



# Indiana Western Lake Erie Basin

The western basin of Lake Erie is one of our nation's most significant collections of inland rivers and streams. The basin area covers over seven million acres in northwest Ohio, as well as portions of northeast Indiana, and southeast Michigan. In Indiana, the area includes parts of Steuben, DeKalb, Allen, Noble, Adams and Wells Counties.

Approximately 1.2 million people live in the basin. The area offers many recreational opportunities and is rich in biological diversity, with abundant wetlands, lakes, forested areas and wildlife. Around 75 percent of the land in the watershed is in agricultural production

while developed areas cover about 12 percent.

Indiana's Natural Resources Conservation Service (NRCS) is working with the Indiana Conservation Partnership (ICP) to help farmers voluntarily reduce the runoff of nutrients and sediment and improve the water quality in this area.

NRCS provides technical assistance to help farmers improve their natural resources, along with financial assistance through Farm Bill programs like the Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP).



## Nutrient and Sediment Load Reductions for 2014 in Indiana

**Sediment: 69,762,000 lbs.**  
 That's a volume of sediment equivalent to four 50' x 100' grain silos!

**Nitrogen: 74,250 lbs.**  
 Which is enough to fill about one and a quarter 15' x 4' swimming pools.

**Phosphorus: 37,015 lbs.**  
 Which is enough to fill approximately half of a 15' x 4' swimming pool.

### Total Practices Installed: 480

Conservation practices in this watershed have reduced the volume of nutrients and sediment from entering Lake Erie. Top practices include the use of cover crops, residue and tillage management/no-till, and Early Succession Habitat Development.

- Nutrient estimates only consider sediment bound N and P, not dissolved.
- Practices do not include the many unassisted practices designed and installed solely by a private landowner without ICP assistance.

> Load reductions based off the EPA region 5 load reduction model.

### Farm Bill Accomplishments to Date

	Contracts	Acres	Obligation
<b>2008 Farm Bill (Fiscal Years 2009-2013)</b>			
Conservation Stewardship Program (CSP)	40	11,841	\$1,370,645
Environmental Quality Incentives Program (EQIP)	198	38,706	\$4,550,270
Wildlife Habitat Incentives Program (WHIP)	8	3,157	\$206,519
<b>TOTAL</b>	<b>246</b>	<b>23,704</b>	<b>\$6,127,434</b>
<b>2014 Farm Bill (Fiscal Years 2014-2015)</b>			
CSP	48	45,444	\$1,622,463
EQIP	45	9,317	\$1,030,769
Resource Conservation Partnership Program (RCPP)	3	3,227	\$229,671
<b>TOTAL</b>	<b>96</b>	<b>57,988</b>	<b>\$2,882,903</b>

### Farm Bill Initiatives Accomplishments to Date

	Contracts	Acres	Obligation
<b>Landscape Initiatives (Fiscal Years 2009-2015)</b>			
Great Lakes Restoration Initiative (GLRI)	83	27,675	\$2,210,011
Western Lake Erie Basin Initiative*	23	5,566	\$294,786
<b>State Initiatives (Fiscal Years 2009-2014)</b>			
Organic	4	169	\$74,814
Beginning Farmer	3	199	\$32,244
High Tunnels	5	5	\$25,394
Specialty Crop	2	33	\$10,472
Drought FY12	3	3,043	\$162,162
<b>TOTAL</b>	<b>123</b>	<b>36,690</b>	<b>\$2,809,885</b>

\*WLEB data only through 2014

Data Source: ProTracts through FY15 QTR3

**The Indiana Conservation Partnership (ICP)** includes eight Indiana agencies and organizations who work together to promote conservation. Members include Indiana Association of Soil and Water Conservation Districts (SWCD), Indiana State Department of Agriculture (ISDA), Indiana State Soil Conservation Board, Indiana Department of Natural Resources (IDNR), Indiana Department of Environmental Management (IDEM), USDA Farm Service Agency (FSA), USDA Natural Resources Conservation Service, and Purdue Extension Service.

## FUNDING

- Great Lakes Restoration Initiative (GLRI) funding is helping famers install **conservation practices that reduce nutrients entering waterbodies** in the St. Joseph-Maumee, Upper Maumee, Auglaize and St. Mary's watersheds through Fiscal Year 2016.
- Through the GLRI Phosphorus Initiative additional EQIP funding is available to farmers in a targeted area within the basin to install sediment and nutrient reducing practices and other **innovative conservation practices that control phosphorus**, such as drainage water management, two stage ditches, blind inlets and denitrifying bioreactors.
- The **Tri-State Western Lake Erie Basin (TWLEB)** project was approved for funding through NRCS's RCPP in 2015. The multi-state, multi-partner project aims to protect the basin area by working directly with farmers to reduce phosphorus and sediment loading and harmful algal blooms with \$17.5 million in NRCS cost-share dollars through EQIP and nearly \$36 million in partner contributions.
- An **innovative IDEM Section 319 grant** application is in process to provide assistance to farmers in areas of highest phosphorus loss risk.
- SWCDs in the basin area **own and rent conservation equipment**, including no-till seeders for use by Amish, as well as others.
- **Clean Water Indiana grants** are being utilized to provide cost-share to help farmers pay for gypsym and cover crops.

## OUTREACH AND EDUCATION

- As part of the GLRI phosphorus initiative, **a random selection of farmers in a targeted area of the basin were surveyed** to get input on local water management issues. The survey was coordinated by Purdue in partnership with the local SWCDs and NRCS.
- Plans are underway to develop an **Amish-accessible demonstration site** within the GLRI phosphorus initiative area to show how conservation practices can reduce nutrients and sediment loading.
- SWCDs, NRCS and ISDA are working together to educate **non-traditional landowners, including Amish, urban and lake residents** through field days and pasture walks.
- The ICP's **Conservation Cropping Systems Initiative (CCSI)** is hosting field days to demonstrate various soil health practices and management activities.
- The Tri- State Watershed Alliance recently hosted the **annual River Summit Conference** to bring together agriculture and urban groups to discuss, experience and celebrate the rivers of Fort Wayne.
- ISDA has created a **WLEB webpage** to serve as a one-stop location to find information at <http://www.in.gov/isda/3261.htm>.
- NRCS is working with Adams County SWCD to reach out to the **Amish farming communities** in the Saint Mary's and Auglaize watersheds.

## MONITORING

- The U.S. Geological Survey (USGS) is installing **two edge of field monitoring sites** in the GLRI phosphorus priority areas. These sites will monitor the water quality changes due to implementation of conservation practices such as no-till, cover crops or nutrient management.
- IDEM maintains a **fixed station network of sampling sites** throughout the basin that are collected and analyzed monthly.
- The Agricultural Research Service (ARS) is **sampling edge-of-field monitoring sites and streams** to document the impacts of various conservation practices to understand how, when and where nutrients and sediments reach waterbodies.
- NRCS is working with the farmers in the basin on a **Conservation Effects Assessment Project (CEAP)** study to document existing conservation efforts and model the best solutions to improve water quality.
- Purdue evaluated various strategies to improve water quality using the **Soil and Water Assessment Tool (SWAT) model.**
- Through a Conservation Innovation Grant with NRCS, the Environmental Defense Fund **conducted a pilot watershed study** on Matson Ditch in the St. Joseph watershed that included land use data, social science surveys and existing water quality data.
- **A basic nutrient reduction model was developed** by EPA Region 5 and Michigan Department of Environmental Quality to measure and illustrate water quality impacts at the conservation practice level.
- With EPA funding, ISDA hired additional staff in the basin area to **conduct phosphorus soil sampling** in fields enrolled in the INField Advantage (INFA) program.
- DeKalb County SWCD received IDNR funds for a **watershed land treatment project** to work with partners and the Agriculture Research Service to monitor nutrient loss, specifically phosphorus, from a controlled drainage tile system.
- The ICP's Conservation Cropping Systems Initiative (CCSI) is collecting and analyzing data on the benefits of soil health management systems at their demonstration farms.

## WORKING WITH FARMERS

- NRCS has certified conservation planners working directly with farmers to develop conservation plans to address their resource concerns.
- The EPA used GLRI funds to enter into an agreement with ISDA to **fund two technicians** who provide direct technical assistance to landowners and also, education and outreach, with an emphasis on the Amish population.
- Adams County is considering modifying their **Zoning Ordinance** to help deal with the increase of livestock operations and the manure.

[www.in.nrcs.usda.gov](http://www.in.nrcs.usda.gov)