



# Fox Waterway Watershed Based Planning

MARCH 27, 2019

Presented by: Randy Sweet



# Agenda

- Objective
- Definition, Description & Benefits
- Scope & Existing Watershed Based Plans
- Stakeholders
- Plan Options - Timelines & Funding
- Project Examples
- Next Steps



# Objective

Establish a Watershed Based Plan approved by the EPA to facilitate access to 319 funding and bring communities & entities together for a common goal of water quality and water management best practices.



# Watershed Discovery Group

- Team
  - Randy Sweet
  - Rob Bowman
  - Pat Smarto



# Companies consulted

- Applied Ecological Services
- Geosyntec Consultants
- Manhard Consulting

# 9 Elements for Watershed Based Plans EPA Nonpoint Source (Section 319) Program



- Identify cause and sources of pollution
- Estimate pollutant loading into the watershed and the expected load reductions
- Describe management measures that will achieve load reductions and target critical areas
- Estimate amounts of technical and financial assistance and the relevant authorities needed to implement the plan
- Develop an information/education component
- Develop a project schedule
- Describe the interim measurable milestones
- Identify indicators to measure progress
- Develop a monitoring component

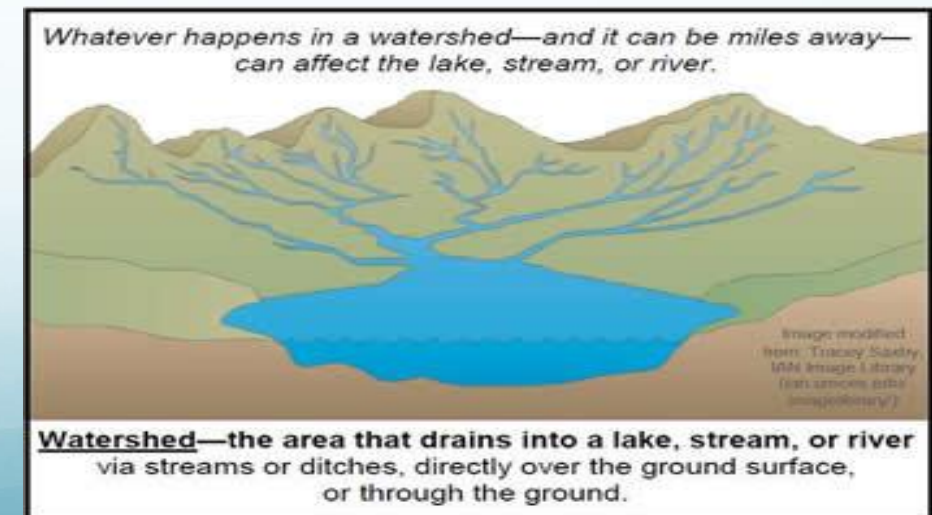


# What is Watershed Planning?

Watershed planning and management comprise an approach to protecting water quality and quantity that focuses on the whole watershed. This approach is necessary due to the nature of polluted runoff, which in most watersheds is the biggest contributor to water pollution. Polluted runoff is caused by a variety of land use activities including development, transportation and agriculture, and may originate anywhere in the watershed.

Watershed planning and management involves a number of activities including:

- targeting priority problems in the watershed;
- promoting a high level of involvement by interested and affected parties;
- developing solutions to problems through the use of the expertise and authority of multiple agencies and organizations;
- measuring success through monitoring and other data gathering.





# A watershed based plan is ...

- ... a strategy and a work plan for achieving water resource goals that provides assessment and management information for a geographically defined watershed. It includes the analyses, actions, participants, and resources related to development and implementation of the plan
- ...a living document that requires periodic updating





# What a watershed based plan does

- Demonstrates that the Fox Waterway is taking a leadership role in water quality and adapting a scientific approach to its management. Further show & grow the Agency's collaboration, capability, and competencies.
- Identifies projects for 319 grant funding (FWA implemented and other)
- Helps to identify sources of water pollution
- Establishes Best Management Practices (BMP) for stakeholders to follow to prevent unchecked sediment and other issues from entering the waterway
- Roadmap to sustainable maintenance of the waterway and done in a way to improve water quality



# Major Benefits

- Improves water quality through project implementation
- Change public perception from FWA as focused on dredging and reactive maintenance to one of a holistic responsible steward of the waterway. Foundational legacy to build upon.
- Opens door to additional funding mechanisms
- Comprehensive plan to effectively prevent/limit the sediment and material loading from reaching our system thus reducing dredging needs
- Mechanism to help further promote proactive stewardship vs. reactive through sound science instead of crisis management
- Identify stakeholders and work as a cohesive unit towards common goal
- Provide forum for betterment of the system while prioritizing appropriate projects
- Educate the public and promote community involvement



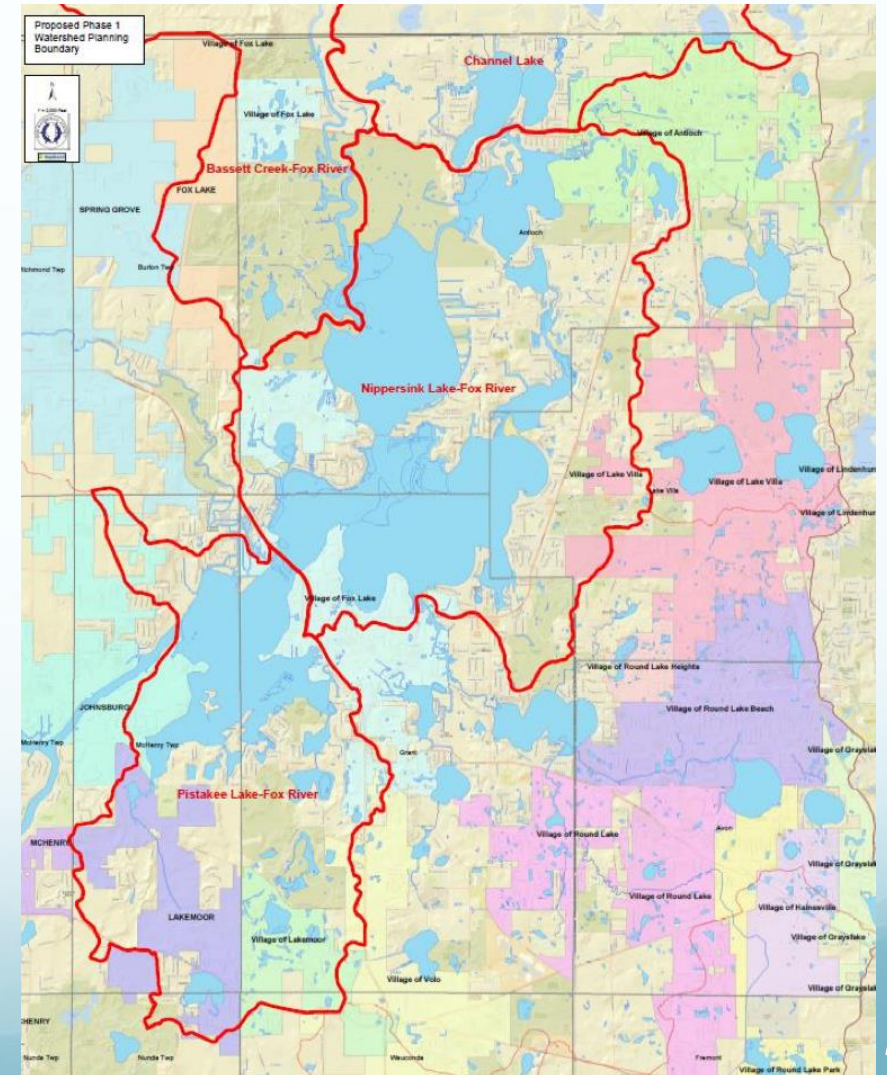
# What a watershed based plan “doesn’t” do

- “Does Not” directly provide regulatory power to mandate BMP’s (Best Management Practices) be implemented
- “Does Not” guarantee funding but rather affords the opportunity to get 319 Federal Funding, when available on a year to year basis. (Grant applications need to be well thought out.)
- “Does Not” directly provide funding for dredging projects

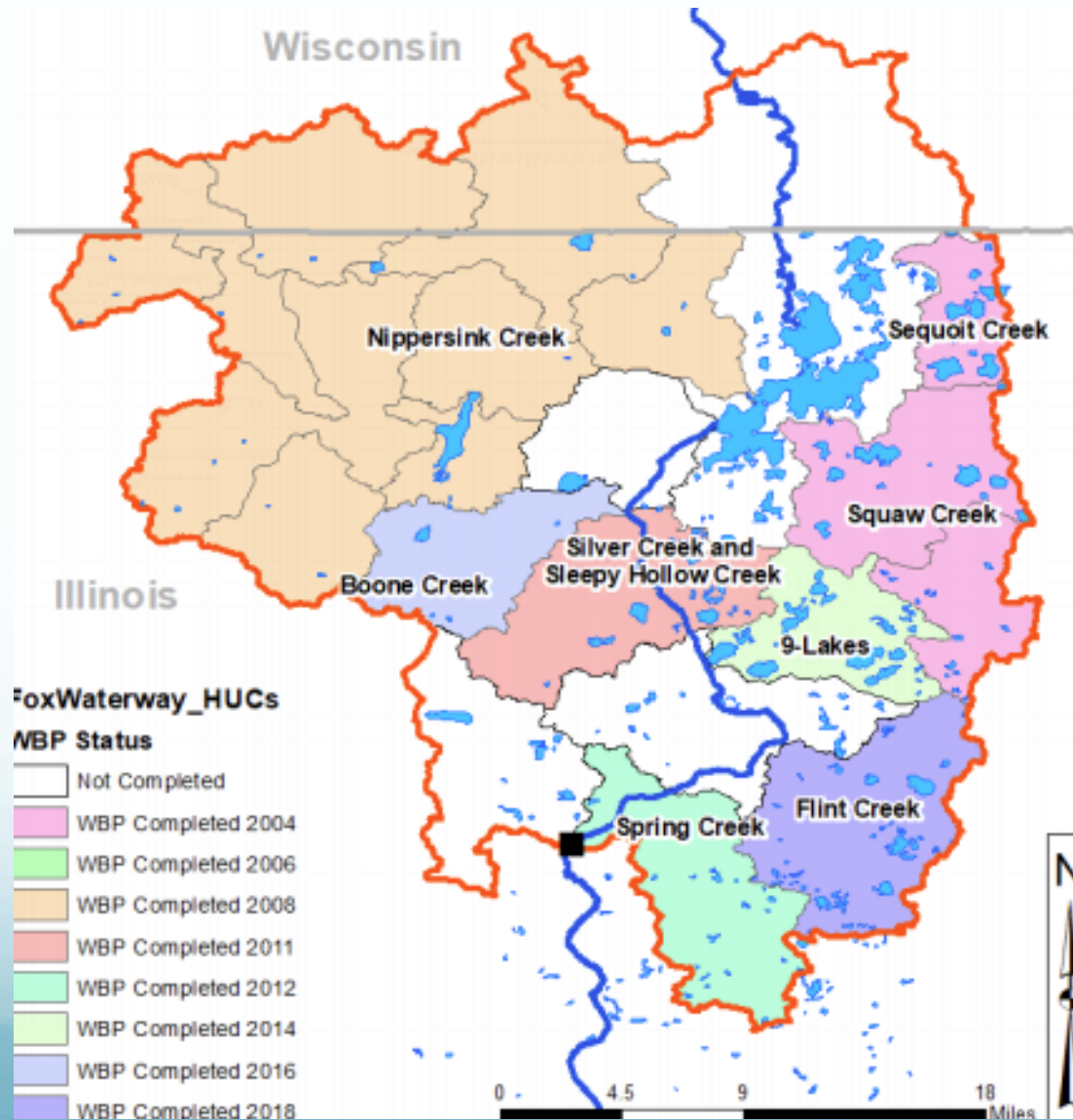
# Geographical Scope (Phase 1)



- Northern boundary: Wisconsin state line
- HUCs (Hydrologic Unit Codes)
  - Channel Lake
  - Bassett Creek-Fox River
  - Nippersink Lake-Fox River
  - Pistakee Lake Fox River



# Existing Adjoining Watershed Plans





# Stakeholders

- Townships (7)
  - Lake Villa
  - Wauconda
  - Grant
  - Antioch
  - Burton
  - McHenry Township
  - Nunda
- Municipalities (8)
  - McHenry
  - Ingleside
  - Lake Villa
  - Fox Lake
  - Volo
  - Lakemoor
  - Johnsburg
  - Antioch



# Stakeholders (continued)

- County (6)
  - Lake County (Stormwater, Public works, etc)
  - Lake County Forest Preserve
  - Lake County Preservation Foundation
  - McHenry County (Stormwater, Public works, Conservation, etc)
  - Lake County DOT
  - McHenry DOT
- State (4)
  - IEPA
  - IDOT
  - IDNR
  - IL Historical Preservation Assoc
- Federal (3)
  - USCG
  - USDA
  - Army Corp of Eng



# Stakeholders (continued)

- Businesses
  - 25 HOAs (Home Owners Associations)
  - 12 Marinas
  - 17 Restaurants/Bars
  - Ancillary businesses
- Lake Associations
  - Friends of Lake Catherine
- Recreational Users
  - ~ 23,000 Sticker holders



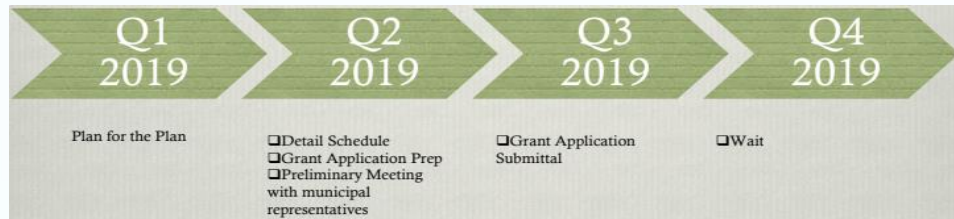
# Analysis & Plan

## Option 1 FWA & Consultant



- Estimated finances
  - Pre Grant Funding: \$10,000
  - Project with Grant
    - \$150,000 Consultant Company
    - \$100,000 FWA in-kind services (Administration, mailings, meetings, etc)
    - \$250,000 Total Project
      - \$150,000          60% Grant from IEPA
      - \$100,000        40% Match from FWA

# Option 1 (continued) Example Timeline



# Analysis & Plan

## Option 2: Pay-in (Recommended)



- Estimated finances
  - Pre Grant Funding: \$10,000 (2019)
  - Total Project
    - \$150,000 Consultant Company
    - \$100,000 FWA in-kind services (Administration, mailings, meetings, etc) & Water Quality \*
    - \$250,000 Total Project
      - \$150,000 60% Grant from IEPA
      - \$100,000 40% Match from FWA and partners
- Note: Example of pay-ins (Approximate)
  - \$30K MS4 sewer monitoring/year = Wastewater treatment facilities (2)
  - \$2K/MS4 monitoring municipality/township/year = \$20K (conservatively assumes 10 of the many more entities: see pages 14, 15, 16)

\*Cost for bioassessment and water quality testing is unknown. If less than \$100,000 over the 2-year grant period, then we would need in kind services from the FWA.

# Analysis & Plan (continued)

## Option 2: Pay-in



- Cost for FWA to hire consultant to get Watershed Planning Group developed (2019), establish bylaws and funding mechanism, facilitate kick off meeting, develop work plan, and apply for grant funding = \$10,000 \*

\*Presently budgeted in 2019

# Option 2 (continued) Example Timeline



# Project example Tower Lakes

(slide from recent ILMA Conference)



## The Budget

- Total Project Value ~\$260k over three years
- IL EPA Funded 319h Grant of ~\$160k
- Lake County SMC Grants of \$10k and \$12k
- Remainder funded by volunteer value matching and split between VoTL and TLIA (The community)

**NONPOINT SOURCE WATER POLLUTION CONTROL PROGRAM**

### Tower Lakes Bioswale/Raingarden

Best management practices have been installed to improve the water quality of the Upper Fox River watershed.

Funded, in part, under Section 319 of the Federal Clean Water Act  
Grant No.: C0952016

For more information, contact the Illinois EPA at 217/782-3362  
FAA Number: 2191615

This Raingarden/Bioswale is a project of the Tower Lakes Improvement Association in partnership with the Village of Tower Lakes.

This project will protect water quality and manage stormwater as recommended in the 9-Lakes Watershed Plan.

Funding for this project is provided in part by grants from Lake County Stormwater Management Commission through a Watershed Management Board Grant.

Illinois Environmental Protection Agency Section 319 grant funds.



# What makes for a good project?

- Restoration based activities:
  - Stream restoration, stabilization, enhancement & protection
  - Shoreline restoration, stabilization, enhancement & protection
  - Wetland restoration, stabilization, enhancement & protection
  - Stormwater pond retrofits and restoration
  - Landscape based water quality protection measures such as rain gardens, bioswales, native vegetation enhancement, bioretention
  - Runoff based protections and initiatives

# Projects Listing Examples



- Reduction of sediment inflows
- Shoreline stabilization
- Wetland restoration
- Grass-lined channel w/ permanent vegetation
- Infiltration trench
- Riparian buffer
- Grade stabilization structures
- Sediment trap
- Stakeholder defined





# Projects Eligible for 319 Funding

- Trinski's Island
- Pape Island Shoreline Restoration
- Ackerman Island Shoreline Restoration
- Grass Island Restoration



# Examples: Local Projects

## 319 Funding and “pay in” groups

- Examples of projects that used 319/604B funds to complete project (includes reducing sediment loads)
  - Buffalo Creek Clean Water Partnership <http://www.buffalocreekcleanwater.org>
  - Des Plaines River Watershed Workgroup <https://www.drww.org>
  - North Branch Chicago River Watershed Workgroup <https://www.nbwwil.org>
  - Nine Lakes Watershed Partnership <http://foxriverecosystem.org/9Lakes.htm>
- Examples of “pay in” groups
  - Des Plaines River Watershed Workgroup <https://www.drww.org>
  - North Branch Chicago River Watershed Workgroup <https://www.drww.org>
  - Lower Des Plaines River Watershed Group <http://www.lowerdesplaineswatershed.org>
  - DuPage River Salt Creek Workgroup <https://drscw.org/wp/>



# Next step

- Board approval to move forward with consultant and watershed based plan NTE \$10,000 for 2019

“Think of not the way it is now, but rather what it could be. A foundation and structure to build on. We don’t need to be in this alone.”



# Closing Thoughts

**Watershed plan is needed**

**Minimal cost to create the plan**

**Creates structure and foundation for the FWA to build upon**

**Scientific methodology to control sediment and pollutants entering the waterway thus improving water quality**

**Basis for true long term effective and notable stewardship of the waterway by the FWA**



End



# Addendum

# 9 Lakes Watershed Plan (Example)

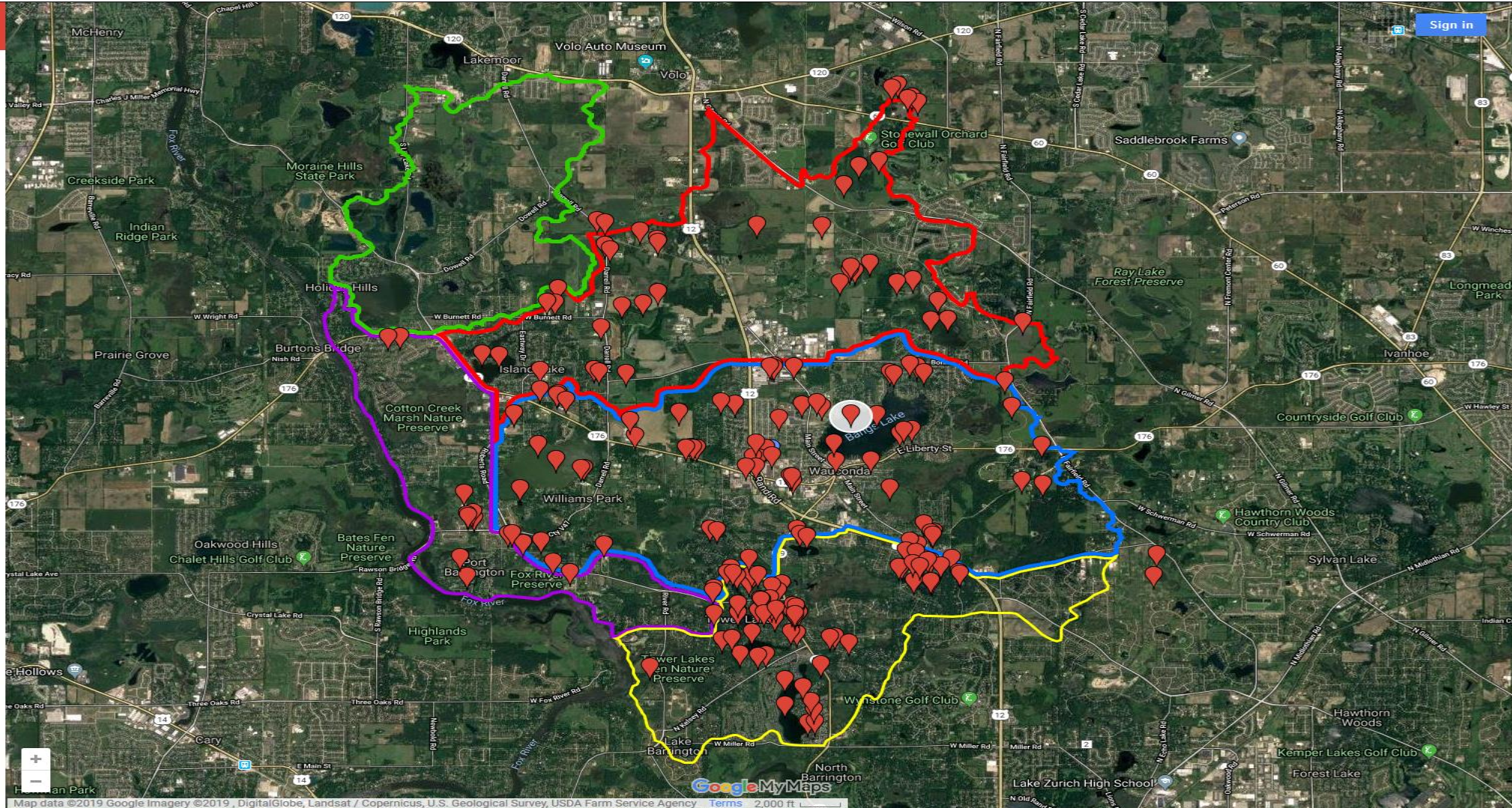
200 projects identified by stakeholders and leadership team during planning process, many lake-centr



← Untitled

description

FID 163  
Name  
Describe shoreline stabilization at Bangs Lk  
COMMENT  
category Hydrologic  
BMP\_Type\_C 580  
NumberOfUn 0  
RemEff\_N 0  
RemEff\_TP 0  
RemEff\_TSS 0  
Subunit Bangs Lk  
Units feet  
MapNumber 189  
BMP\_Jeff  
BMP\_Type Shoreline Protection  
Landowner private (multiple), HOAs, Wauconda Pk Dist  
Partners Vlg of Wauconda  
load\_reduc  
POINT\_X -88.137353  
POINT\_Y 42.266093





# MS4

- An MS4 is a conveyance or system of conveyances that is:
  - owned by a state, city, town, village, or other public entity that discharges to waters of the U.S. designed or used to collect or convey stormwater (e.g., storm drains, pipes, ditches)
- Purpose
  - To prevent harmful pollutants from being washed or dumped into MS4s, certain operators are required to obtain NPDES permits and develop stormwater management programs (SWMPs). The SWMP describes the stormwater control practices that will be implemented consistent with permit requirements to minimize the discharge of pollutants from the sewer system.



# Southeastern Wisconsin Fox River Commission (from 1/25/2019 meeting minutes)



## Commission members present:

Katelyn Bratz (Town of Mukwonago) (Vice-Chairperson)

Ken Miller (Town of Waukesha)

Doug Koeller (City of Waukesha)

Alan Barrows (Waukesha County)

Jon Grove (Racine County)

Jeff Lang (Town of Burlington)

Bill Hopkins (Village of Salem Lakes)

Bob Bartholomew (Town of Vernon)

Michelle Clark (Village of Big Bend)

Rachel Sabre (Wisconsin DNR)

Tom Slawski (SEWRPC)

Jim Pindel (Town of Waterford) (Secretary/Treasurer)

## Commission members absent:

Dean Falkner (Village of Mukwonago) (Chairman)

Fred Koeller (Village of Waterford)

Donny Hefty (City of Burlington)

Andy Buehler (Kenosha County)

Andrew Lois (Town of Wheatland)

Wayne Jensen (Village of Rochester)

Also present: Dan Treloar of Kenosha County, Rob Bowman and Randy Sweet of the Fox Waterway Agency of Illinois, Representative Chuck Wichgers of the 83<sup>rd</sup> Assembly District and Cheryl White of the Waukesha County Land Conservancy.



# Grants

- Planning 319 EPA (due August 2019)
- Planning Grant 604B EPA – Timing Varies
- Watershed Management Assistance Grant (WMAG: October 2019 - LC)
- Watershed Management Board Grant (WMB : October 2019 - LC)