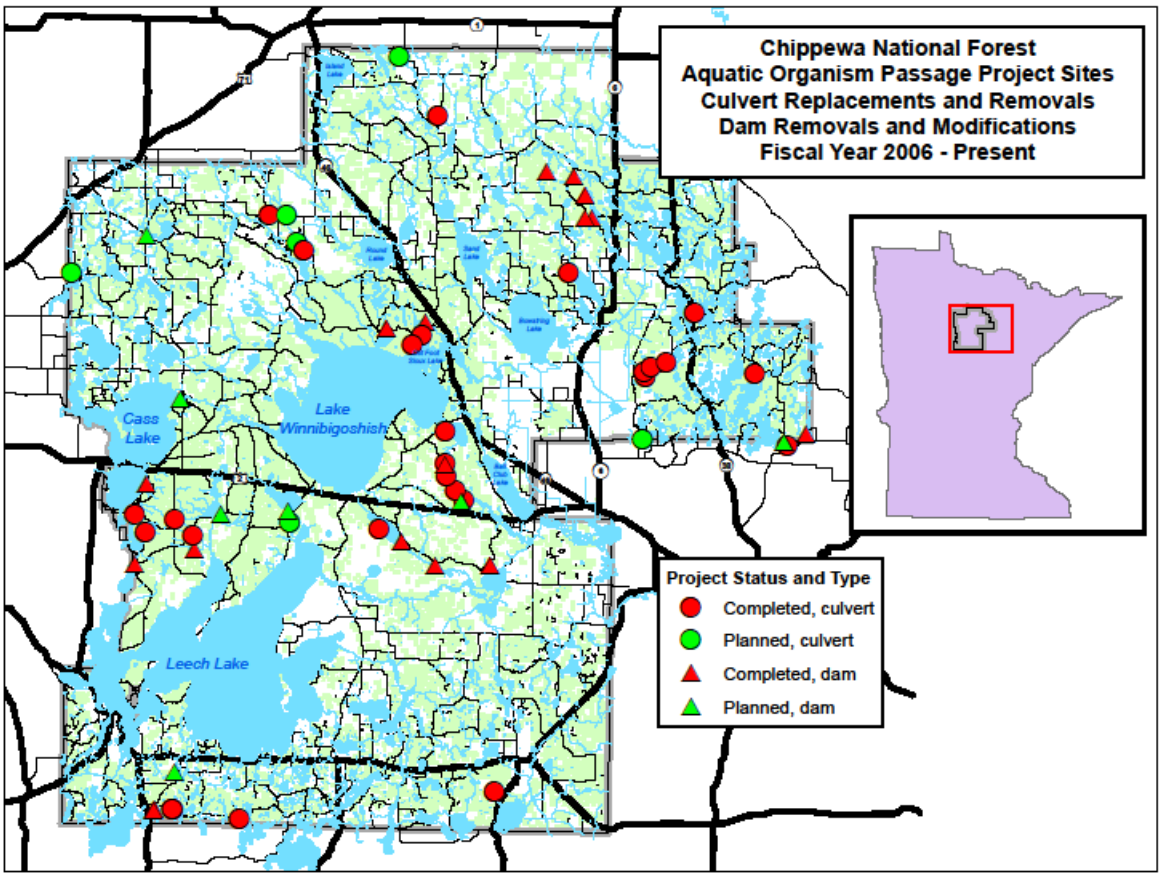
Conservation easements are also used to protect valuable stream frontage, as well as lakeshore on other lakes such as Lindbom Lake in Becker County.

Lindbom L. Conservation Easement

Aquatic Habitat Restoration

**Lake Habitat Projects**

- **Aquatic Habitat Restoration** This DNR program has had over 10 years of accomplishments, with approximately $225,000 available in bloc-grants each year to fund shoreland habitat projects on both public and private land. The goal of this program is to expand the diversity and abundance of native aquatic and shoreland plants; improve and protect the quality of aquatic habitat; enhance and protect water quality; and raise awareness of the value of native shoreline and aquatic vegetation. In 2011, 61 projects on over 50 lakes in MN were completed; improving habitat on over 10 acres, and 2.5 linear miles of shoreline. In 2012, there were 47 projects completed totaling 49.6 acres, and over 3.5 miles of lakeshore protected/improved!
- **Chippewa National Forest Fish Passage**
  Funding was obtained from **MGLP** for a 2013 project (Portage Lake). American Reinvestment Act funds were obtained for projects within the forest, and many projects to improve fish passage through dam removal, culvert improvement/relocation were completed. **MGLP** staff provided input on the inventory and project selection process, and endorsed this important effort on the forest. The map shows completed and planned aquatic projects on the Chippewa.




During 2011 and 2012, a total of $738,000 of Forest Service Funds plus $620,500 of Partner funds were expended on a total of 6 stream/culvert improvement projects, one dam modification and one dam removal, which resulted in 30 connected stream miles, and 3,932 additional lake acres available for fish movement! This proactive approach combined with available funding and willing partners such as the Leech Lake Reservation, and **MGLP,** has resulted in some fabulous projects for fish and fish habitat improvement.

Six Mile Creek Fish Passage Project

Pigeon River Fish Passage Project

For more information on the projects, contact **Forest Biologist** Todd Tisler at tisler@fs.fed.us

- **Sand Lake Woody Habitat Improvement** This **MGLP** endorsed project was completed in Winter 2011/12. With the support of the Sand Lake Homeowners Association, nine woody habitat installations were placed in 41acre Sand Lake, in Cass County, MN. Staff sought and received other funding for the project, so **MGLP** did not ultimately fund it. Homeowners/recreational users are pleased with the results, noting increased use by fish and frogs.

Sand Lake Woody Habitat

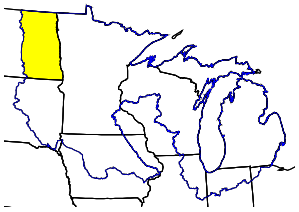
Sand Lake Woody Habitat

**Special Lake Research/habitat condition Projects**

- **Sensitive Shoreline Project** This project was funded by the LCCMR, and the goal was to use multiple approaches to delineate unique critical habitat on important lakes in N. Minnesota. The project used field surveys, ecological modeling and delivery of the information. Information including detailed reports can be accessed at **http://www.dnr.state.mn.us/eco/sli/** The sensitive shoreline manual may be accessed from: **http://files.dnr.state.mn.us/eco/sli/sens_lakeshore_manual.pdf**
- **Score your Shore Tool** This tool was developed for the lakeshore owner to assess habitat conditions on a lake; in order to quantify habitat conditions and stewardship concerns. The tool is available free on the MN DNR website http://www.dnr.state.mn.us/scoreyourshore/

**Planning**

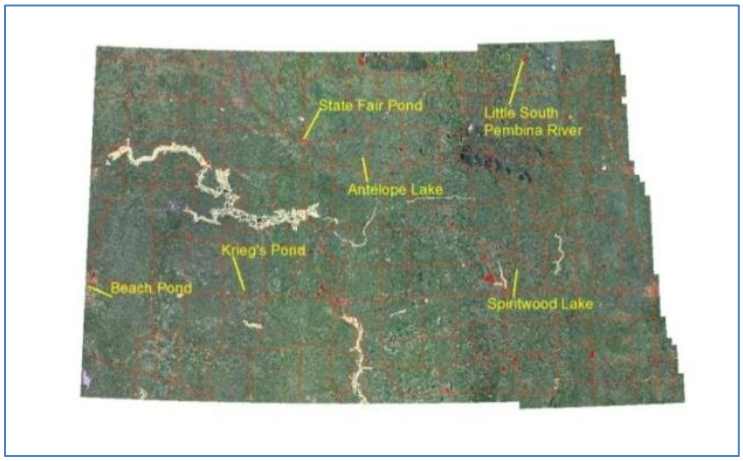
- **Section of Fisheries Aquatic Habitat Strategic Plan** This plan is being written for Minnesota's 5400 fishing lakes and 15,000 miles of fishable rivers and streams. The plan is designed to identify areas for watershed protection and restoration. For more information contact Michael.duval@state.mn.us



# North Dakota Highlights

Many lake/pond habitat improvement projects were completed in North Dakota, and following is a subset which does not include reservoir work. Only a couple of these are within the **MGLP** project area, but we are including the others because they show innovative restoration techniques.

**MAP of Project Sites**




**1. Beach Pond** – Urban fishery in which the pond had filled in over the years from agricultural runoff and was weed choked. ~6,000 cubic yards of sediment were removed, landscaped and reseeded, and the pond was stocked with catchable trout. A metal fishing pier was also installed. This went over very well with the community and stockings are planned to continue. Fishing was enjoyed by young and more mature individuals.

Beach Pond prior to dredging

Dredging taking place


Sign for new fishing site

**2. State Fair Pond – More urban fishery work.** Pond at the state fair was in need of a facelift. After many years of runoff from adjacent parking lots and livestock barns the pond had filled in and was in desperate need of help. A hydraulic dredger was used in this case as Fair staff didn't want any of the adjacent lawns disturbed. Sediment was pumped into bags and hauled away by

a local contractor. Added depth of pond and reduction of organic material was significant. Alum was also added to the ponds after the dredging operation to give an added boost to the water quality. Fishing was excellent during and after the state fair and hopefully in the future.

Sediment Bags

Dredge

**3. Krieg's Pond – Still another urban fishery.** Private pond where the landowner was very cooperative in allowing us to remove sediment and build earthen piers allowing better access for the public and survival for the fish. Fence was also installed around the pond to exclude cattle. Additionally, trees were planted and a dugout installed to replace the water source that was lost.

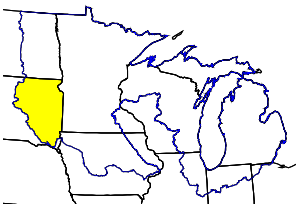
Cattle exclusion fence around Krieg's Pond

Pier at Krieg's Pond

**4. Antelope Lake** – Installed fence and alternate water source. Riparian habitat was fenced off from livestock and an alternate water source (solar water pump and tank) was installed

Photo showing lake buffer location

Solar panel and cement pad for tank/pumped water



# South Dakota Highlights

South Dakota was a recipient of **MGLP/NFHAP** project dollars in 2011 in the amount of $15,000 for a project entitled "Landscape Demonstration Sites in Eastern South Dakota." Headed up by South Dakota Game Fish and Parks Biologist Steve LaBay, the project has been a win-win for all. The private lakeshore owners on these glacial lakes in E. South Dakota were able to install buffers utilizing bio-engineering techniques and native plant materials along the riparian edge. These projects resulted in an improved riparian interface for fish and wildlife, as well as reduced mowing requirements for the properties, and a reduction of runoff into the lakes. Lakes included in this demonstration project have included Lake Kampeska and Pelican Lake (three sites) in Codington County, Pickerel Lake (two sites) in Day County and Norden Lake (one site) in Hamlin County. To date 10 projects on four lakes have been completed totaling 17,628 square feet. According to LaBay, the sites have served as models for others to change public perception of what comprises beautiful natural lakeshore. "There have been many participants in this effort, with volunteers spending long days planting, but all are happy with the result."

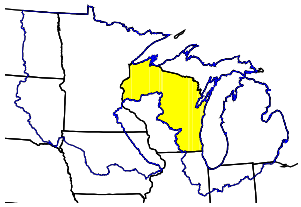
Shultz Project prior to project installation

Lammie Project Pelican L. before

Shultz Project 1 year post installation

Lammie Project one year post installation

A project report is available from Steve LaBay at Steve.Labay@state.sd.us



# Wisconsin Highlights

2011 and 2012 were busy years for folks involved in lake management in Wisconsin. Several projects are described here which either received **MGLP** funding, or were projects of a similar nature.

**Large Woody Habitat Rehabilitation Project in the Northern Lakes and Forest Region of Wisconsin**
This **MGLP** funded project was an exciting effort to improve woody in-lake habitat conditions in N. Wisconsin. The project has received some national notice, and has drawn attention to this particular methodology.

**Fish Sticks even a fish can love-**The Eau Claire Chain of Lakes in Bayfield and Douglas counties are high quality headwaters of the National Wild and Scenic St. Croix River. Historic logging followed by a slow progression of shoreland development eliminated much of the natural woody habitat in the lake system. Since 2006, local citizens and conservation groups, the WI DNR, and the Bayfield County Land and Water Conservation Department have placed hundreds of downed trees ("Fish Sticks") in the water's edge and anchored them to shore where they benefit fish, bugs, birds, turtles, frogs, and other critters, and of course people. Bony Lake was one of the first lakes to benefit from the Fish Sticks effort. Now, interest in Fish Sticks projects is growing throughout the region. Trees were placed in Nelson, Upper, Middle and Lower Eau Claire Lakes. This project received $15,000 in 2011 **MGLP funding.** For questions, contact Scott Toshner at 715-372-8539 (ext. 121)

**Identifying and protecting habitats**
The DNR completed Critical Habitat Designations to protect important habitats and natural scenic beauty on 14 lakes and the St. Croix River in Northwestern Wisconsin. WI DNR staff mapped the critical habitat, including native aquatic plant beds, spawning substrates, wetlands and fallen trees; wrote reports; and invited citizens to provide feedback, which was overwhelmingly positive. Local government and conservation planning efforts had identified habitat protection as a need and these groups will use the designations in local decision making.

**Wild lakes preservation**
The Nature Conservancy (**TNC**), the State of Wisconsin and the Chequamegon-Nicolet National Forest closed a multi-faceted deal with Connor Timber Associates that will protect more than 19,000 acres of Industrial forestland in Northeast Wisconsin for forest jobs and timber products, recreation and wildlife habitat. The property includes 55 river miles and 15 lakes, including land next to two of the most significant undeveloped lakes left in Wisconsin; Wabikon and Riley lakes. TNC will eventually transfer the land to the Chequamegon-Nicolet National Forest for long-term stewardship. Lake Wabikon is one of the most significant undeveloped lakes in Wisconsin.

**Watershed management works**
After nearly 15 years of state, county and especially local citizen efforts to control runoff pollution, phosphorus runoff into Polk County's 807-acre Deer Lake was reduced by more than 50 percent,

resulting in an increase in water clarity of nearly five feet; an almost unprecedented lake response to watershed improvements. Many of the improvements were spearheaded by the Deer Lake Conservancy, which acquired and restored 168 acres of land, much of which was degraded.

Rain gardens help control runoff pollution to Deer Lake.
© Photo supplied by Harmony Environmental Project

**Education**

The Northwoods Land Trust, led by Executive Director Bryan Pierce, promoted education, not acquisition, as their strategy for preserving valuable shallow water fish habitat on a shoestring budget. The group used DNR Lake Protection grants to identify landowners with more than 500 feet of lakeshore property, meet with them about various conservation options, and provide onsite technical assistance and management options for long-term protection and conservation. To date, the projects have made 1,775 landowner contacts resulting in 38 permanent conservation easements protecting 4,049 acres of land and nearly 21 miles of lake frontage on over 40 lakes and two miles of river frontage in Vilas, Oneida, Forest, Florence, Iron, Price and northern Langlade counties. As an example, Patrick and Sue Dugan donated 5.6 acres in Oneida County to the Northwoods Land Trust which became the Dugan Squash Nature Preserve. It should be noted that these conservation easements were donated, rather than purchased.


© Northwoods Land Trust

**Public Involvement**

Wisconsin hosted the national NALMS conference in Madison, in November 2012. The Yahara Lakes Legacy Partnership held a community breakfast event in conjunction with the meeting, and over 400 attended the event. Speaker David Mollenhoff gave the keynote presentation. This partnership has a signed MOU with DNR, DATCP, Dane County and the city of Madison to protect lakes in the watershed and reduce phosphorus by 50% by the year 2025, in lakes within the watershed.

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## What's next in 2013?

**UPDATE OF STRATEGIC PLAN**

In the coming year, the Midwest Glacial Lakes Partnership will use the habitat models to begin to refine its strategic plan. The new information will help focus conservation activities in areas most likely to yield success, and will also be able to point to the natural quality potential of the lak-esheds.

**PROJECTS FOR 2013 AND BEYOND**

Our partnership selected three projects to fund in 2013 with NFHAP dollars. MGLP's allocation will continue to increase due to a change in the allocation formula for the Fish Habitat Partnerships. These projects are: Tippecanoe Watershed Improvements Indiana, Sinkhole Lakes erosion/Michigan, and Phase II MGLP Assessment. We will work with partners to complete those projects and seek additional project proposals for 2014 and beyond. We will continue to seek additional resources for projects that meet the goals and objectives of the National Fish Habitat Action Plan.

For more information on the partnership, or to be added to the mailing list, or to participate in the partnership, please contact Partnership Coordinator Katie Haws.

www.MidwestGlacialLakes.org