



Minor Maintenance Dredging & Permitting

October 29th 2023

Welcome!

Fox / Chain Watershed

Executive Director – Joseph S. Keller



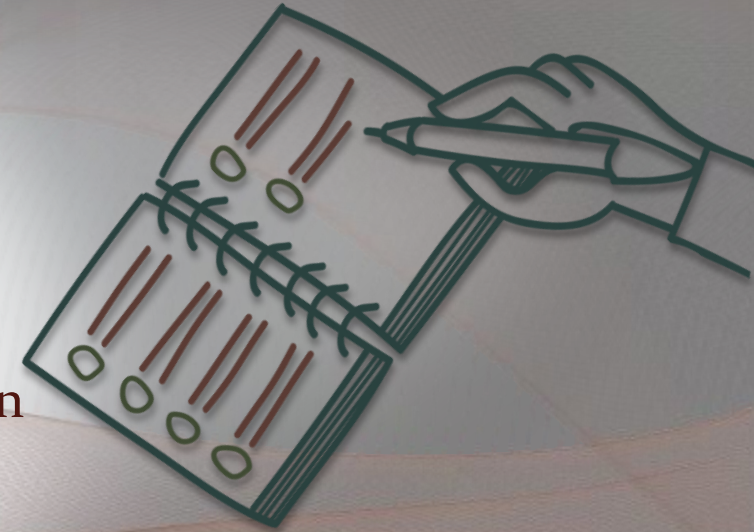
Watershed Plan

Development

- Road Map for Improving Water Quality by Addressing Non-Point Sources
- Identifies, Projects and Practices to Drive Improvements in Water Quality with in a Specific Area
- Once Complete Community Engage is Needed for Implementation

Implementation

- Larger Projects Can Be Supported with Shared Funding Grants
 - Generally 40% Community – 60% IEPA
- Smaller Projects Need to be Privately Funded – HOA or Individuals
- Practices are Support by Continued Education



Watershed Goals

#1

Our water is clear enough that you can see the bottom in shallow water.

#2

Our water is free of excessive nutrients so algae growth does not turn our water green.

#3

Our water is clean enough that there are no recreational restrictions for boating, swimming and fishing.

#4

Our community and stakeholders are knowledgeable and engaged in the preservation of our watershed.

#5

Our communities have land within the watershed so activities to monitor, maintain and improve water quality can be implemented.



Dredging Impact On Our Goals

Goal #1

Water Clarity

- Less Suspended Solids when we Address Areas where Sediment Impacts Navigation

Goal #2

Reducing Excessive Aquatic Growth

- Less Resuspending of Nutrients
- Removal of Sediment with Nutrients

Goal #3

No Restriction in Use

- Excess Nutrient Loading – Blue Green Algae

Goal #4

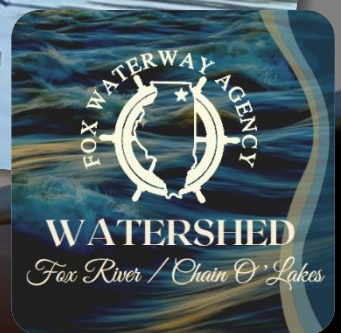
Community Engagement

- Critical to Reducing Sedimentation

Goal #5

Lake Access and Land Use

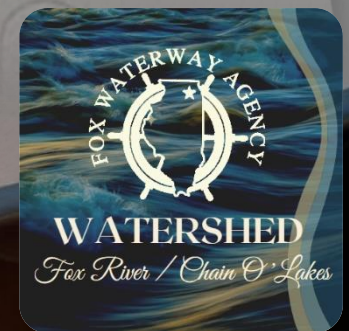
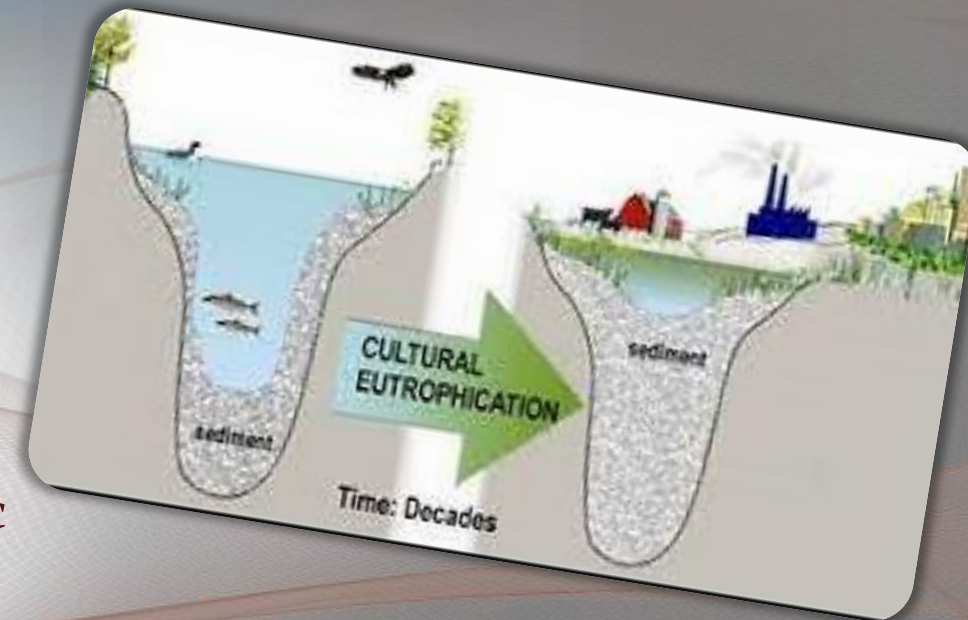
- Critical to supporting the Dredging Operation



Eutrophic Lakes – Natural Aging

Eutrophic System - Are Older Systems

- Generally Shallow Mucky and High in Nutrients
- Our Basin is Soil Based which Feeds the Lake
- Biologically Productive Resulting in Accumulation
 - Plant and Algae
 - 1 Ib of Phosphorous can Produce 500 Ib of Organic Material
- Human Activity Greatly Accelerates the Eutrophication
 - Recreational Activity Causing Erosion – High Levels
 - Urban Runoff – High Levels
- It is a Race Against Time!

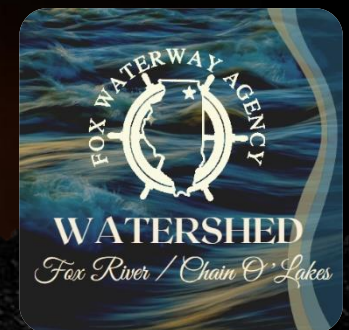


Minor & Major Dredging Permitting

Regulatory Project Manager
US Army Corp. of Eng. Chi. Dist.
Aaron D. Spencer's
PRESENTATION GOES HERE

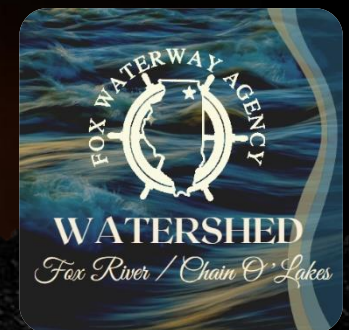
What are national permits?

- When is it minor versus major dredging?
- How to complete an application?
- What are they checking for
- When reviewing and application?

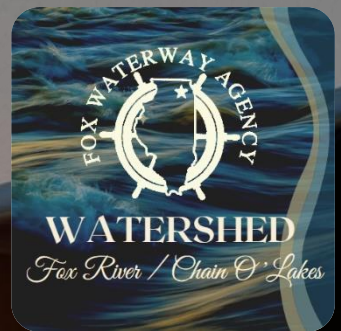


Highlights From The FWA 2023 Season

FWA Superintendent – Rob Bowman



Minor Maintenance Dredging Process Flow



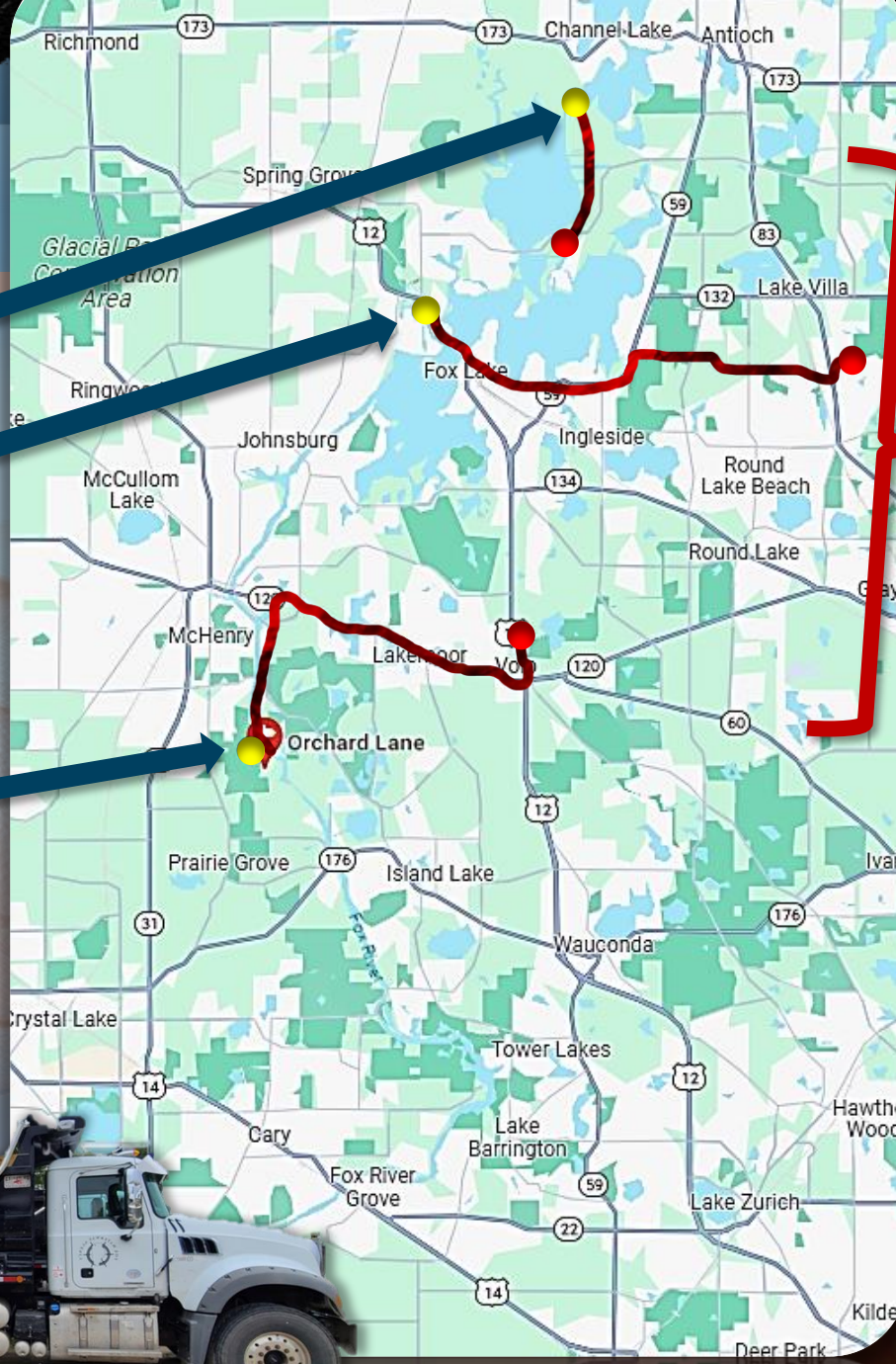
Project Locations

Grass Lake/Lake Marie Channel

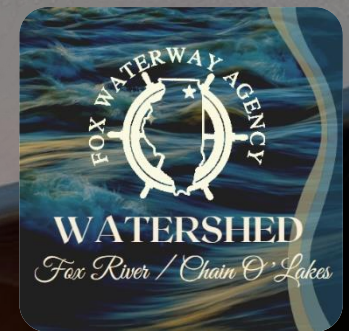
Nippersink Creek

Orchard Heights

Project Locations



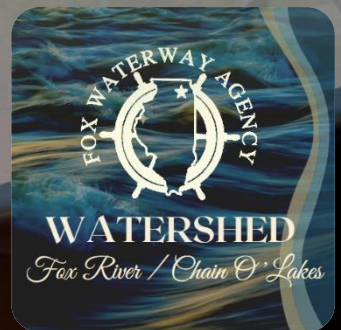
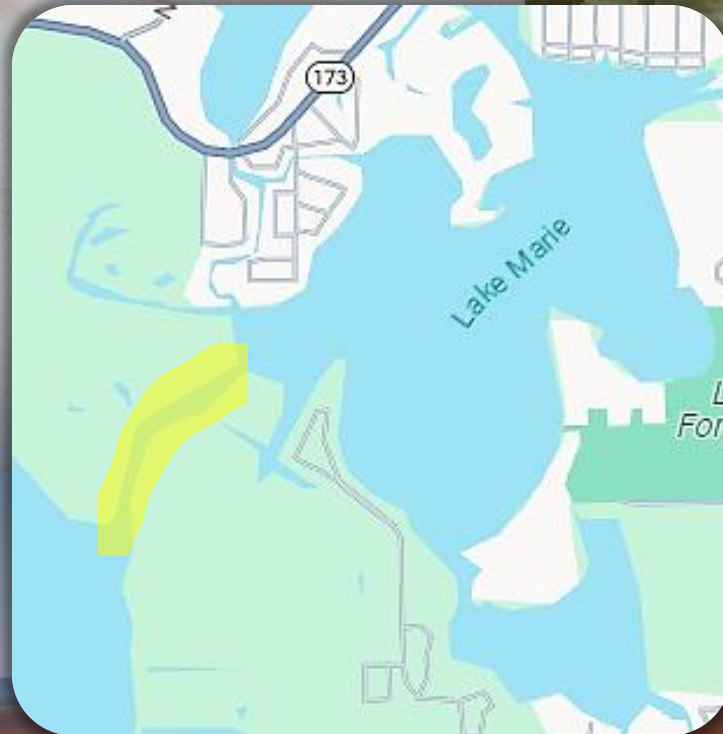
Dredge
Material
Transport
Location



Grass Lake

- Channel to Lake Marie
- Hydraulic Project
- Volumes
 - 44,629 Cubic Yards

 Project Area



Nippersink Creek



 Project Area

- South Portion
- Mechanical Project
- Volumes 85,000 – 95,000 Cubic Yards



Orchard Heights

Scope

- North Channel
- Mid Channel
- Mouth of South Channel

Mechanical

Volumes

3,222

4,555

12,500

20,222 Cubic Yards



 Project Area



Soil Sales

Dredge Material is Processed and Sold

- Dried
- Screened
- Mixed

2023 Sales

Volumes

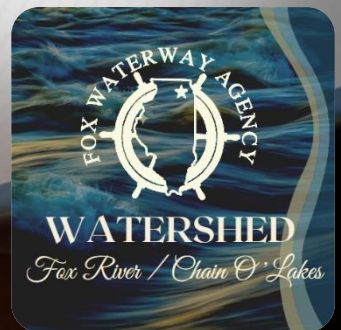
(April – October 2023)

11,673 Cubic Yards

\$134,520 Sales To Date

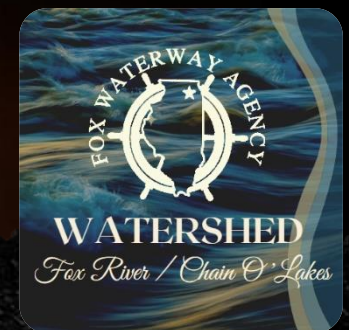


**FWA Soil Processing
Facility
Wall Street
Lake Villa, IL**



Preventing Sedimentation

FWA Advisory Committee – Rob Bryson



Preventing Sedimentation

Prevention is Better than Remediation

Sources of Sedimentation

- **Local Runoff**
- **Local Erosion**
- **Local Growth**
- **System Inflow**



Local Runoff

From Individual Home

- Rain Barrels and Rain Gardens

From Neighborhood

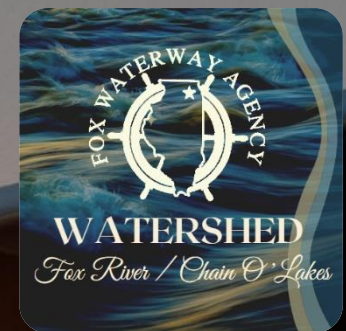
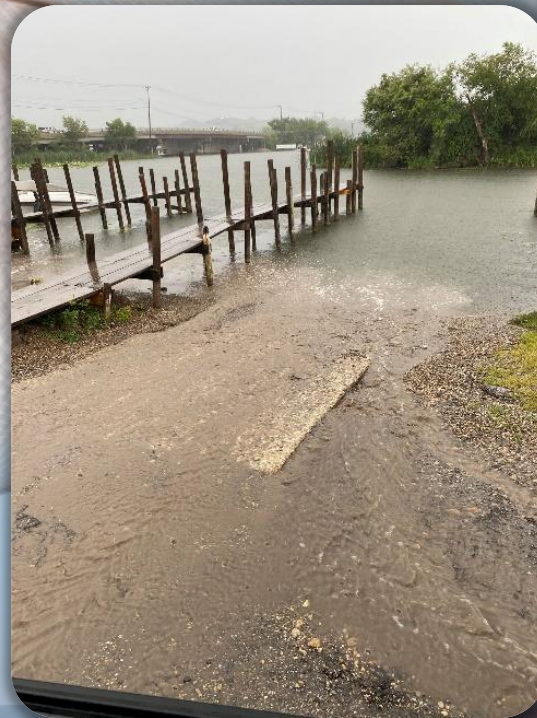
- Bioswales

Communities

- Retention Ponds

Agriculture

- Cover Crop
- Field Buffers



Local Erosion

Solution Dependent on the Situation

- How Aggressive is the Water Action?

Low Levels – Plant Buffers

- Less Open Area
- Low Traffic
- No Wake

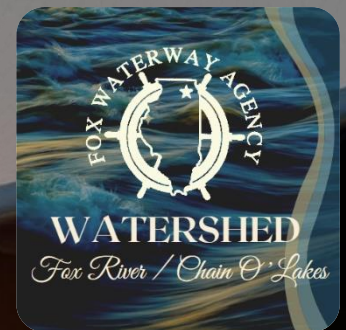
High levels – Sea Walls

- High traffic
- Wake Boats

Medium – Rip Rap

- Moderate Traffic
- Traffic Off the Shore
- Open Areas

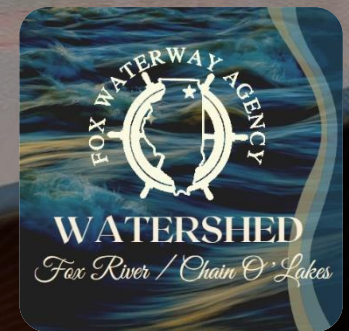
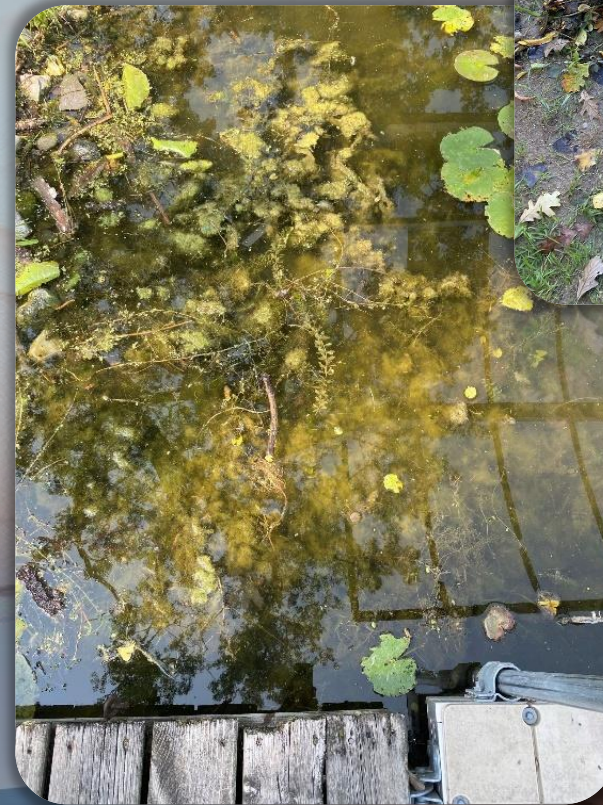
All Shorelines Need To Be Maintained



Local Growth

Aquatic Plants Become Sediment Prevent Nutrient Loading

- Manage Run Off
- Preventing Erosion
- Yard Maintenance Practices
- Shoreline Maintenance
- Septic Maintenance
 - November topic



System Inflow

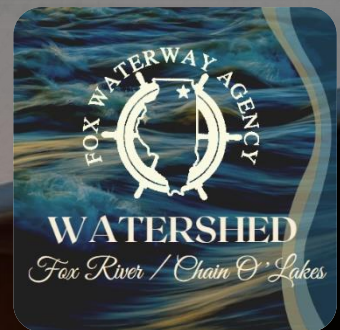
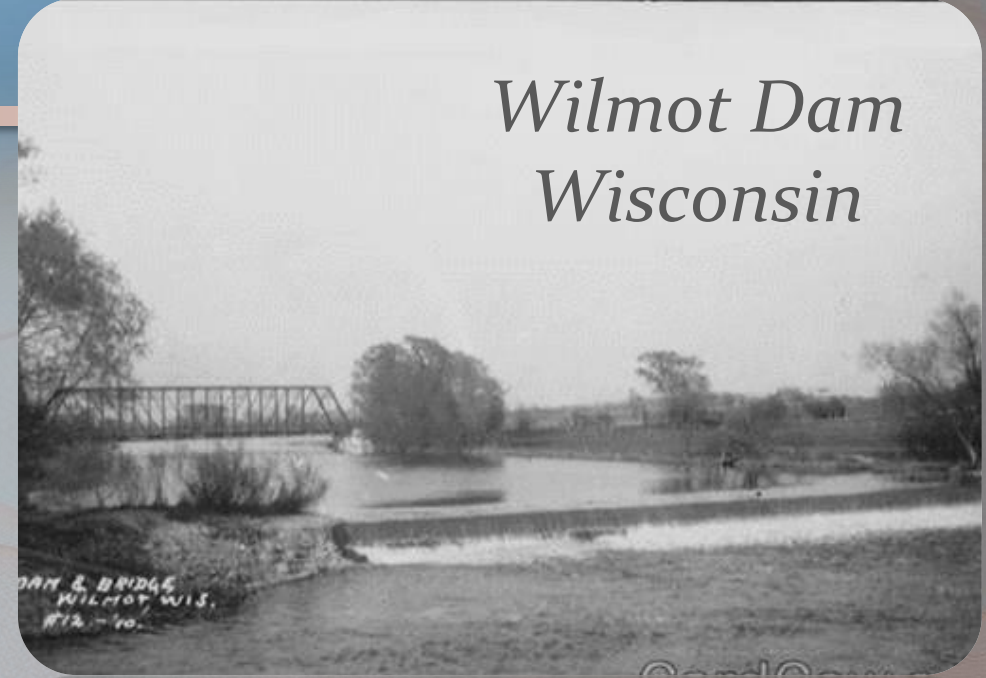
Watershed Plan has Identified Projects in the Upper River within Illinois

Wisconsin has their own Watershed Groups

Wilmot Dam

- Failed and was Removed in 1992
- No Longer use for Original Purpose – Mill Pond
- Reduced Flooding
- Improved River Access

*Wilmot Dam
Wisconsin*



DIY - Dredging

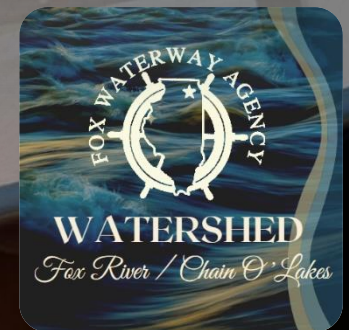
Each situation is unique...

- How can I access the lake?
- Do I have a path to move sediment away from the lake?
- Do I have a place to put the sediment or a place to take it?

Is it hard work...

- This is no different than many other home-improvement projects

Is it worth the time and effort to improve your lakefront and water quality?



Simple Removal Method

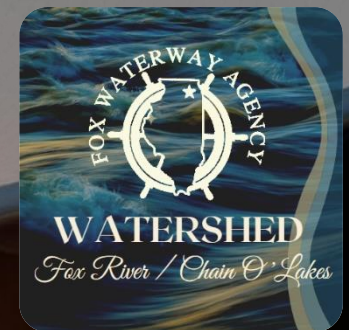
Shovel & Bucket



Simple Transport Method

Trailer with a Box

The box supports water drainage



Results

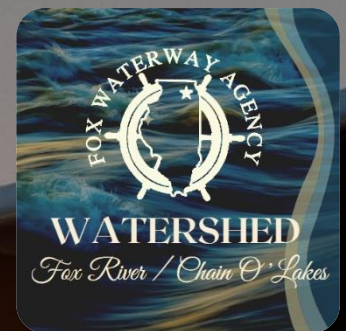
I discovered a sand based bottom

Local impact



Sand

Muck



Watershed Plan Input

Do you see Non-Point pollution points in your neighborhood?

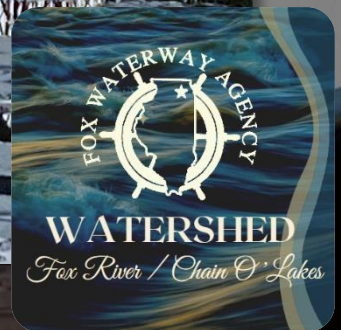
Tell us about them and we'll share them with our technical consultant:

- Northwater Consulting



Fill out a notecard...

Submit a note online...



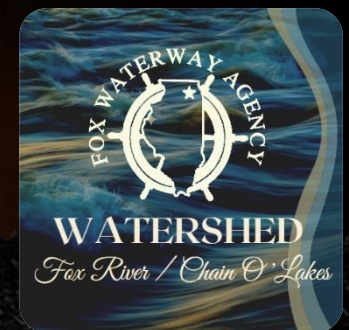
Identifying Projects for the Watershed Plan

FWA Advisory Committee – Rob Bryson



Summary Q & A

FWA Advisory Committee – Rob Bryson



Related Links



Illinois
[Joint Permit Application](#)

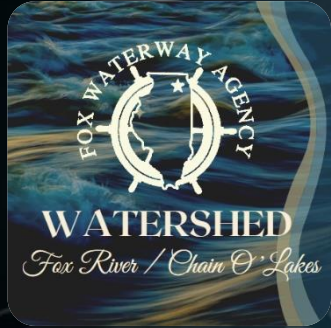


Illinois
[Joint Permit Instructions](#)



FWA
[Dredging Packet](#)





Become A Watershed Volunteer!

FWA Advisory Committee - Rob Bryson

