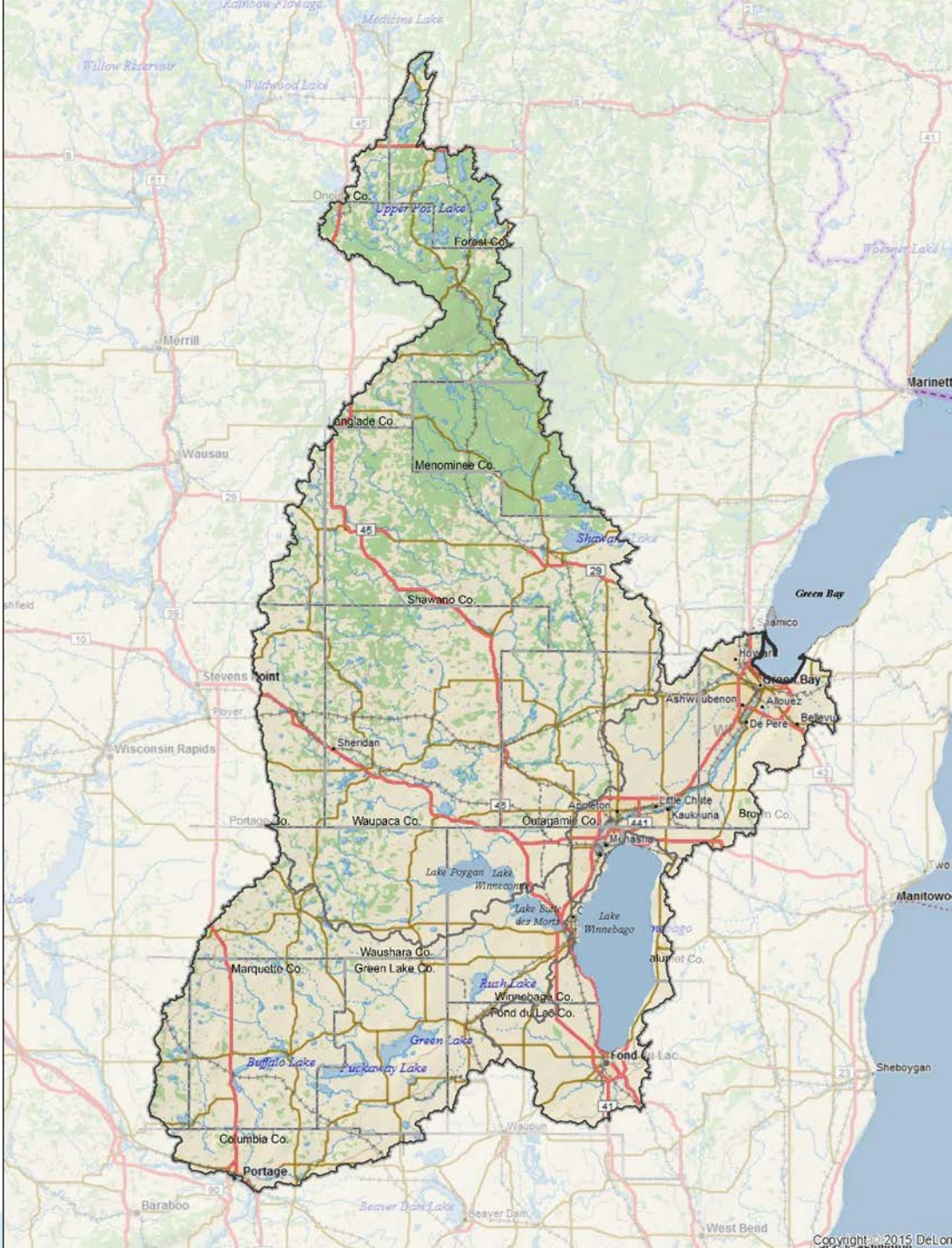


Fox-Wolf Basin – On the Road to Recovery



Jessica Schultz
Executive Director



The Fox-Wolf River Basin drains more than 6,300 square miles to the Bay of Green Bay.

It is the largest drainage basin to Lake Michigan and the third largest to the Great Lakes.

BRACE YOURSELVES

Brain dump: a complete transfer of accessible knowledge about a particular subject from your brain to some other storage medium, such as paper or your computer's hard drive.


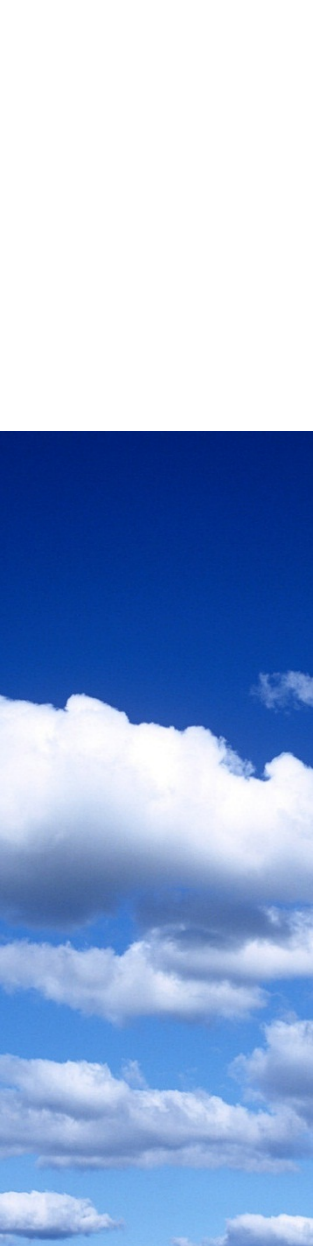
Topic: Watershed Recovery in the Fox-Wolf Basin



THE BRAIN DUMP IS COMING

To guide us on this journey....

- On the ground work towards Watershed Recovery
- Advancing Alternate Compliance Options
- Planning Efforts and Tools
- Outreach, Education and Engagement
- Initiatives Led by Elected Officials
- Monitoring & Research

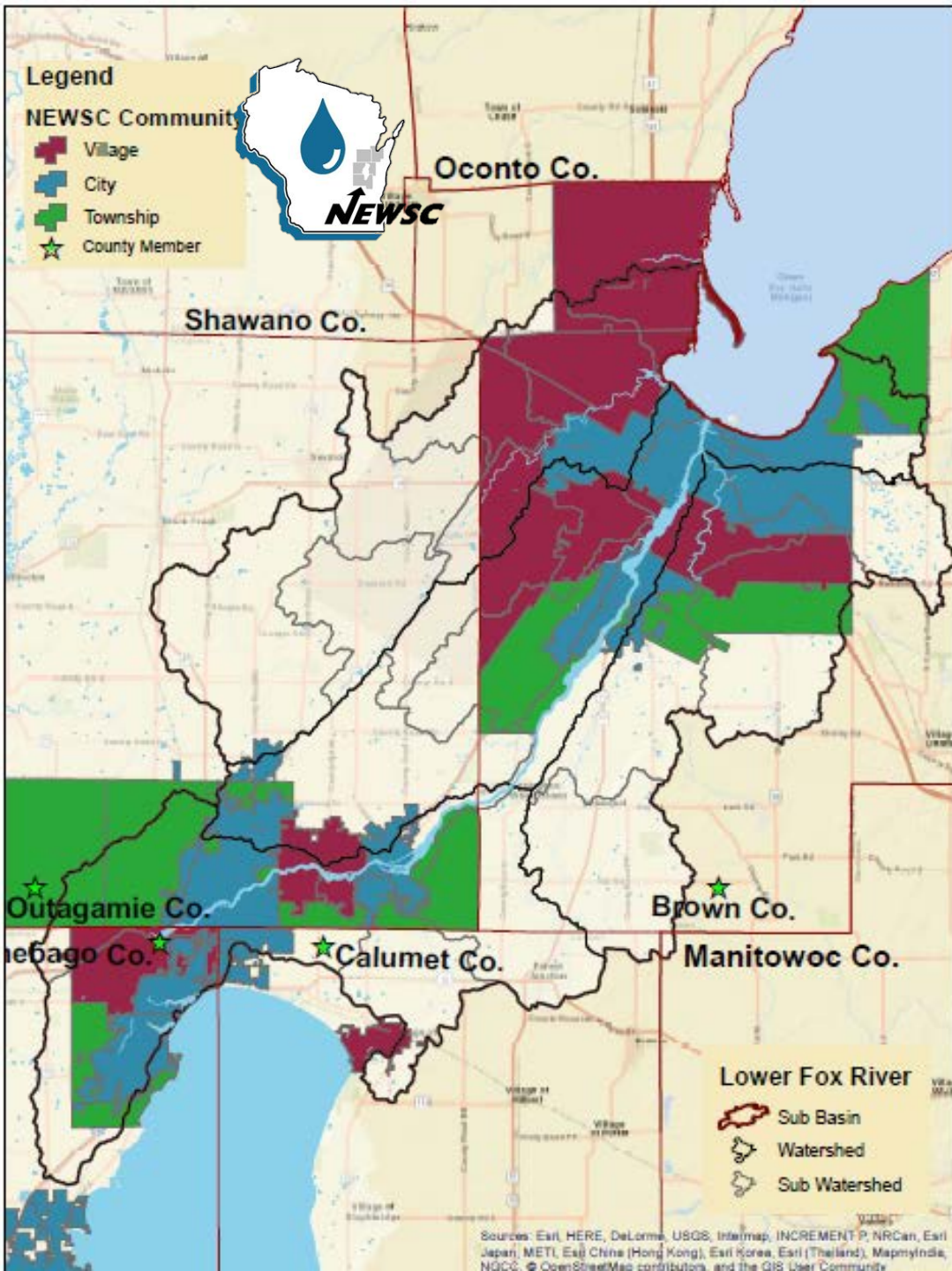


On the ground
work towards
Watershed
Recovery



Urban Stormwater Best Management Practices





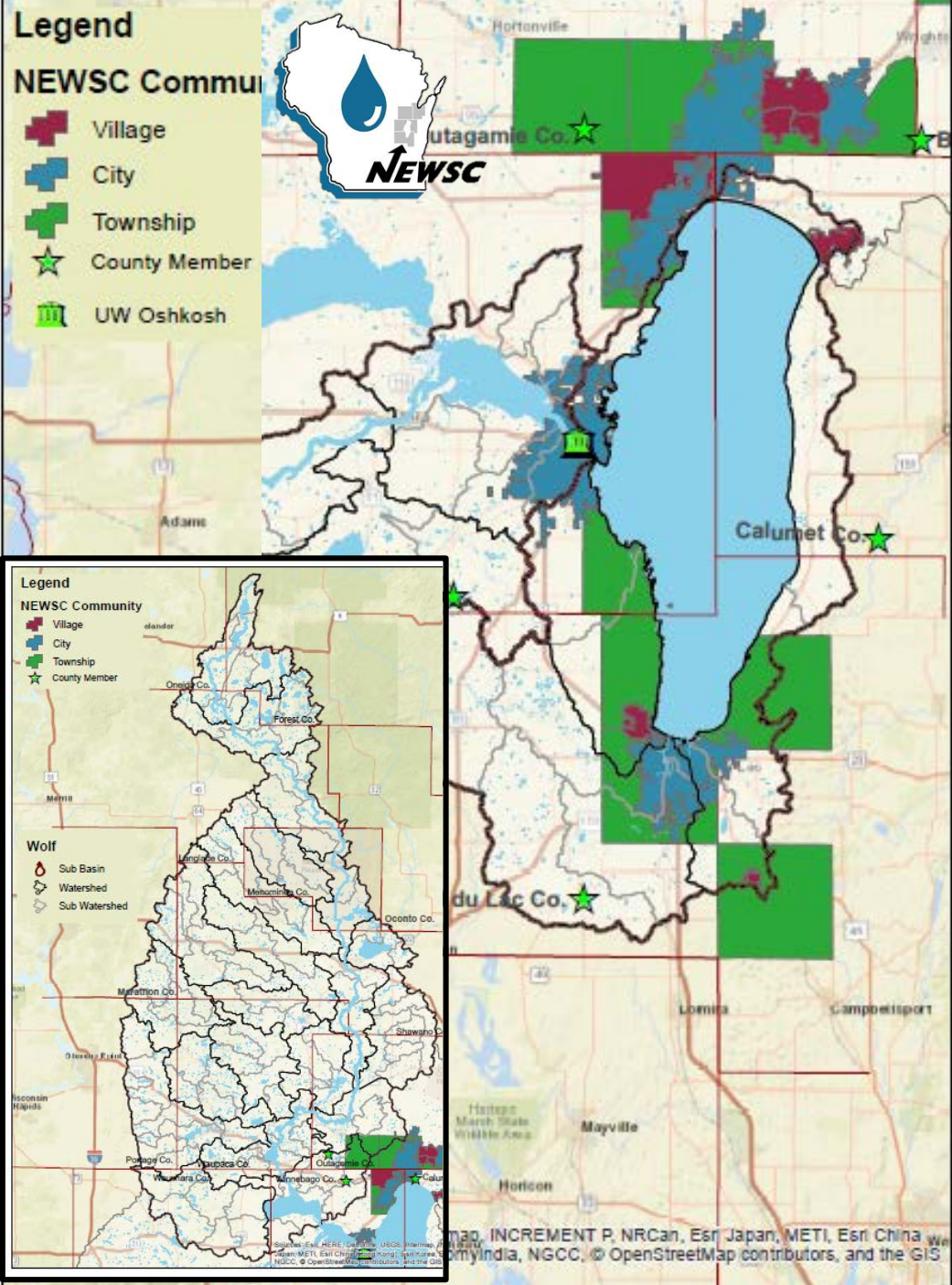
Northeast Wisconsin Stormwater Consortium MS₄ Members in the Lower Fox TMDL Boundaries

WDNR reissued 5 year MS₄ permits with effective date April 2014.

Because LFR TMDL was already approved, MS₄s in Lower Fox had the following requirements related to TMDL within this permit cycle:

Annual report due March 31, 2016 – MS₄s submitted maps of MS₄ boundaries and drainage areas in relation to the TMDL

Annual report due March 31, 2018 - For each pollutant report whether or not MS₄ is meeting TMDL goals, if not, submit a plan describing how the permittee will make progress toward achieving compliance.



NEWSC MS4 Members in the Upper Fox/Wolf TMDL Boundaries

WDNR reissued 5 year MS4 permits with effective date April 2014.

Because TMDL is still under development the following are the TMDL related expectations of the MS4 under this permit:

Within 2 years of TMDL approval – MS4s submitted maps of MS4 boundaries and drainage areas in relation to the TMDL

Within 4 years of TMDL approval - For each pollutant report whether or not MS4 is meeting TMDL goals, if not, submit a plan describing how the permittee will make progress toward achieving compliance.

Agricultural Conservation Best Management Practices



Interseeding



Concentrated Flow Area Seeding



Treatment Wetland



Manure Injection



Cover Crops

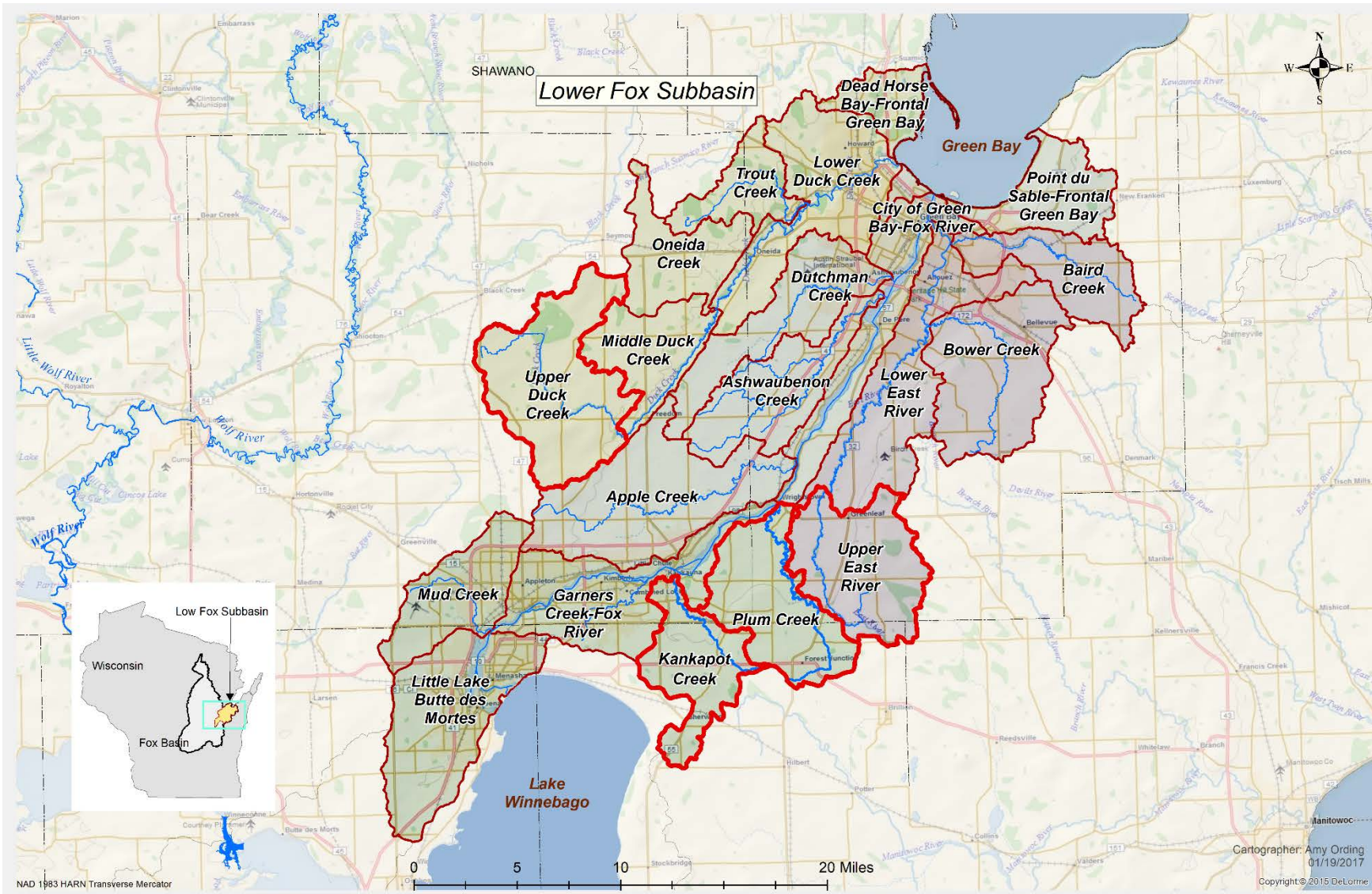


Harvestable Buffer



No-till Planting

Intensified Agricultural Conservation Implementation Efforts



and

Pipe Creek 9 Key Element Plan & Agricultural Implementation



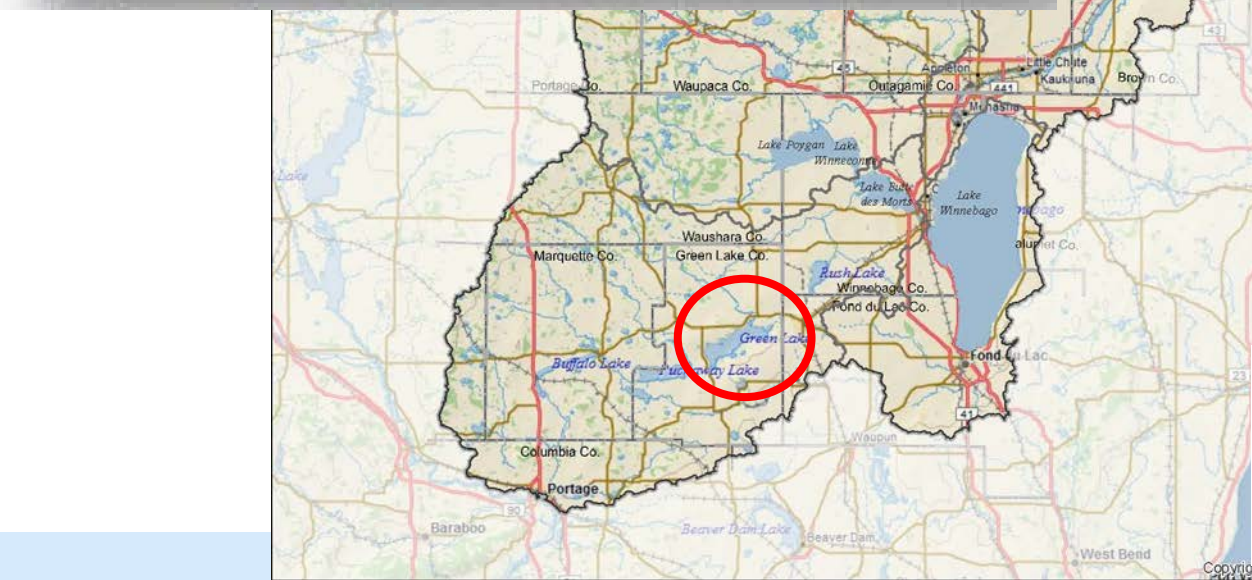
A Lake Management Plan for Green Lake Green Lake, Wisconsin

Wisconsin's Deepest Natural Inland Lake

Part 1 – Main Contents



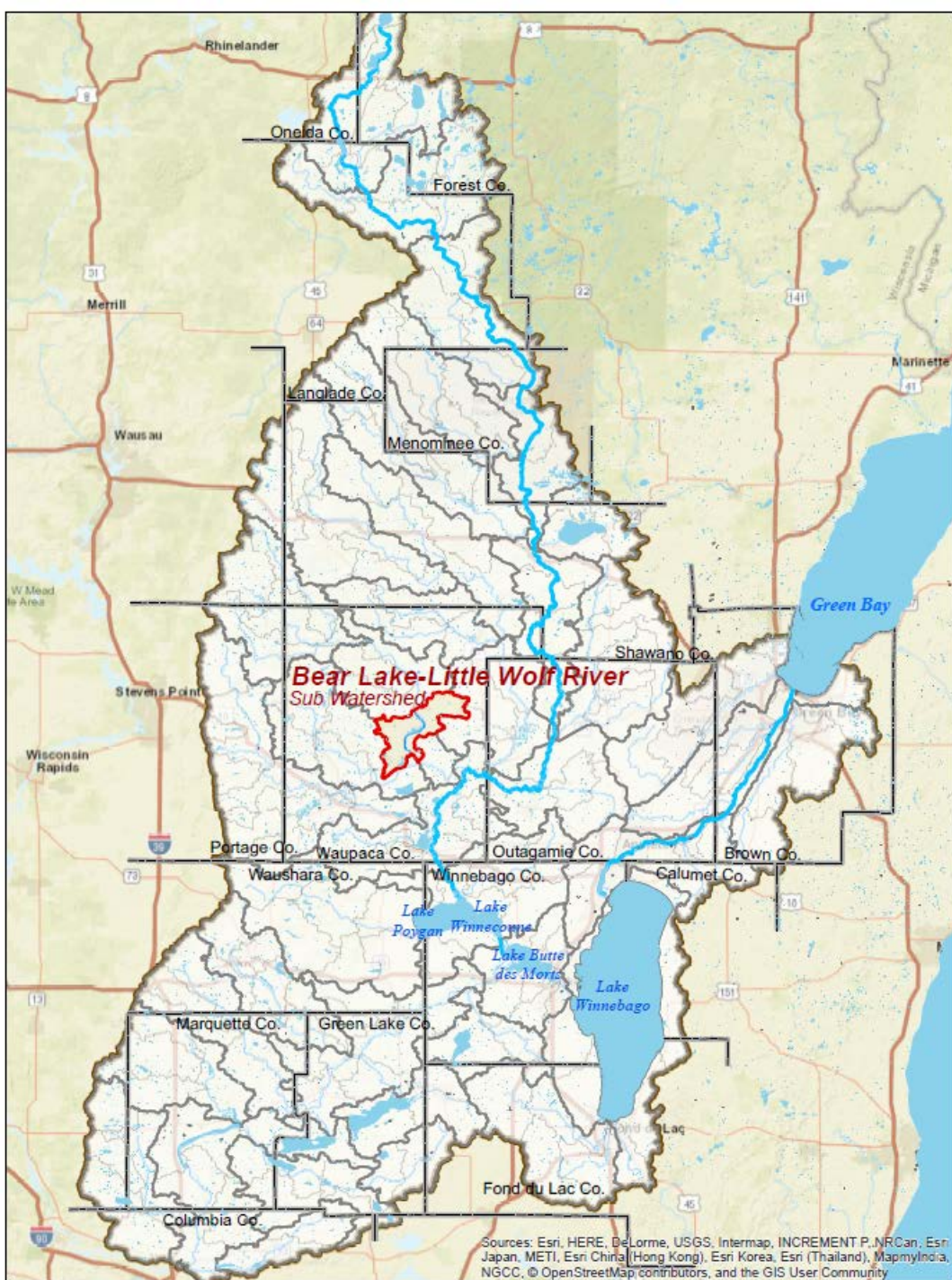
Developed in Partnership
January 2013



GREEN LAKE ASSOCIATION

CARING FOR OUR LAKE FOR GENERATIONS

Bear Lake – Little Wolf River Watershed Management Plan



NRCS's National
Water Quality
Initiative (NWQI)



Habitat Restoration Projects – Bay of Green Bay



And others



Lower Green Bay habitat, like the Duck Creek Delta pictured here, is getting a boost from several organizations.

- Wild rice seeding and planting of native aquatic plants.
- Enhancement of marsh habitat for waterfowl and northern pike at the Ken Evers Natural Area in Green Bay.
- Engineered log jams in lower Green Bay to protect the shoreline from waves and enhance fish and wildlife habitat
- Development of a fish and wildlife habitat management plan for lower Green Bay with input from local conservation professionals, which will establish management priorities and restoration goals for the area behind the Cat Island wave barrier including the Duck Creek Delta.

Grant funds from Sustain Our Great Lakes, U.S. Fish and Wildlife Service Coastal Program and the Fox River/Green Bay Natural Resources Trustee Council will support the restoration projects.

Pike Habitat Restoration

- Remove Impediments to fish migration in streams and road ditches
- Restore wetland destinations that have become degraded

Over 50 completed projects since 2007



Streambank and Shoreline Protection



Winnebago County



Aerial view of offshore breakwall



Vegetative regrowth behind offshore breakwall

Streambank and Shoreline Protection



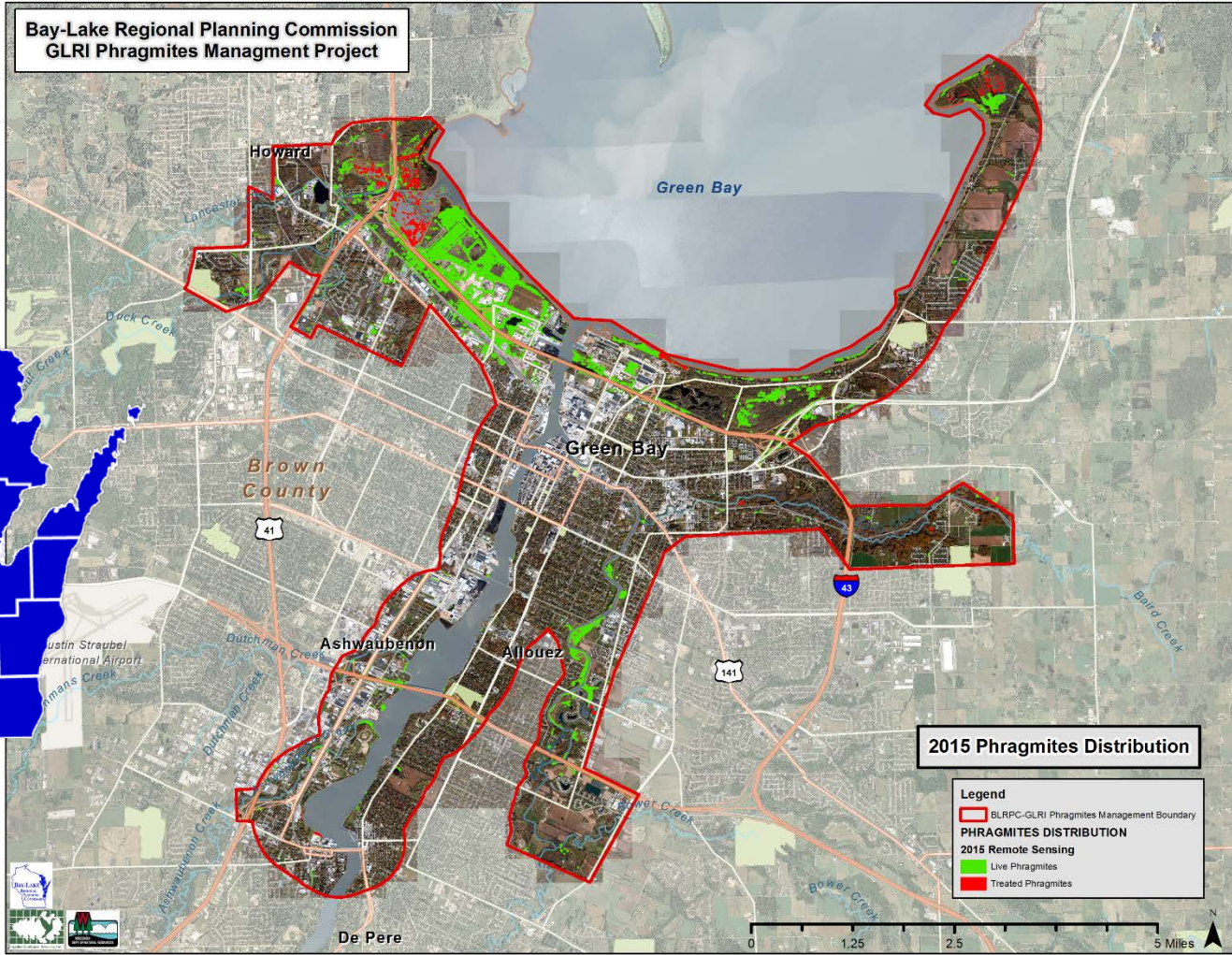
Natural Shoreline Restoration

Phragmites Management – Brown County

BAY LAKE

REGIONAL PLANNING COMMISSION

Brown • Door • Florence • Kewaunee • Manitowoc • Marinette • Oconto • Sheboygan





Advance Alternate Compliance Options

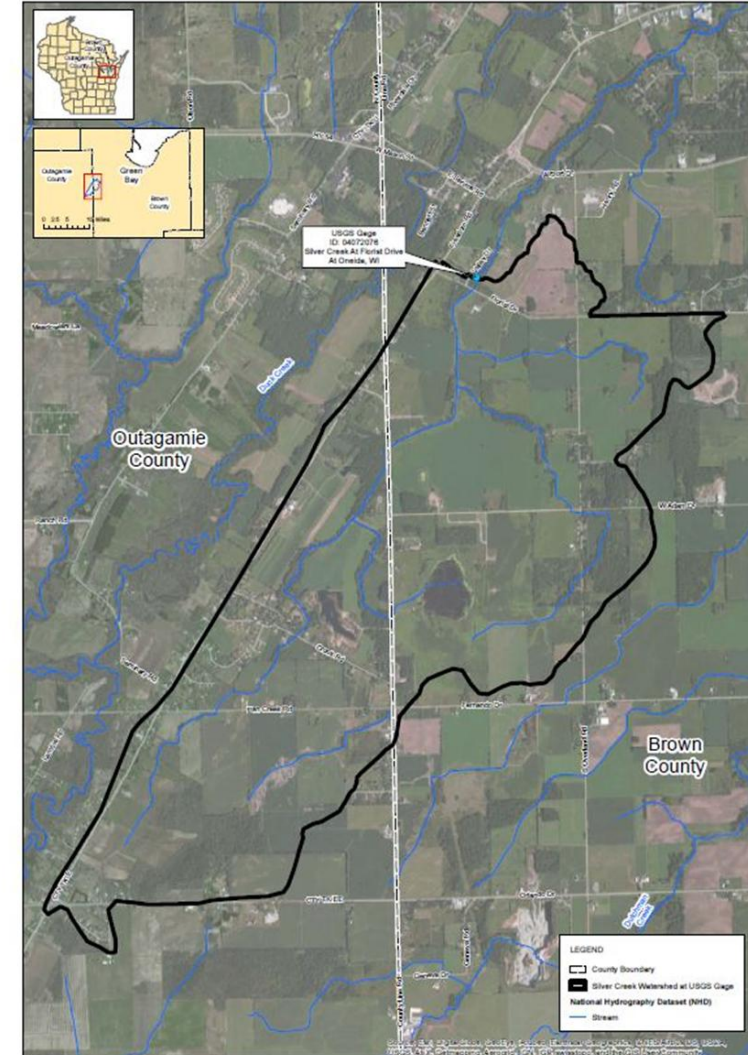




Adaptive Management

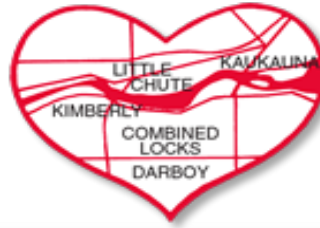


Silver Creek Pilot Watershed Project





Water Quality Trading



Heart of the Valley
METROPOLITAN SEWERAGE DISTRICT

- 1st Water Quality Trade in a TMDL watershed
- 1st Water Quality Trade for TSS



Statewide phosphorus multi-discharger variance

“The multi-discharger variance (MDV) for phosphorus extends the timeline for complying with low-level phosphorus limits. In exchange, point sources commit to step-wise reductions of phosphorus within their effluent as well as helping to address nonpoint sources of phosphorus from farm fields, cities or natural areas to implement projects designed to improve water quality.”

Source: WDNR website



Planning Efforts & Tools



Statewide Project



The Wisconsin Food, Land & Water Project invites all of us to come together, look beyond the present moment, see the big picture, and think about our shared Wisconsin resources in a more systematic and collaborative way.

Respected agriculture, business, community and environmental leaders are working together to address the daunting challenges of food production, surface water quality, groundwater quality, groundwater quantity, and farmland loss.

Food • **Land** • **&** **Water**
Toward a Sustainable Wisconsin



Basin-Wide Planning Green Bay Conservation Blueprint (Design)



Landscape conservation design is both the process and products that achieve the collaborative conservation community's shared missions, mandates and goals.

The blueprint design process allows for collaborative decision making about

- the kind, quantity and configuration of habitat needed,
- what activities to undertake,
- and where.

Partners and stakeholders will utilize the end products to plan and implement projects while ensuring the sustainability of ecosystem services for current and future generations.

The workgroup for the project includes representatives from Tribes, federal, state, and local government agencies, universities and non-profit groups.

The Green Bay Field Office is leading the project



Office of Great Waters

Lower Green Bay & Fox River Area of Concern (AOC)

Lower Green Bay and Fox River Area Beneficial Use Impairments

- Restrictions on fish and wildlife consumption
- Tainting of fish and wildlife flavor (*suspected*)
- Degradation of fish and wildlife populations
- Fish tumors or other deformities (*suspected*)
- Bird or animal deformities or reproductive problems
- Degradation of benthos
- Restrictions on dredging activities
- Eutrophication or undesirable algae
- Restrictions on drinking water, or taste and odor problems
- Beach closings
- Degradation of aesthetics
- Degradation of phytoplankton and zooplankton populations
- Loss of fish and wildlife habitat



TMDL Implementation Coordination



Keith Marquardt
WDNR, Water Resource Management Specialist
TMDL project manager
Lower Fox, Upper Fox & Wolf (& more outside of basin)



ALLIANCE *for the*
GREAT LAKES

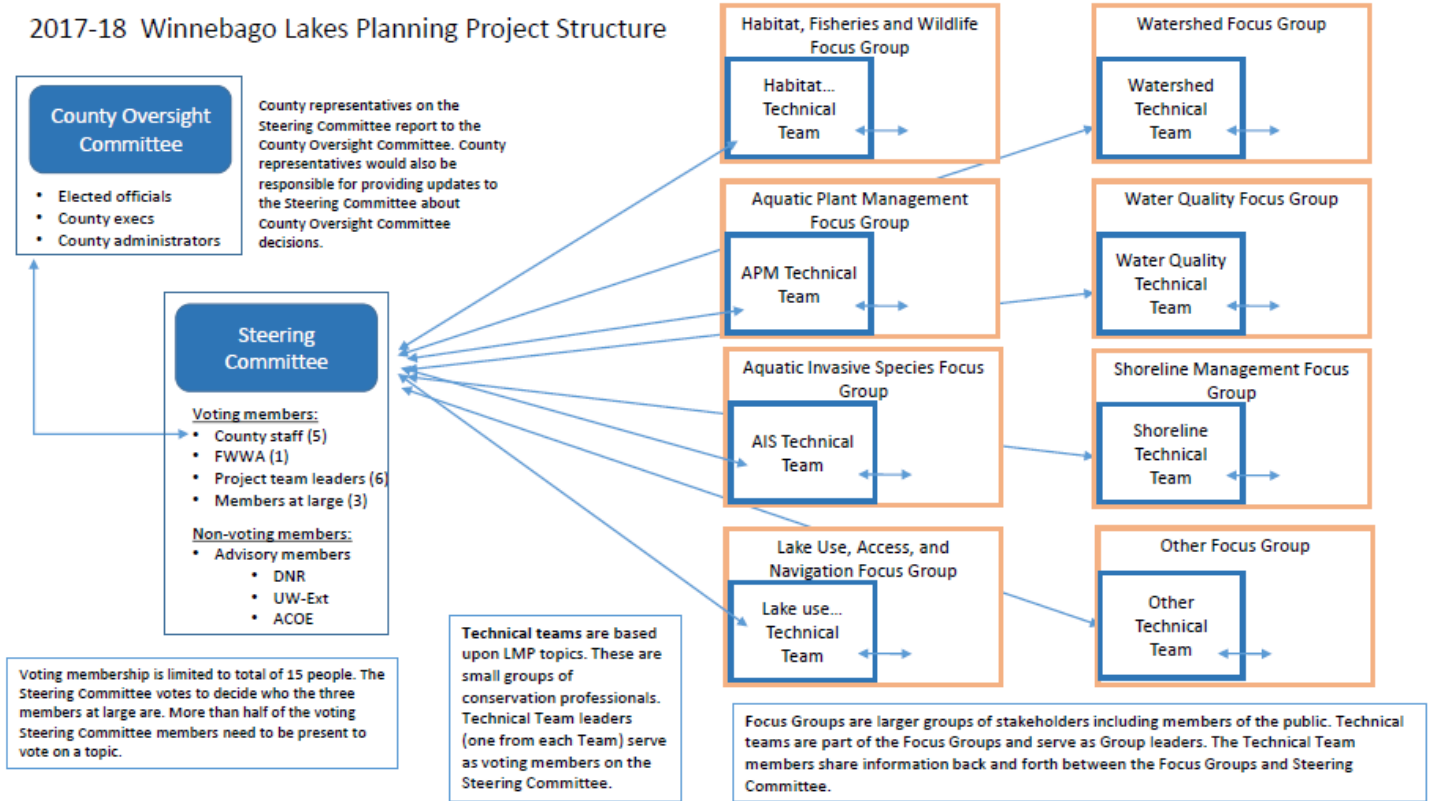
Lower Fox River Watershed Clean Water Agenda

Building a shared vision for clean water
and an improved quality of life in the
Fox River basin and greater Green Bay
area





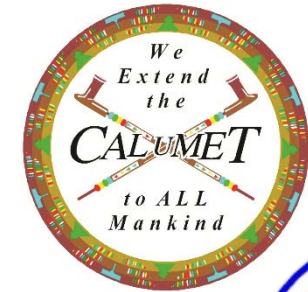
2017-18 Winnebago Lakes Planning Project Structure



Financial support for Lake Management Planning coordination provided by:



Agriculture Conservation GIS Tool



Winnebago County

ResourceConcern

1. Select Form

Resource Concern

2. Enter Information

RC # record:

Form Name:

Landowner:

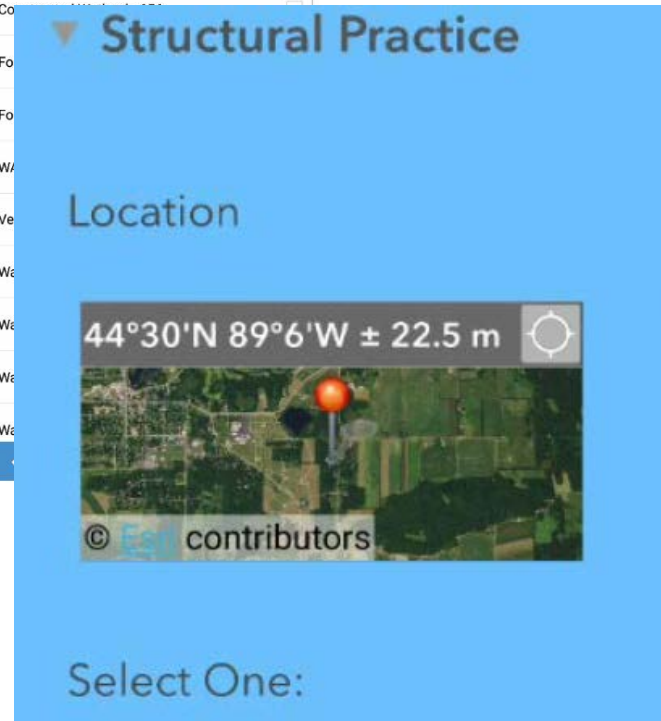
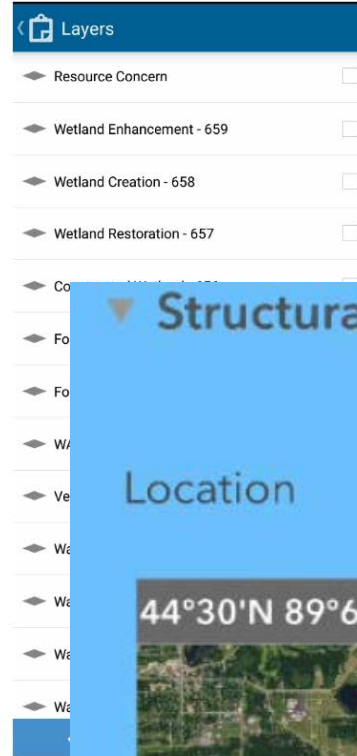
Status:

Attachment

Select File

3. Select Location

Specify the location for the entry by clicking/tapping the map or by using one of the following options.



TACKLING BARRIERS TO Green Infrastructure

A photograph of an urban street scene. On the left is a multi-story brick building with many windows. A paved road runs along the building. In the foreground, a concrete curb separates the road from a gravel-filled planter bed containing a young tree. To the right of the planter bed is a concrete sidewalk. In the background, a white water truck is parked on the street. The sky is blue with some clouds.

AN AUDIT OF LOCAL CODES
AND ORDINANCES

Partners:

1000 Friends of Wisconsin

Orion Planning and Design

Milwaukee Metropolitan Sewerage District

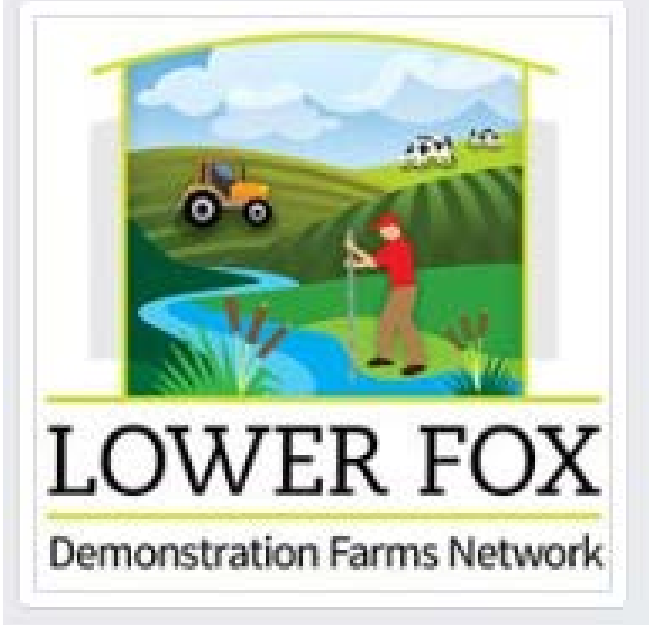
Production of this workbook was funded by the National Oceanic and Atmospheric Administration Coastal Storms Program and University of Wisconsin Sea Grant Institute.

Credit: photo by Kevin Miyazaki



Outreach, Education & Engagement





LOWER FOX DEMONSTRATION FARMS NETWORK 

Interested in
Field Days on the Fly?

To join our list, please TEXT:
FoxDemoFarms to 88202

For more information follow:
Fox Demo Farms

 Like us on Facebook  

www.foxdemofarms.org



CLEAN BAY
BACKERS

Annual event for elected officials
& community leaders



Winter Road and Parking Lot Workshops



Construction Site Erosion Control Training

EROSION & SEDIMENT CONTROL

WORKSHOPS

March 13, & March 14,
2018

Green Bay, WI Oshkosh, WI



Save the Date!
Rice Lake Field Event
September 20, 2018
Rice Lake, WI

Wisconsin Water Thinkers Network

ThinkWater is a national campaign supported by the U.S. Department of Agriculture to help people of all backgrounds and ages think and care deeply about water.

Our Mission-Vision is to **Engage, Educate** and **Empower** a world of Systems Thinkers to solve wicked water problems.



Contact Jeremy Solin, jeremy.solin@ces.uwex.edu

Watershed Cleanup



FOX-WOLF
WATERSHED CLEANUP
2018

6th Annual Cleanup
Saturday, April 21

Join us!



Semi-Annual Agricultural Newsletter



Basin Buzz

Things to consider if thinking about:

PLANTING COVER CROPS AFTER CORN SILAGE

- Determine what herbicide to use THIS Spring.**
Spring herbicide application can limit your choice of fall cover. Some herbicides will kill off your cover later in the fall, determining which type of cover you will plant in the fall prior to your spring herbicide selection/application will save you headache later!
Work with your crop consultant and/or LWCD agent.
- Choose an early maturity rate corn for your 2018 crop.**
Early maturity rate allows you to harvest corn earlier, which gives you more time to establish cover crops.
i.e., Select 95-day corn versus 100-day corn.
- What are you doing with your manure?**
 - + Low-disturbance or surface apply? Applying manure to a growing cover? Talk to your County LWCD agents about your options - depending on the location of your farm, equipment may be available to rent.
 - + Incorporation? Apply manure BEFORE planting covers. It's important to note that this will delay when cover crops are planted, which will reduce the time available to establish cover crops.
Talk to your manure hauler early.
- Choose your cover crop by determining the goals you have for your cover crops.**
Consider what is your plan for 2019? Corn silage for 2019? Try planting a nitrogen rich cover crop (i.e., legumes or brassicas)
 - + Covers for soil health?
 - + Covers for forage?
 - + Covers for grazing?*Work with your Crop Consultant and/or LWCD agent.*

Explore Cover Crops

Cover crops improve soil quality by reducing erosion, reducing soil crusting and compaction, reducing weeds, improving infiltration, and increasing soil organic matter.

Species:
Soil Health

- Cereal Rye
- Radish

ITEMS TO CONSIDER WHEN CHOOSING A COVER CROP

- **Seeding Date:** Select species such as radish and oats for establishment when planted early. Winter Rye and Triticale planted until late in the Fall.
- **Termination:** Some species winter kill, while others will be sprayed or tilled in Spring.
- **Manure Management:** Manure can be applied to cover crops using a vertical tillage injector or by applying manure and cover crops after.
- **Seeding Mixes:** There is an added benefit to soil health when two or more species are mixed together. Common mixes are rye and oats, clover and radish, and barley and oats.

CHECK IT OUT! The Midwest Cover Crop Council has a free "Cover Crop Selector" tool for producers to select which cover crop species will best meet goals and work with crop rotations. Find it online:

Cover crops can be established through many different application methods. The most common are drilling in cover crops or broadcasting seed after harvesting crops in the fall. Aerial applications, no-till drills, and manure slurry applications also work very well. A newer concept to this area is interseeding cover crops into standing crops. This allows for earlier establishment and more cover crop growth in the fall. If extremely dry field conditions exist, incorporating seed for maximum establishment potential is highly recommended.

For help with cover crop planning specific to your farm contact your agronomist, local Land Conservation Department or UW-Extension.



Events from the Green Bay Conservation Partners

Green Bay Conservation Partners Spring Roundtable
April 25, 2017
UW-Green Bay
8:00 a.m.-1:30 p.m.



GBCP recently held their third annual Roundtable event on April 25, 2017 to share information and foster collaboration among conservation practitioners, researchers and stakeholders working in the bay of Green Bay, Lower Fox River watershed, Green Bay's west shore and Door Peninsula.

Conservation Partnerships

- Spring Roundtable
April 19, 2018
UW GB
- Email Listserve

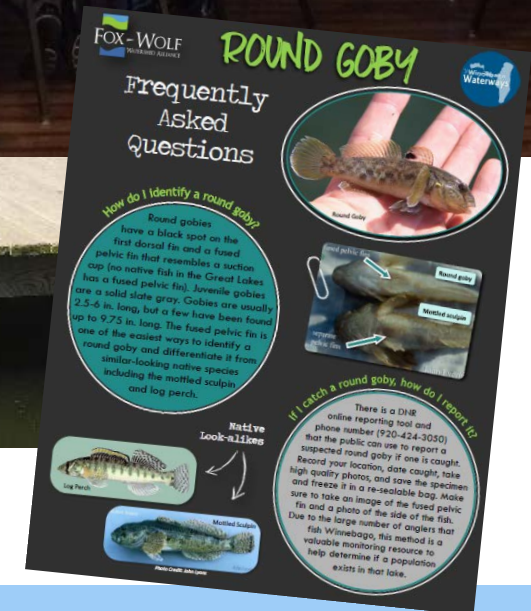
Aquatic Invasive Species Coordinators



Golden Sands
Resource Conservation
& Development Council, Inc.

- Prevention Outreach and Education
- AIS Snapshot Day
- AIS Monitoring
- Habitattitude
- Clean Boats, Clean Waters
- Developing/Implementing AIS Strategic Plan

Funded by:

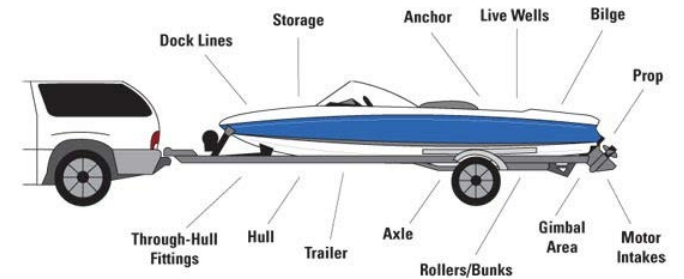




Clean Boats Clean Waters



Before launching and before leaving...
Inspect everything!



Outreach & Education

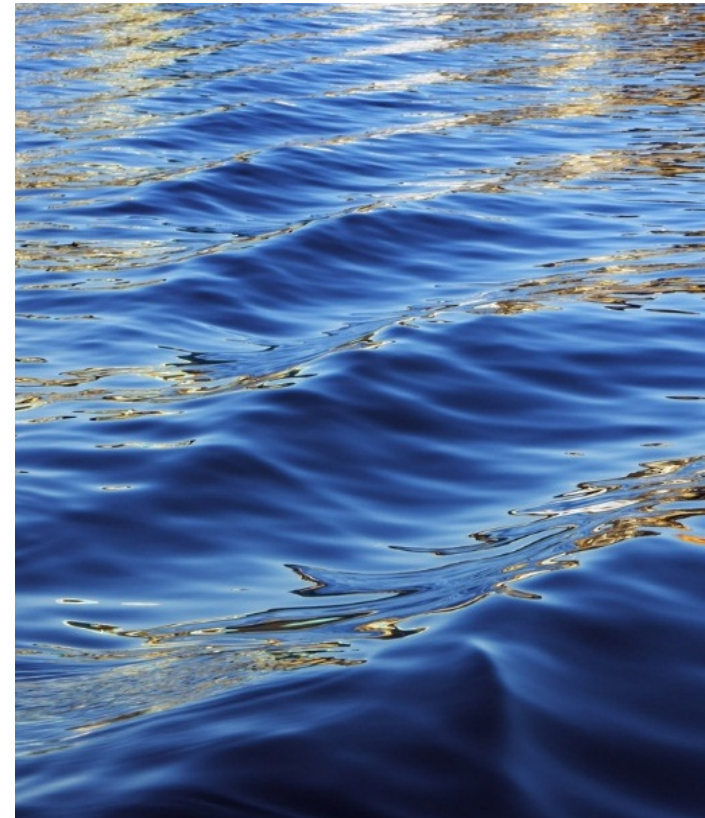


- In schools
- Exhibiting at Community Events
- Signage



And many more organizations!

Initiatives Led by Elected Officials



Brown County Phosphorus Committee



- Initiative began and led by Brown County Executive Troy Streckenbach
- Meeting since March of 2012
- The Phosphorus Committee's charge was to develop a strategy focusing on the attainment of a long-term sustainable Lower Fox and Bay of Green Bay watershed that is healthy and economically viable for agriculture, industry, tourism and residents in Brown County while looking for a long term solution that mitigates compliance impacts and costs.



Save the Bay

- Congressman Gallagher continues the Save the Bay initiative began by Reid Ribble



Mission: *Save the Bay* is a Northeast Wisconsin collaborative initiative in which agriculture, academia, industry, government and nonprofit leaders identify, share and promote conservation practices to reduce phosphorus, nitrogen and sediment flowing into the waters of Green Bay and Lake Michigan.

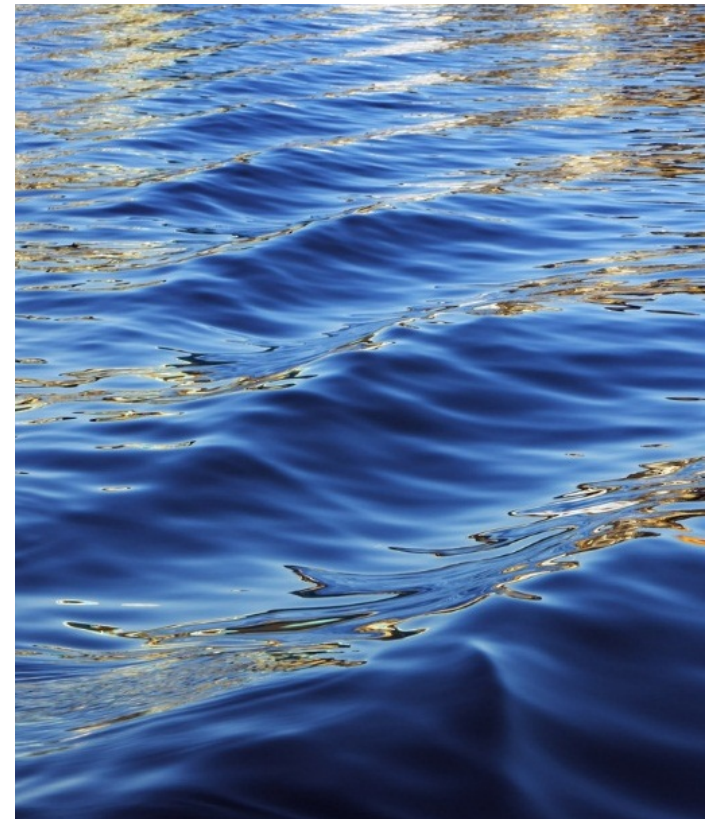
Vision: A viable community that works toward clean water and sustains a healthy Lake Michigan.

Winnebago Waterways Committee



- Calumet, Fond du Lac and Winnebago Counties formalized their commitment to work together to support and promote beautification, restoration, promotion and general upkeep of the waters that comprise the lakes of the Winnebago Waterways, commonly defined as Lake Winnebago and the associated pool lakes of Poygan, Butte des Morts and Winneconne as well as the watershed tributaries within the five county area including Calumet, Fond du Lac, Outagamie, Waushara and Winnebago Counties.

Monitoring & Research



Edge of Field Monitoring Efforts



UNIVERSITY of WISCONSIN

GREEN BAY



DISCOVERY
FARMS

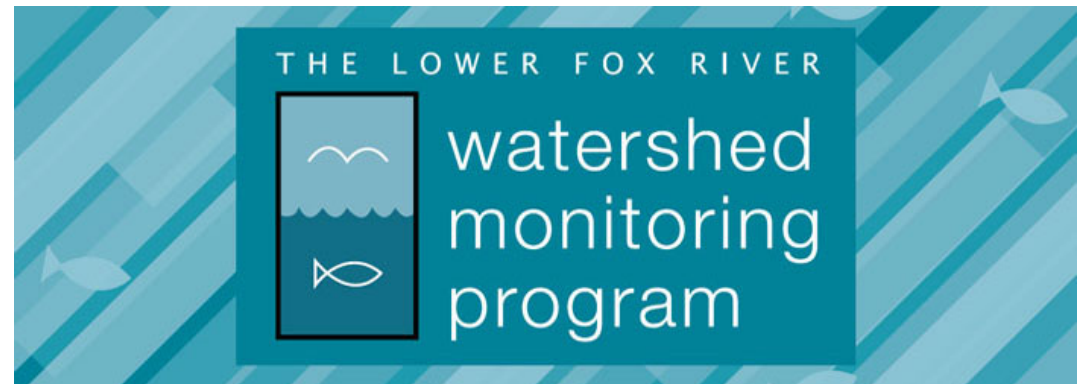
WISCONSIN

In Stream, River & Bay Monitoring Efforts



UNIVERSITY of WISCONSIN

GREEN BAY



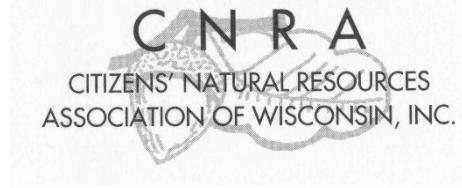
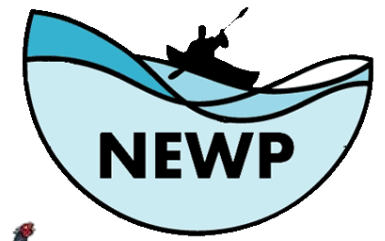


Research – Sediment Fingerprinting



- Lower Fox River –
Streambank Erosion Sediment Fingerprinting
- 2 sub-watersheds

Additional Conservation Organizations



LEAGUE OF WOMEN VOTERS®



List not all encompassing



Thank you!

Jessica Schultz
Executive Director
jessica@fwwa.org
(920)858-4246

**MY
BRAIN
HAS
TOO
MANY
TABS
OPEN**

The Source
Monthly
e-newsletter

If you are not already on our mailing list and would like to receive updates from FWWA and partners working to protect and restore the Fox-Wolf River Basin, sign up at the registration table!