



GREAT LAKES RESTORATION INITIATIVE



NRCS 2010 Conservation Activities

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Great Lakes Restoration Initiative (GLRI) is a project aimed at improving and protecting the waters and natural resources of the Great Lakes Basin. To realize this goal, NRCS is using a diverse array of technical and financial assistance and easement programs across the eight GLRI states (IL, IN, MI, MN, NY, OH, PA, and WI). Each State identified priority watersheds for funding. NRCS is working cooperatively with and through funding from the Environmental Protection Agency (\$34 million for FY2010).

Over 800 landowner applications addressing nutrient and sediment runoff, terrestrial invasive species, and wildlife habitat were received during the June 1 through July 1, 2010 sign-up period. As of October 1, 2010, approximately 220 contracts for over \$11.4 million have been obligated. (Because GLRI funding is available for obligation for two years, States are continuing to complete contract obligations in FY2011.) Additional Tribal contracts in MI will result in opening over 70 miles of rivers and streams to fish passage.

Nine grants, focusing on soil erosion and sediment control, were funded with \$5 million from GLRI through a Cooperative Agreement with the Great Lakes Commission and their Great Lakes Basin Program.

This document highlights successful 2010 activities of the eight GLRI States and their partners. For more information on the Initiative, contact your local NRCS office.

FIGURE 1: Great Lakes Basin



Did You Know?

- Over 30 million Americans get their drinking water from the Great Lakes which also support a multi-billion dollar economy based on fishing, boating, and recreational activities.
- In October 2009, President Obama authorized \$475 million for a Great Lakes Restoration Initiative (GLRI), the most significant investment in the Great Lakes in two decades.

Illinois

ENHANCING URBAN WATERSHEDS

With two urbanized watersheds draining into Lake Michigan, Illinois faces unique challenges in implementing watershed improvement goals outlined in the GLRI. Because these watersheds contain no agricultural land and are ineligible for NRCS' Environmental Quality Incentives Program (EQIP) and Wildlife Habitat Incentive Program (WHIP), Contribution Agreements through the NRCS Conservation Technical Assistance Program were used to get conservation on land in need of improvement or treatment.

After reviewing several proposals, funds were allocated to two projects designed to control invasive species within the two watersheds. Owned and operated by the Lake County Forest Preserve District, the Greenbelt Forest Preserve Project will treat 17 acres overtaken by Honeysuckle and Buckthorn as well as 12 additional acres invaded by Common Reed and Teasel. The second project, in partnership with the Chicago Park District, involves 17 acres of woody invasive treatment in Rainbow Park, a 104-acre beachfront park located on Lake Michigan that offers recreational services to a wide area of South Chicago.

Both projects will improve shoreline and recreational areas used by thousands of annual visitors. Success with these GLRI invasive species projects will facilitate opportunities for more urban-based natural resource ventures in the future.



■ Invasive plant species are taking over many acres of Illinois GLRI watersheds.

Indiana

RE-ESTABLISHING A FOREST CORRIDOR

The Emergency Watershed Protection Program's Flood Plain Easement component (EWPP-FPE), is being used by GRLI to restore a bottom-land, hardwood forest habitat along the St. Joseph River in DeKalb County, Indiana. Frequent flooding often claimed crops on the 32-acre site, including tree seedlings planted by the landowner through the Conservation Reserve Program. Funding from GLRI helped re-establish some of the hardwood forest damaged by flooding. These trees will reduce soil erosion from scouring, and minimize soil deposition. An easement will also protect the land.

The reestablishment and protection of this habitat will benefit many different species of wildlife, including a wide variety of waterfowl. Additionally, the area can handle heavy runoff and reduce erosion from flooding, providing flood protection for the surrounding area.



■ Many Conservation Reserve Program tree seedlings were destroyed when February 2006 flood waters froze and rose, lifting the ice along with trapped seedlings.

Michigan

PROVIDING FISH WITH SAFE PASSAGE

The Keweenaw Bay Indian Community, located in Michigan's Upper Peninsula along the Keweenaw Bay of Lake Superior, will use about \$400,000 in GLRI financial assistance to replace road culverts that inhibit fish passage in streams on and around the Reservation.

Current road culverts do not allow fish passage when water levels are low or the flow is too high for fish to pass through. The Tribe plans to replace culverts at 12 road crossings on cold water streams that provide trout habitat. More than half of the funding is coming from GLRI. Improved passages will give the fish access to more of the stream system to find food and spawn. Brook trout, a culturally important food source for the Keweenaw Bay Indian Community, is one species that will benefit.



■ The Secret Creek culvert outlet is one of those that will be changed to allow fish passage.



■ Site preparation has been completed for Spring 2011 riparian tree planting on the Midway River.

Minnesota

PLANTING TREES FOR CLEANER STREAMS

The Nemadji River Basin Project identified sediment from erosion as the primary natural resource issue in the predominantly forested watershed. Eroding stream banks and massive clay slumps contribute 117,000 tons of sediment annually. Sheet, rill, and roadside erosion delivered an additional 14,500 tons of sediment (11 percent of the total).

A long history of erosion control efforts failed to significantly reduce the sediment load in the Nemadji River. Structural measures did not work in the past, so NRCS pursued a new direction with the River Basin Project. Trees were planted to keep snow on the land longer in the spring to reduce snow melt peak flow runoff and slow bank erosion rates. The newly reforested open land areas of the watershed will reduce snow melt runoff rates, minimize erosion and sediment load in the Nemadji, and establish needed shade on cold water tributaries (recent summer water temperatures have reached lethal levels for trout). Site preparation work for Minnesota's first GLRI-funded project, a Spring 2011 riparian tree planting on the Midway River, was recently completed.



■ GLRI activities provide necessary habitat for the Golden-winged Warbler.

New York

PROTECTING THE GOLDEN-WINGED WARBLER IN NORTHERN NEW YORK

One of New York's treasured eco-regions is the St. Lawrence River Valley—a mix of farmlands, wetlands, forests, and grasslands that provide critical habitat for a variety of wildlife species. With funding from GLRI, the Thousand Islands Land Trust enrolled 133 acres of land on Grindstone Island into the Wildlife Habitat Incentive Program. The Land Trust will manage the land as early successional (shrubland) habitat to provide critical nesting sites for a number of species, in particular, the Golden-winged warbler, a bird species of special concern in New York State. The Valley has been identified as the most important nesting area in the state for the Golden-winged warbler, providing 15 percent of the species' total nesting habitat.

Through partnerships with the St. Lawrence Soil and Water Conservation District and Thousand Islands Land Trust, more landowners are learning about NRCS programs and enrolling their land into conservation programs that maintain and enhance the region's natural resources while providing widespread benefits to the public in the form of improved wildlife habitat, water quality, and educational opportunities.



■ Algal bloom in Lake Erie.

Ohio

TAKING A MANAGEMENT SYSTEM APPROACH IN THE MAUMEE WATERSHED

Ohio NRCS has partnered with several State agencies and other conservation partners in the Ohio Phosphorous Task Force to address the problem of increasing phosphorous runoff into Lake Erie. Heidelberg College has been monitoring streams draining to Lake Erie and documented the increase in dissolved reactive phosphorous (DRP). Excessive amounts of DRP have been identified as a contributor to the massive algal blooms recently occurring in Lake Erie. Agriculture has been identified as a source of DRP.

To decrease phosphorous runoff, a system of practices has been designed for this watershed. By using the "Nutrient Management System Approach," conservation practices that include conservation crop rotation, no-till, cover crops, buffer strips, and nutrient management, work synergistically as part of a system to fully treat the land – decreasing the runoff and maximizing nutrient utilization. The key is working with farmers to understand and use this system approach.

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Ohio (continued)

TAKING A MANAGEMENT SYSTEM APPROACH IN THE MAUMEE WATERSHED

GLRI provided an opportunity to market this approach in the Maumee Watershed. Partners such as Environmental Defense Fund assisted with the marketing, and farmers are learning about the benefits of the management system approach and are signing on to give it a try. One farmer's conservation plan outlines three years of applying cover crops, nutrient management, conservation crop rotation, and residue management to 225 acres. As more farmers participate, DRP levels will drop and Lake Erie will return to a healthy ecosystem supporting aquatic life forms.



■ Dense algal mats in Lake Erie.

Pennsylvania

WINERIES REDUCING SEDIMENT AND PESTICIDES IN LAKE ERIE

Pennsylvania NRCS is using GLRI funding through the Environmental Quality Incentives Program to address non-point source pollution and sedimentation on over 430 acres of specialty crops. These acres are located in the Concord grape belt of Erie County, Pennsylvania, along the shore of Lake Erie. Local farmers are implementing integrated pest management and nutrient management systems and planting no-till cover crops to reduce the number of sprays and chemicals used, manage the amount and placement of nutrients, and hold the soil in place to reduce soil erosion. The use of these combined practices will decrease chemical, nutrient, and sediment delivery to near-shore tributaries of Lake Erie.

Through GLRI, NRCS is addressing degraded aquatic habitat through the Wildlife Habitat Incentive Program. Conservation practices to reduce sediment and protect streams will improve and enhance migratory fish habitat in these same tributaries. Farmers participating in these programs are also involved in controlling invasive species.



■ Pennsylvania grape growers near Lake Erie use Integrated Pest Management systems to reduce chemicals draining into the Lake.

Wisconsin

MANURE MANAGEMENT REDUCES NUTRIENTS IN LAKE MICHIGAN

Through the GLRI partnership, livestock managers in the Lower Fox River and Manitowoc-Sheboygan Watersheds are reducing nutrients going into Lake Michigan and providing healthier aquatic habitat and safer recreational areas. NRCS is working with landowners to implement comprehensive nutrient management plans on Wisconsin farms in close proximity to the Lake.

A waste storage facility is part of a nutrient management plan. It holds animal waste during the winter when the ground is frozen and nutrients cannot be applied. The Nutrient Management Plan also helps farmers determine how to measure the nutrients they put on the land - ensuring they are applied using the proper rate, method, and timing.

Through GLRI, Wisconsin NRCS has been able to target additional funds specifically to address critical surface water quality resource concerns affecting Lake Michigan.



■ Wisconsin livestock producers are installing waste storage facilities through GLRI to ensure nutrients are held safely until weather conditions allow their safe distribution on the land.



**FIGURE 2: Fiscal Year 2010* Great Lakes Restoration Initiative Funding—
NRCS Financial and Technical Assistance****

	Conservation Technical Assistance: CTA (Funded/Obligated)	Environmental Quality Incentives Program: EQIP (Funded/Obligated)	Wildlife Habitat Incentive Program: WHIP (Funded/Obligated)	Farm and Ranchland Protection Program: FRPP (Funded/Obligated)	Flood Plain Easements Program: FPE (Funded/Obligated)	Total Funding (Funded/Obligated)
Illinois	\$110,000/ \$34,641	\$0	\$0	\$0	\$0	\$110,000/ \$34,641
Indiana	\$541,400/ \$69,578	\$992,500/ \$904,965	\$55,500/ \$28,029	\$0	\$1,758,500/ \$16,440	\$3,347,900/ \$1,019,012
Michigan	\$1,490,600/ \$295,984	\$4,521,400/ \$4,023,934	\$555,400/ \$413,368	\$2,375,100/ \$406,899	\$0	\$8,942,000/ \$5,140,185
Minnesota	\$163,600/ \$68,245	\$72,200/ \$6,569	\$12,900/ \$0	\$0	\$0	\$248,700/ \$74,814
New York	\$699,200/ \$1,734	\$1,564,300/ \$1,412,902	\$117,200/ \$31,650	\$1,204,100/ \$1,083,707	\$625,000/ \$0	\$4,209,800/ \$2,529,993
Ohio	\$1,286,100/ \$355,199	\$4,962,600/ \$1,644,202	\$55,500/ \$4,636	\$333,300/ \$15,813	\$1,973,500/ \$275,795	\$8,611,000/ \$2,295,645
Pennsylvania	\$226,300/ \$41,593	\$198,500/ \$168,620	\$55,500/ \$1,955	\$444,500/ \$396,597	\$0	\$924,800/ \$608,765
Wisconsin	\$432,800/ \$28,202	\$1,764,500/ \$1,590,352	\$0	\$0	\$0	\$2,197,300/ \$1,618,554
Support Activities	\$500,000/ \$48,365	\$0	\$0	\$0	\$0	\$500,000/ \$48,365
GL Basin Program	\$5,000,000/ \$5,000,000	\$0	\$0	\$0	\$0	\$5,000,000/ \$5,000,000
Totals	\$10,450,000/ \$5,943,541	\$14,076,000/ \$9,751,544	\$852,000/ \$479,638	\$4,357,000/ \$1,903,016	\$4,357,000/ \$292,235	\$34,092,000/ \$18,369,974

* FY10 = 10/1/09 through 9/30/10

** EPA provided 2-year funding for GLRI; State NRCS offices will continue to obligate FY10 funding through June 1, 2011, as per the interagency agreement with EPA.

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For more information visit: www.nrcs.usda.gov/programs/glri