



United States Department of Agriculture  
Natural Resources Conservation Service

# Great Lakes Restoration Initiative

Conservation Beyond Boundaries **GLRI**



## The Need

The Great Lakes—Erie, Huron, Michigan, Ontario, and Superior—contain over 20 percent of the world's fresh water. Millions of people rely on the Great Lakes for drinking water and recreation; they also provide valuable fish and wildlife habitat.

The Great Lakes are highly sensitive to biological and chemical stresses, including habitat destruction from development and urban sprawl, pollution from sewage and industrial sources, and nutrients and sediment from agricultural land. Excess phosphorus allows large algae blooms—toxic and non-toxic—to thrive on the surface of several Great Lakes, including western Lake Erie, Lake Michigan and Lake Huron. Invasive fish, such as Asian carp, and plant species, such as Phragmites, also threaten the Great Lakes ecosystem.

## Goals

The Natural Resources Conservation Service (NRCS) is contributing toward the overall Great Lakes restoration effort through the Great Lakes Restoration Initiative (GLRI). Several major GLRI goals are:

- Protect water quality and reduce nonpoint source pollution
- Combat invasive species
- Restore wetlands and other critical habitat
- Encourage farmers to use scientifically proven conservation practices that reduce or prevent excess phosphorus from entering into nearby rivers and streams

## Programs

- Environmental Quality Incentives Program
- Wildlife Habitat Incentive Program

## Results/Outcomes

In fiscal year 2012, NRCS received \$24.1 million for two fiscal years through an interagency agreement with the U.S. Environmental Protection Agency to target conservation efforts through GLRI in selected priority areas. During that time, producers signed 351 contracts worth nearly 14 million to implement conservation practices on their agricultural land.

Producers in these priority watersheds implemented scientifically proven conservation practices to improve water quality, eliminate invasive species, and enhance wildlife habitat. The additional funding allowed NRCS and its partners to provide financial and technical assistance to private landowners beyond the normal Farm Bill program funding.

GLRI has been very successful in accelerating water quality improvements in the most vulnerable areas of the Great Lakes. Farmers used these additional GLRI funds to implement

conservation practices on more than 78,000 acres. These farmers voluntarily implemented conservation practices in critical sub-watersheds that will have the greatest impact in reducing pollution.

Over the past three years, farmers used a combination of conservation practices that included three key practices—nutrient management, cover crops, and no-till or mulch-till. These practices resulted in significant reductions in nutrient runoff on more than 105,000 acres in priority watersheds.





### Feature Story

## Protecting the Land and Water at Essential Dairy

Dave and Heather Lettow turned to NRCS for assistance for several natural resource concerns on their farm, Essential Dairy. Their farm is located in the Milwaukee River Watershed, one of several targeted for GLRI funding.

Using technical and financial assistance available through the Environmental Quality Incentives Program, the Lettows worked with NRCS staff to develop a rotational grazing plan. Lettow uses the plan to manage his herd, allowing the cows to spend more time grazing and less

time in confinement. This saves time, reduces energy costs, and helps to spread manure on the pasture, thus improving nutrient use on the land. Grazing systems encourage groundwater recharge, improve soil quality and prevent sediment and nutrient losses, all goals of GLRI.

The Lettows also installed additional conservation practices, including a roof runoff system with gutters on the barn. The runoff system diverts the clean water from the barnyard and helps the barnyard drainage system work properly.

The Lettows plant cover crops in the fall to absorb any excess nutrients in the soil

and to protect the soil from erosion during the winter. In addition, the cover crop serves as a source of high-quality forage for their cattle in the spring.

"We've made a lot of changes and improvements to this farm since we took it over just five years ago," Dave Lettow said. "We never would have been able to do it without the assistance of the NRCS."

The overall strategy of GLRI is to implement conservation practices in priority watersheds to ensure the water quality improves downstream. All the conservation practices installed at the Essential Dairy help to meet this goal.

NRCS is using additional targeted funding in three watersheds in Wisconsin to reduce sediment and nutrient runoff entering Lake Michigan. The Milwaukee River, the Lower Fox River, and Manitowoc-Sheboygan River border the shores of Lake Michigan. NRCS is helping private landowners implement conservation practices such as cover crops, crop rotations, filter strips, prescribed grazing and wetlands restoration in these watersheds. A multi-agency USDA study has shown these practices can reduce the amount of nutrients significantly that leave the field, enter streams and subsequently end up in Lake Michigan.

## Fiscal Year 2012 Great Lakes Restoration Initiative NRCS Financial Assistance (FA) and Active and Completed Contracts

State	Environmental Quality Incentives Program (EQIP)			Wildlife Habitat Incentive Program (WHIP)		
	Number of Contracts	FA Contract Obligations	Acres Contracted	Number of Contracts	FA Contract Obligations	Acres Contracted
Illinois	0	0	0	0	0	0
Indiana	11	\$455,413	2,716	0	0	0
Michigan	121	\$4,821,633	29,555	36	\$158,807	796
Minnesota	2	\$16,993	5	0	0	0
New York	18	\$704,353	6,144	2	\$89,185	39
Ohio	75	\$2,561,021	12,022	0	0	0
Pennsylvania	4	\$215,874	479	0	0	0
Wisconsin	82	\$4,608,871	26,306	0	0	0
<b>Totals</b>	<b>313</b>	<b>\$13,384,158</b>	<b>77,227</b>	<b>38</b>	<b>\$247,992</b>	<b>835</b>

During the past three years, GLRI has provided about \$35 million in financial assistance above normal Farm Bill funding to help eligible farmers in the Great Lakes Region accomplish critical conservation goals.

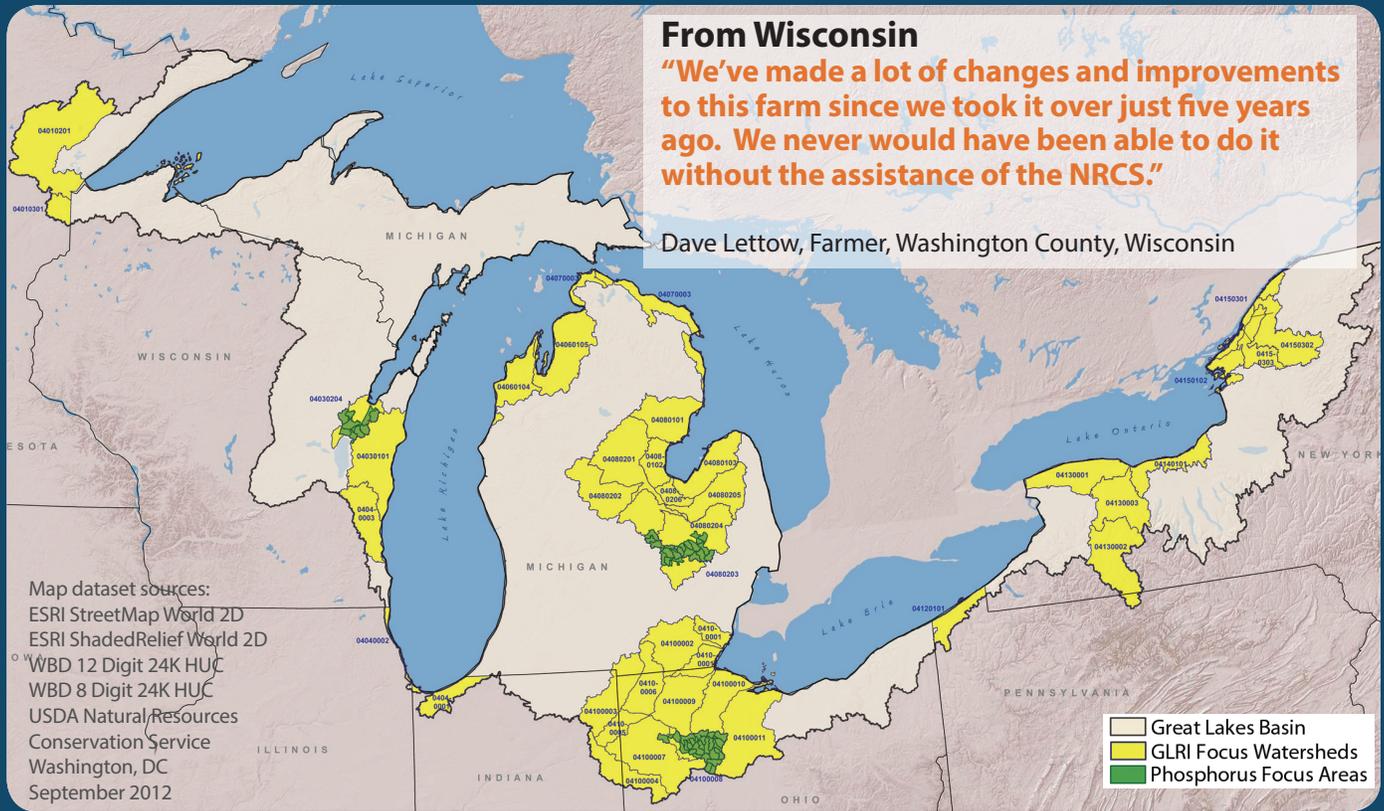
During the three years that GLRI has existed, farmers have signed 941 contracts totaling 189,500 acres.

Note: Illinois has a small area of urban shoreline that is part of the GLRI. They received funding the first year of GLRI to combat invasive, terrestrial species. Those contracts were put in place in FY10, and additional monies were not made available in FY11 or FY12.

Helping People  
Help the Land

Statistical Source: Protracts for new enrollment, October 4, 2012.

# Great Lakes Restoration Initiative Priority Watersheds and Phosphorus Focus Areas



## Results

### Ohio, Michigan, and Wisconsin

Excess phosphorous has been identified as a significant issue in the Great Lakes, especially in Lake Erie, which receives water from the Maumee River in Ohio; Lake Huron, which receives water from the Saginaw River in Michigan; and Lake Michigan, which receives water from the Lower Fox River in Wisconsin. Phosphorous contributes to harmful algal blooms in these Great Lakes. To address this issue, NRCS is focusing additional GLRI assistance in 55 priority smaller watersheds where voluntary efforts by farmers can have the greatest impact in reducing phosphorous loading to the lakes. NRCS established certain criteria to select these smaller watersheds, including their potential for the greatest improvements resulting from the use of high-impact phosphorus reduction practices, presence of watershed management plans, percentage of agricultural land, and local interest. NRCS devoted nearly half of its fiscal year 2012 GLRI assistance to these small priority smaller watersheds to gain maximum benefits in reducing phosphorus. In addition, farmers entered into 139 contracts to implement phosphorous-reducing practices on nearly 34,000 acres.

### Partnerships

Partnerships are a crucial aspect of GLRI. During the past three years, NRCS has entered into several cooperative agreements with the Great Lakes Commission (GLC) to support work consistent with GLRI goals. NRCS and the GLC also are exploring methods to develop a market-based approach to phosphorus trading.

**Cleaning up the most polluted areas in the lakes**

**Combating invasive species**

**Protecting watersheds and shoreline health**

**Restoring wetlands and other habitat**

**Working with strategic partners on education, evaluation, and outreach**

## Great Lakes Restoration Initiative



For more information, visit: <http://go.usa.gov/47eB>

Conservation Beyond Boundaries

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