



## **The Great Lakes Restoration Initiative Moving from the GAO Report to the next Action Plan**

*Honorary cosponsors of this briefing are Senate and House Great Lakes Task Force Co-Chairs Senator Carl Levin, Senator Mark Kirk, Congresswoman Miller, Congressman Dingell, Congressman Duffy, & Congresswoman Slaughter*

**Wednesday, December 18, 2013  
Capitol Visitor's Center  
Congressional Meeting Room North  
CVC-268  
3:30 p.m.**

**Speakers:**

Cameron Davis, Senior Advisor to the Administrator, U.S. Environmental Protection Agency  
Rachel Jacobson, Principal Deputy Assistant Secretary for Fish, Wildlife & Parks, U.S. DOI  
Tom Christensen, Acting Associate Chief for Operations and Regional Conservationist for the Central Region U.S. Department of Agriculture [Martin Lowenfish filled in]

The Northeast-Midwest Institute invites you to a briefing on the Great Lakes Restoration Initiative (GLRI), as agency principals will discuss the past four years of projects, progress, as well as the future plans. The GLRI is the largest investment in the Great Lakes in two decades and was recently reviewed by the Government Accountability Office (GAO). The GAO review included recommendations on, among other aspects, measuring the progress of the GLRI as well as considerations of the long-term timeline for ecosystem impacts and outside factors that may impact the GLRI's success. A task force of 11 federal departments (including 16 federal agencies) operates under an Action Plan to implement the GLRI. The current Action Plan covers FY2010-2014 with discussions and input on the next Action Plan, FY2015-19, currently underway. This briefing will help staff understand the past implementation of the GLRI Action Plan and likely future direction of the next Action Plan, including recent input from the public, GAO and Great Lakes Advisory Board.



# Great Lakes Restoration Initiative

## Briefing for the Great Lakes Senate & House Task Forces

December 18, 2013

Capitol Visitor Center Room 268

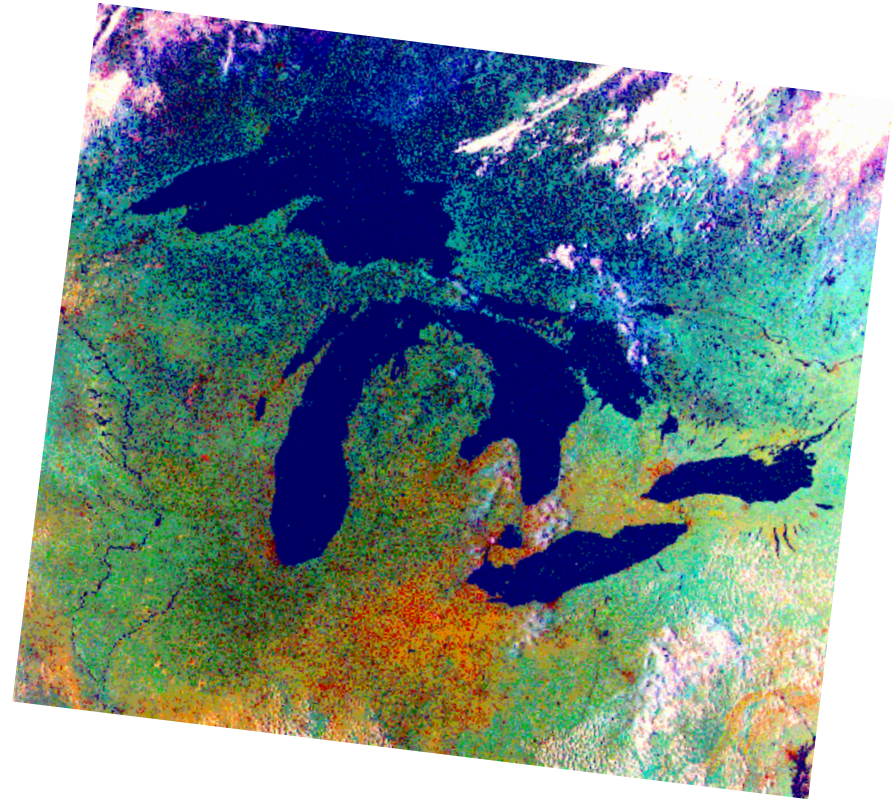
Washington, D.C.



**Cameron Davis**  
Senior Advisor to the Administrator  
U.S. Environmental Protection Agency

# Overview

- ▶ Past (2009-2013)
- ▶ Present (Progress to Date)
  - DOI
  - USDA
- ▶ Future (FY15-19)



# The Past

“[T]he federal and state governments have developed [the GLRI Action Plan] to protect and improve these incomparable resources...The 30 million people who live in this region make it a major political battleground. In an age of rampant distrust, I can't think of a better way to show that government can work.”

David Broder

*The Washington Post*

February 25, 2010



# The Past

- ▶ Interagency Task Force
- ▶ Five Focus Areas
- ▶ Each with Measures of Progress
- ▶ “3 Priorities”

## Measures of Progress

The Great Lakes Restoration Initiative will significantly accelerate pollution prevention and reduction in the Great Lakes ecosystem. The measures by which progress will be evaluated in this focus area are:

Measure	Baseline/ Universe <sup>9</sup>	2010 Target	2011 Target	2012 Target	2013 Target	2014 Cumulative Target
1. Number of Areas of Concern in the Great Lakes where all management actions necessary for delisting have been implemented (cumulative).	Baseline: 1 AOC Universe: 31 AOCs	1 AOC (no change)	1AOC	3AOCs	4 AOCs	5 AOCs
2. AOC BUIs removed (cumulative). <sup>10</sup>	Baseline: 11 BUIs Universe: 261BUIs	20 BUIs	26 BUIs	31 BUIs	41 BUIs	46 BUIs
3. BUI delisting project starts at AOCs (cumulative). <sup>11</sup>	Baseline/Universe: 30 national and bi-national AOCs Universe: 261BUIs	60 projects	80 projects	110 projects	140 projects	170 projects

# The Present

- ▶ Since 2009, 21 Beneficial Use Impairments have been removed at 12 Areas of Concern in Illinois, Indiana, Michigan, New York, and Wisconsin with the help of GLRI-funding, almost tripling the total number of BUIs removed in the preceding 22 years.



# The Future

- ▶ CEQ Chair Sutley announced the Administration's commitment to another five-year Action Plan.
  
- ▶ New Action Plan will incorporate lessons learned from the past five years, including:
  - Science Framework
  - Public Input
  - GAO
  - Great Lakes Advisory Board
  
- ▶ Timeline

# Great Lakes Restoration Initiative

USDA/NRCS Progress Report  
Senate & House Great Lakes  
Task Force

December 18, 2013  
Capitol Visitors' Center, Room 268

Thomas Christensen  
Associate Chief for Operations  
USDA NRCS





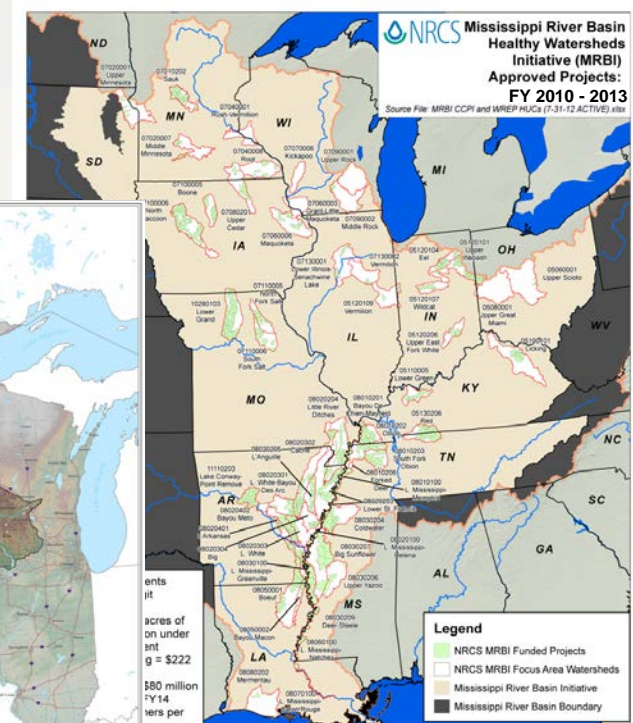
## CEAP findings in the Great Lakes Region:

- **A moderate or high Level of conservation treatment is needed on 53% of cropland in the Great Lakes Basin**
- **Adoption of additional conservation practices on high /moderate-need acres can be expected to further reduce edge of field losses of:**
  - sediment loss by 64%
  - total nitrogen 31%
  - total phosphorus by 36%

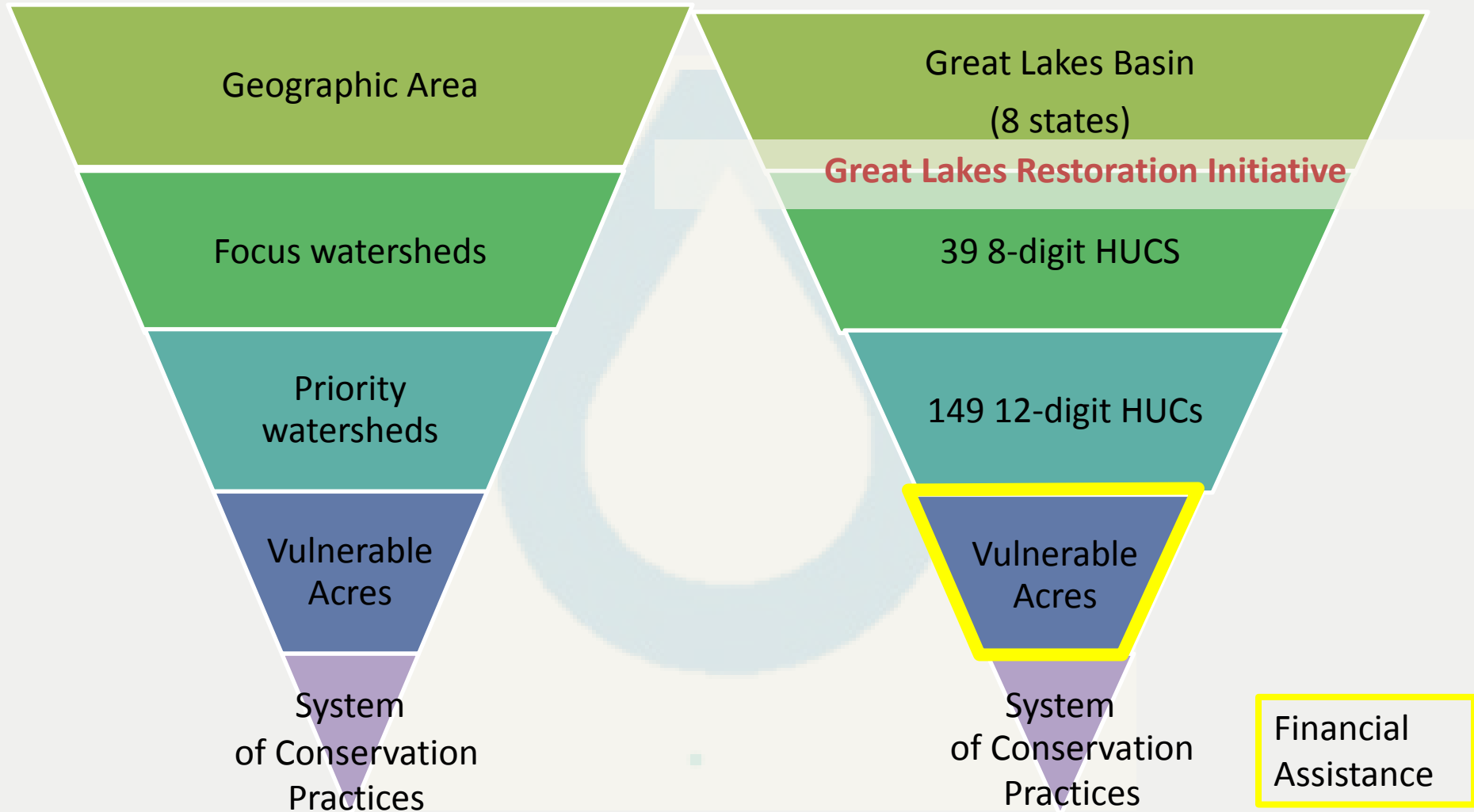
# Targeting: Rationale and Approach

## Why focus targeting on priority watersheds?

- ✓ Maximize the benefit of each conservation dollar by prioritizing the use of limited technical and financial assistance
- ✓ Produce greater environmental results in shorter time span
- ✓ Avoid the inefficiency of “random acts of conservation”
- ✓ Serve as fertile ground for lessons learned
- ✓ Graduated approach where lessons learned can be applied in other watersheds



# Targeting: Rationale and Approach



## Focus of Conservation Planning = Conservation Systems

At its core, the focus of conservation planning is on increasing the voluntary adoption of:

- Right conservation systems
- Right position on landscape
- Right amount
- Right timing and sequencing of practice/system implementation

**“Practices to reduce nitrogen and phosphorus are very different due to different transport pathways.”**

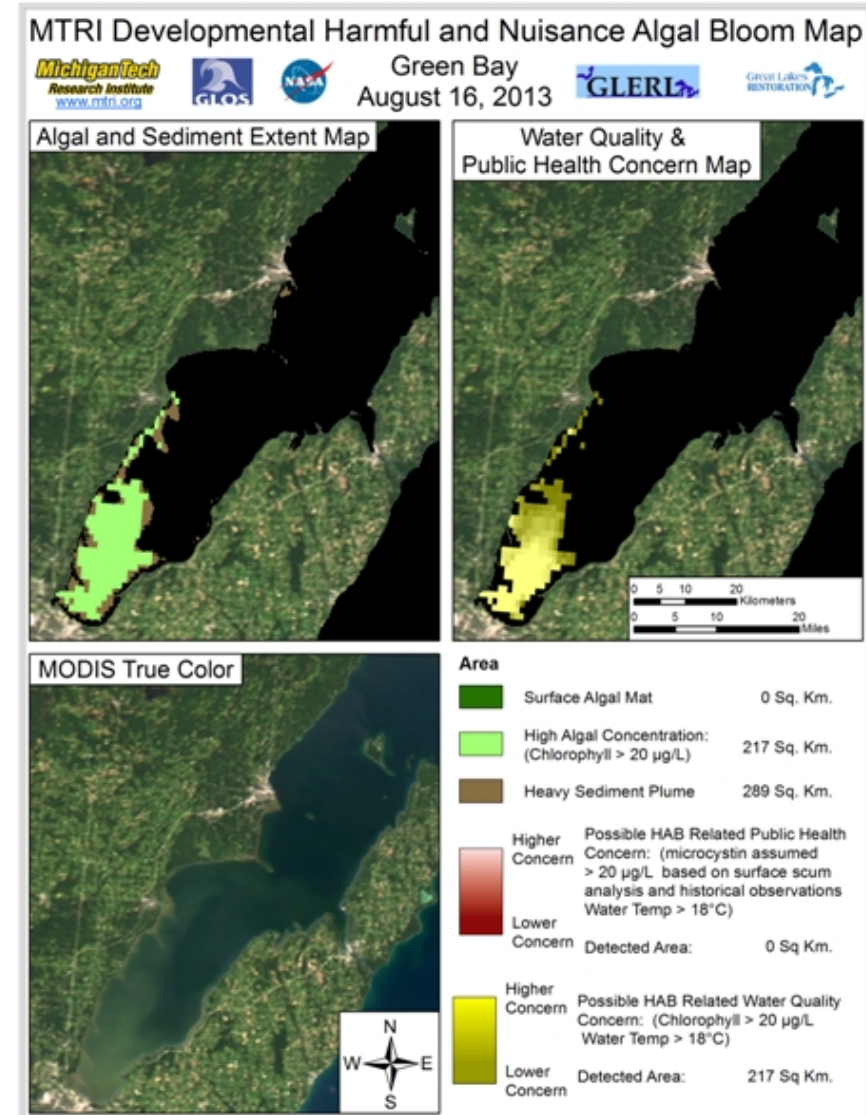
—Dr. Jane Frankenberger, Purdue University

## EPA GLRI Total Funding to NRCS (FY2010/2013)

- Invasive Species \$ 2,442,288
- Habitat and Wildlife Protection and Restoration \$ 2,000,000
- Nearshore Health and Non Point Source Pollution \$ 94,324,427
- Accountability, Education, Monitoring, Evaluation, Communication \$ 1,018,163
  
- **Total 10/13 Funding** **\$99,784,878**
  
- Funding supports:
  - Over 1,225 farmer contracts covering approximately 245,000 acres
  - Practices including: nutrient management, cover crops, riparian buffers, residue management (no-till / mulch till), pest management, upland wildlife habitat practices, and wetland restoration

# GLRI – Phosphorous Targeting

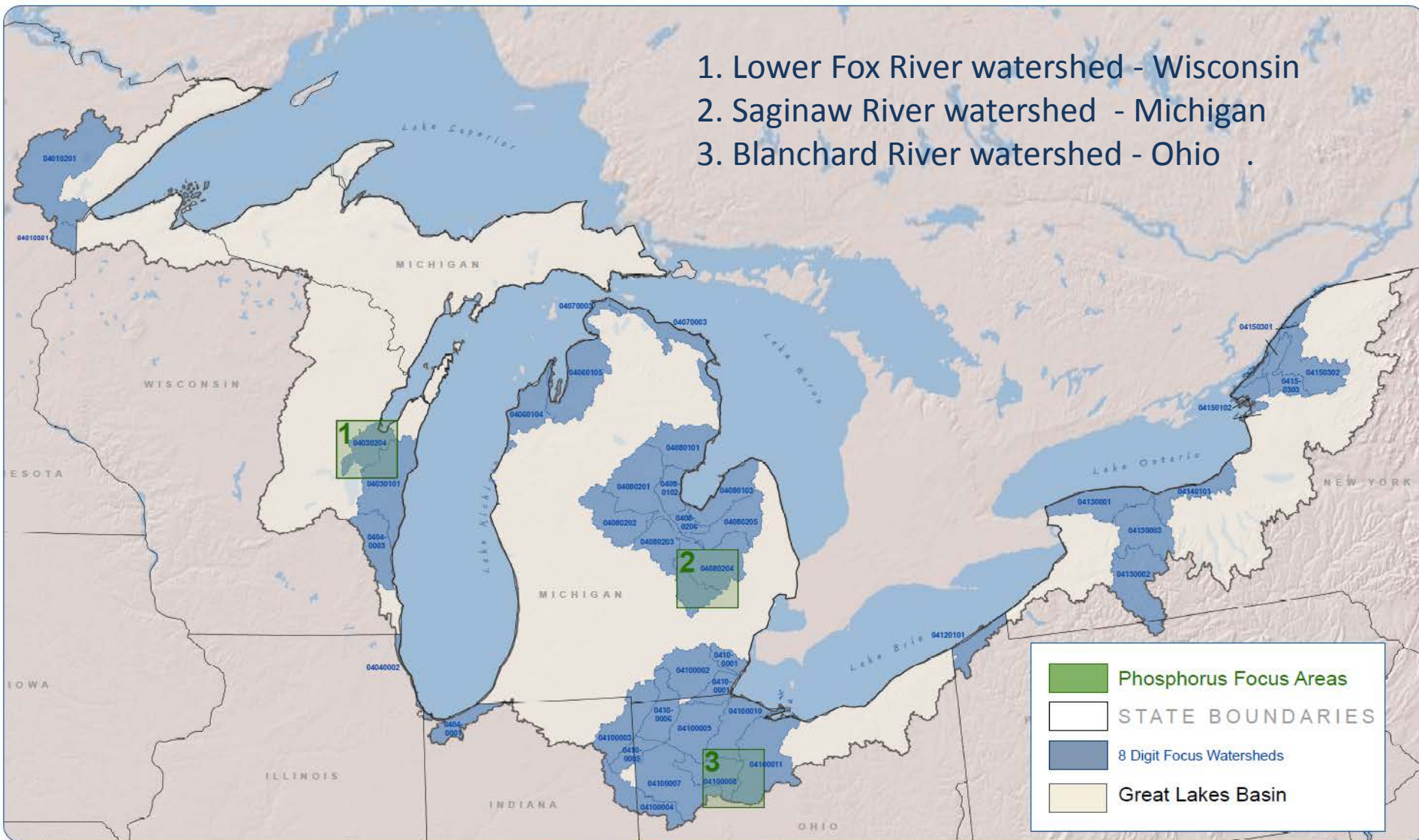
- Harmful algal blooms (HABs) linked to excess nutrients, particularly phosphorous, are a GLRI priority in Western Lake Erie, Saginaw and Green Bay.
- Starting in 2012 NRCS targeted watersheds with excessive phosphorus inputs -- devoting \$20 million in GLRI funds to reduce phosphorous loadings in these water bodies.
- Target watersheds selected through an interagency process based on factors including local water quality and extent of agriculture
- In the targeted phosphorus watersheds, farmers have entered into 290 contracts to implement phosphorous-reducing practices on over 55,000 acres.



# GLRI Priority Watersheds

## Great Lakes Restoration Initiative (GLRI) Priority Watersheds Fiscal Year 2012

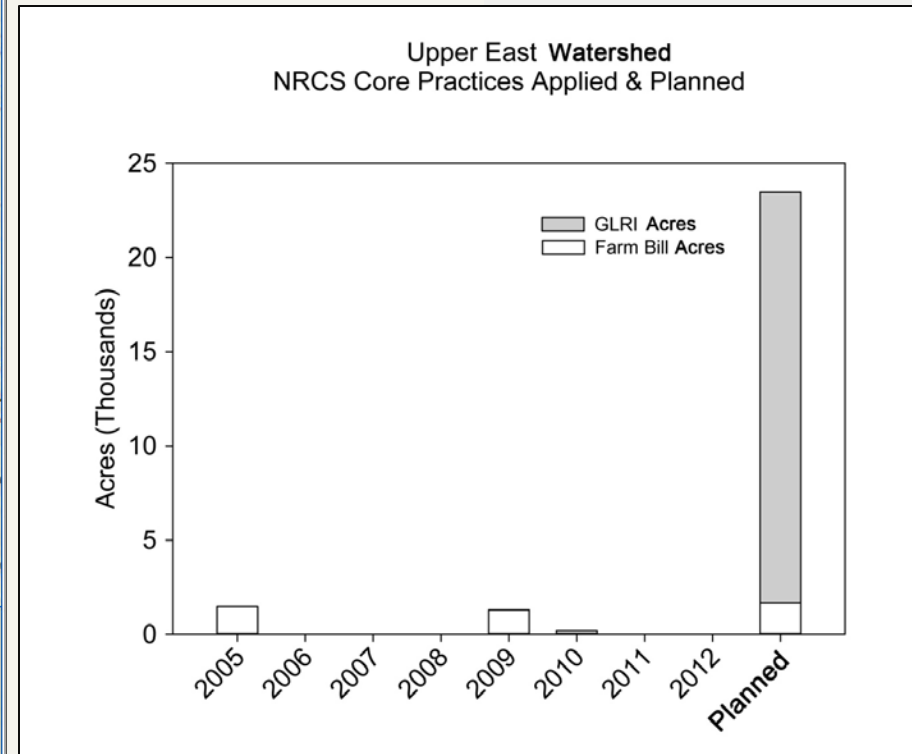
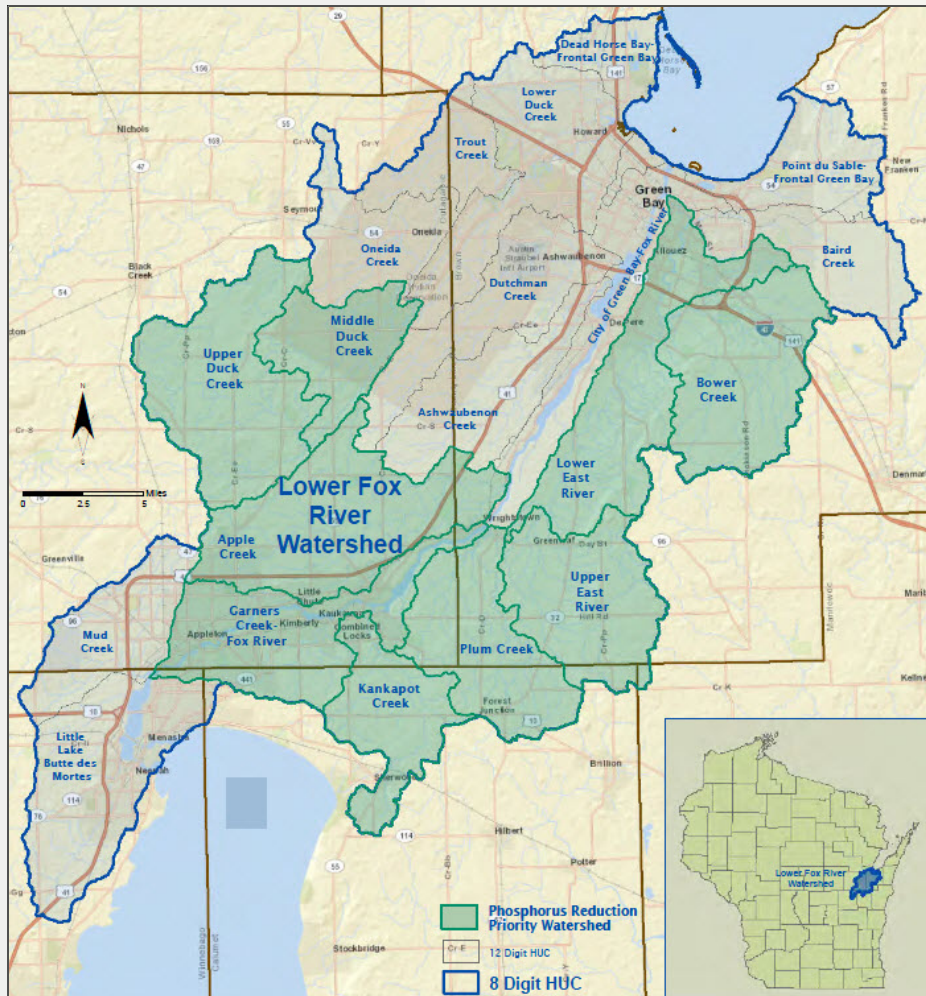
1. Lower Fox River watershed - Wisconsin
2. Saginaw River watershed - Michigan
3. Blanchard River watershed - Ohio



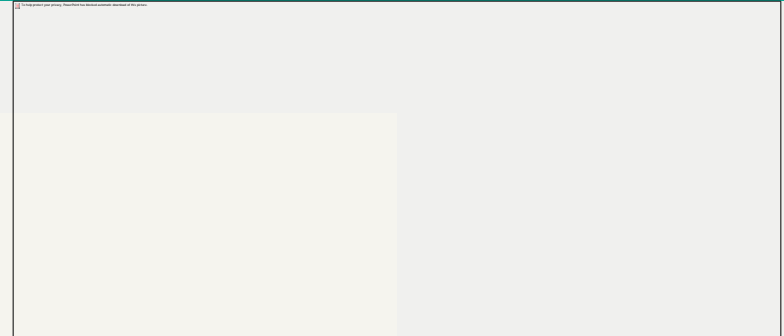
GLRI 2012 8 digit Priority Watershed Locations

# Fox River – Targeting Funding for P

Significant acceleration of conservation through GLRI funding







## Fox River P Trade

- Partnership with Great Lakes Commission and WI DNR
- Market-based approach to enable the most economic solution to achieving water quality gains
- \$500,000 of GLRI funding through NRCS with 25% match from GLC

## Project Goals

- Establish trading framework for Lower Fox
- Begin credit trading in 2016
- Develop a model consistent with other nutrient trading programs and replicable in other watersheds/states.



GLRI funded partnership with GLC to:

- Establish two to four demonstration farms within the Lower Fox Watershed to test new and standard conservation systems in reducing phosphorus and sediment
- Establish an efficient mechanism to share this technology and information with farmers, agribusiness, conservation agencies, and the public
- Create opportunities for others to test their research, technical and program ideas at the demonstration farms
- Share information and lessons learned from the Lower Fox Watershed throughout the Great Lakes basin

Edge of field water quality monitoring (EoF) allows for better understanding and quantification of the effects of conservation practices.

NRCS has made funding for EoF available through general programs.

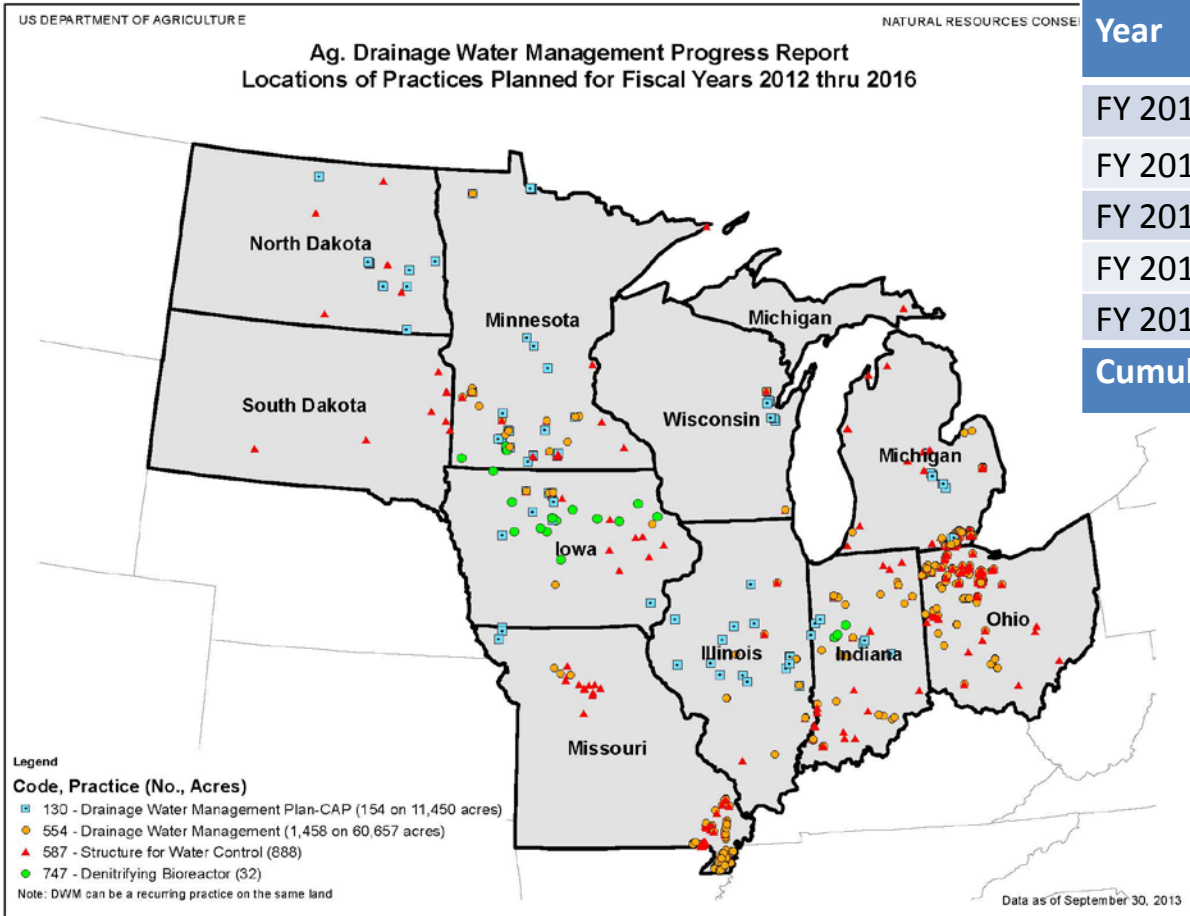
Through GLRI, USGS and NRCS worked together to get Edge of Field monitoring installations on-the-ground.

EoF monitoring will result in small watershed data with before and after comparison that can be used for:

- public outreach,
- conservation planning,
- practice implementation.



- Through **Agricultural Drainage Water Management**  
*“More Production, Less Risk, and Cleaner Water”*



Year	Application Acres	Conservation Plan Acres
FY 2010	1,016	
FY 2011	1,599	2,176
FY 2012	4,281	11,715
FY 2013	8,575	16,178
FY 2014		23,343
<b>Cumulative</b>	<b>15,471</b>	<b>53,412</b>



- **Soil Health Campaign:**

- ✓ Fully integrate Soil Health Management System planning and implementation into NRCS's conservation programs
- ✓ Increase awareness and understanding of healthy soil ecosystems and their role in sustainable agricultural production
- ✓ Increase the number of producers implementing Soil Health Management Systems



**Soil Health Management Systems** increase organic matter and soil organic systems, making soils more able to retain water and less susceptible to runoff and erosion.

**Dig a little, learn a lot:** Healthy soil looks dark, crumbly, and porous and is home to worms and other organisms.

**Do not disturb:** Soils' natural biological cycles and structure can be disrupted through tillage, improper chemical disturbance, or excessive grazing.

**Discover the cover:** Biodiversity—growing more plants in rotation—increases the success of most agricultural systems and means more diversity below ground.

# Opportunities to Improve Conservation Efforts in the Great Lakes Basin

- Increased commitment to a systems approach to conservation, with soil health as the foundation
- Increased leveraging with partners to provide more funding and technical resources
- Greater focus on the economics and sustainability of conservation systems
- Greater commitment to adaptive management and the tools/technical assistance to support it

# Opportunities to Improve Conservation Efforts in the Great Lakes Basin(*cont.*)

- Further refinement of targeting efforts— greater focus on high need/vulnerable acres
- Greater collaborative commitment to monitoring, modeling, and assessment of environmental outcomes on a long-term basis
- Development and implementation of recognition and certainty “programs” by states
- Continued development of environmental service market based economic opportunities



## Sustainable, environmentally friendly, safe food production

- Today, one farmer can feed 155 people; in 1960, one farmer fed 25 people.
- We'll need farming systems that are:
  - Even more productive
  - More environmentally friendly
  - Capable of producing safe food from field to table
- Targeting conservation resources generates more benefits than general approaches.





## *More than 78 Years of Helping People Help the Land*



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