



Southeastern Wisconsin FOX RIVER COMMISSION:

Stormwater Workshop
“The Rundown on Runoff”
April 14, 2016

Chad Sampson
SEWFRC Commissioner
Appointed by Racine County Executive
Racine County Conservationist



SEWFRC

ELIGIBLE ACTIVITIES:

- Feasibility Studies
- Construction Projects
- Rehabilitation
- Navigation Aids
- Channel Dredging

- [Planning Area Boundary Map](#)

COMMISSION CHAIRMAN
Al Sikora
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WHO IS THE SEWFRC?

The Southeastern Wisconsin Fox River Commission (SEWFRC) was established in 1997 by Wisconsin Act 27 (1997 - 1999 Budget Bill) in response to citizen and community concerns over water resource problems in the Fox River system. Under the 1997 Wisconsin Act 27, the SEWFRC was given the authority to carry out a number of programs and measures designed to improve water resource conditions in the Fox River system within the identified planning area.

The area of jurisdiction for the SEWFRC consists of the tributary drainage area to the 36.5-mile-long reach of the Fox River between the Village of Waterford dam in Racine County and the northern limits of the City of Waukesha north of Moreland Boulevard. The tributary drainage area for the implementation planning area ranges from approximately 119 square miles at the upper end of the planning area to approximately 312 square miles at I-43 and to about 364 square miles at the Waterford dam.

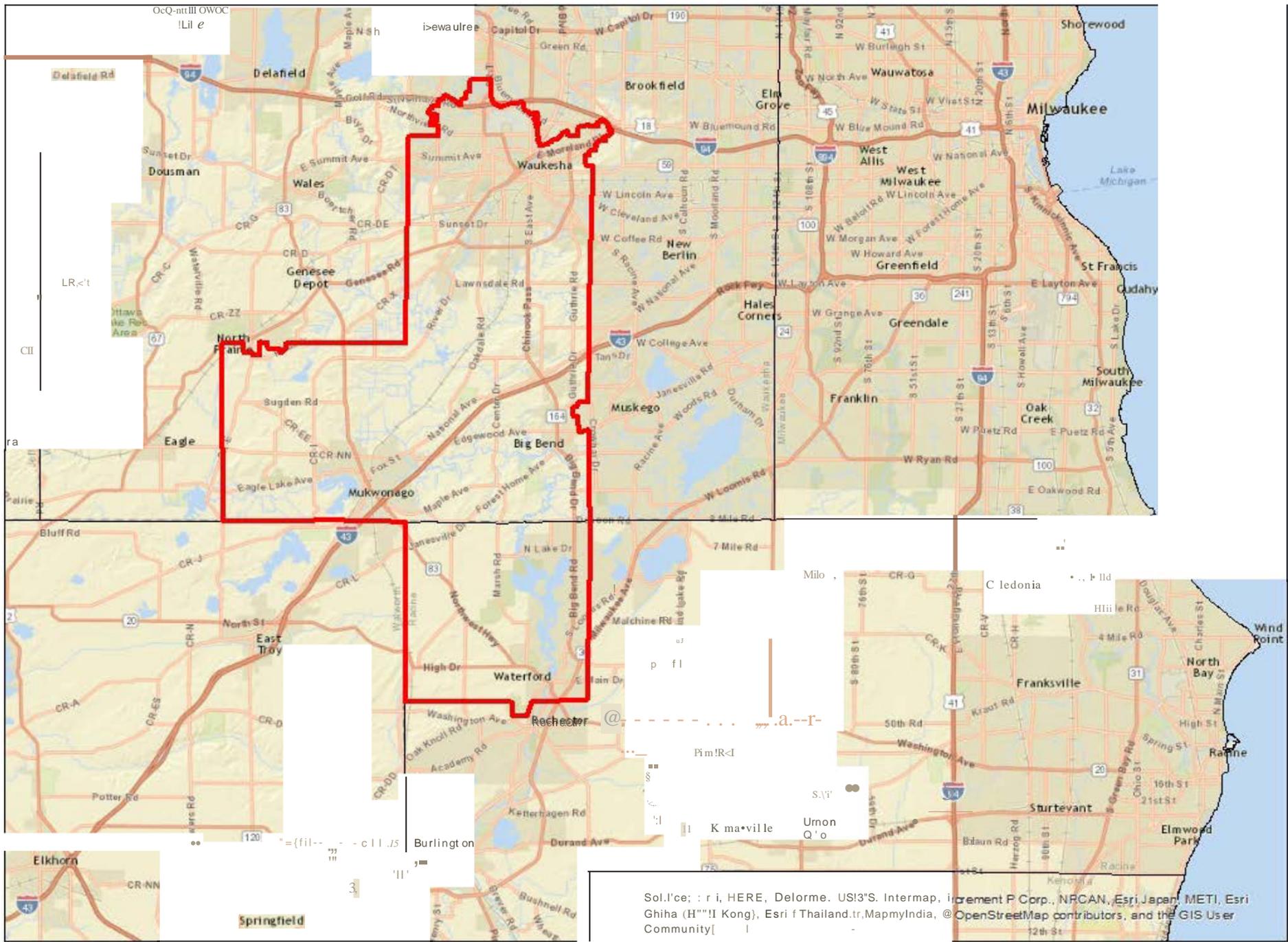
The Southeastern Wisconsin Regional Planning Commission was charged with developing an [Implementation Plan](#) on behalf of the SEWFRC in 1997. The plan was adopted in March 1998, updated in September 2011 and still serves as a dynamic guide in assisting the Commission to conduct its work.

WHAT DOES THE SEWFRC DO?

The Commission has supported numerous projects within the planning area and has contributed approximately \$1.25 million to projects that help improve the Illinois Fox River basin.

The Southeastern Wisconsin Fox River Commission does the following:

- Initiate and coordinate surveys and research projects to gather data relating to the surface waters and groundwaters of the Illinois Fox River basin
- Maintain a liaison with Federal, State, and local agencies and other organizations involved in protecting, rehabilitating, and managing water resources
- Develop a public informational and educational program on issues related to the surface waters and groundwaters of the Illinois Fox River basin
- Develop and implement plans or projects to:
 - Improve water quality and the scenic, economic and environmental value of the surface waters and groundwaters of the Illinois Fox River basin
 - Protect or enhance the recreational use of the navigable waters of the Illinois Fox



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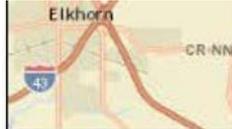
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Community[

Mission:

- Develop and implement **plans**
- Develop and propose **programs and projects** to the county boards
- Create advisory committees as necessary
- Adopt rules as necessary

(per § 33.54, Stats.)

Mandate:

- Plan(s) must address:
 - Selective dredging of the Fox River Waterway and clearance of debris jams
 - Automating Waterford Dam operations, including winter drawdown
 - Streambank erosion protection, and maintenance, protection and improvement of shorelines
 - Water use, recreational access and facilities, water safety and regulations

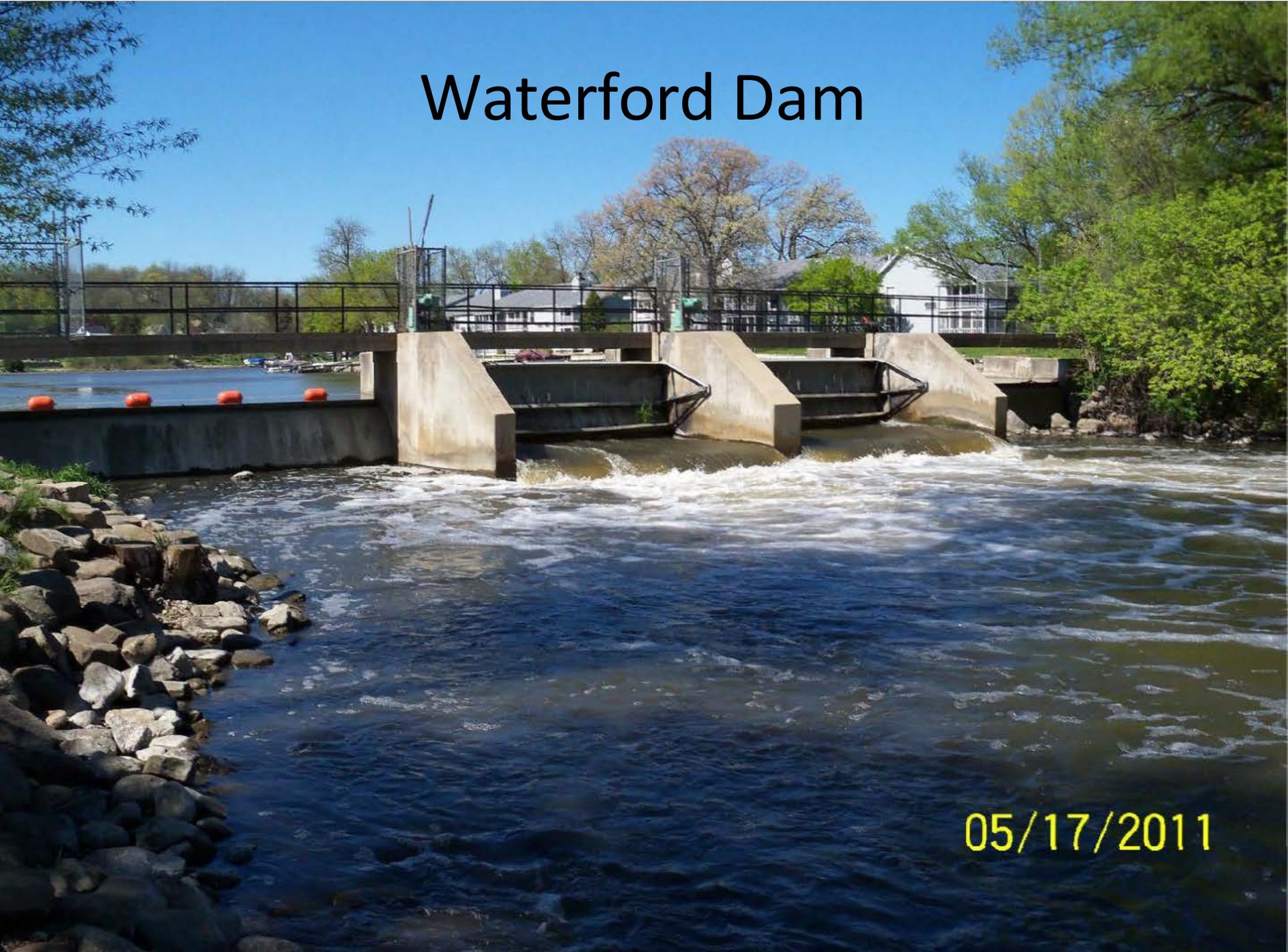
(per § 33.59(2), Stats.)

Why was a Commission
established ?



Sediment, Weeds, Invasives, Algae

Waterford Dam



05/17/2011



Visible Sediment - During Drawdown

05/20/2011

During Drawdown Sediment



05/17/2011

5/18/11



Elm Island Circle
Waterford Dam Drawdown 2011

**SOUTHEASTERN
WISCONSIN FOX
RIVER COMMISSION
IMPLEMENTATION
PLAN: 2011-2020**

**ONGOING ISSUES OF CONCERN
AND RECOMMENDED RESPONSES**

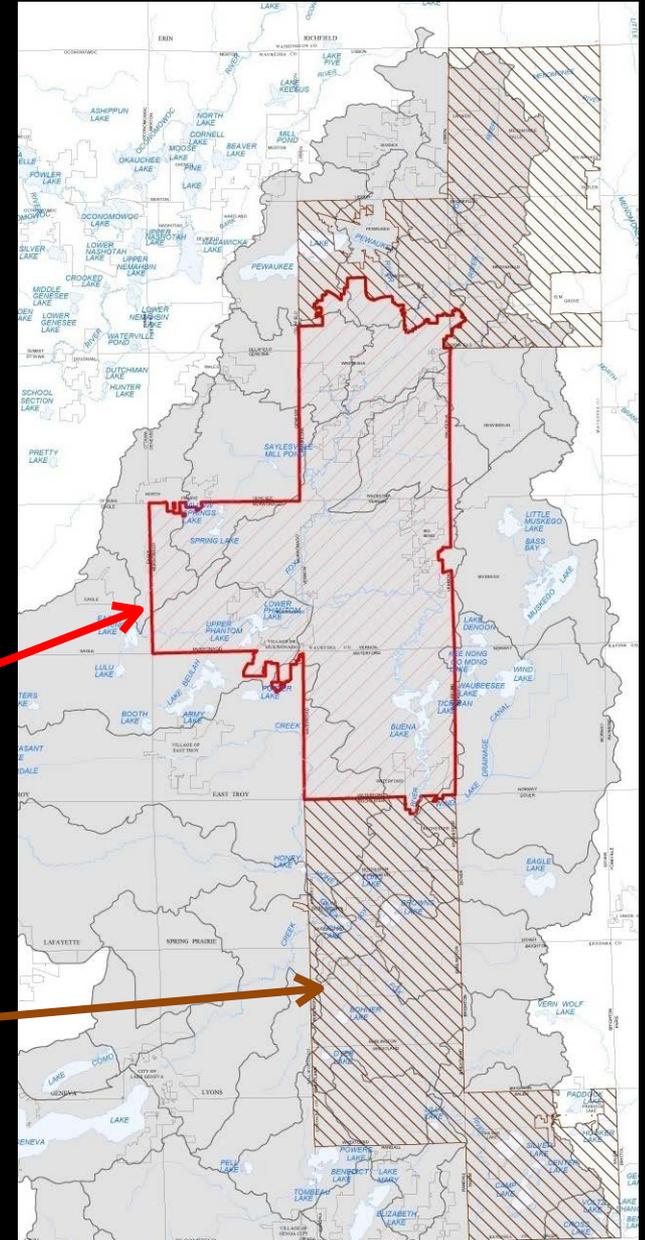
<http://sewfrc.org/downloads/MR-199FRC-IMPL-PLAN-Sept2011.pdf>

Jurisdictional Issues

- Boundary and Commission established by Legislature pursuant to Subchapter VI, Chapter 33, Stats.
 - Legislative action would be required to amend Chapter 33 provisions

Existing
Boundary

Proposed
Boundary

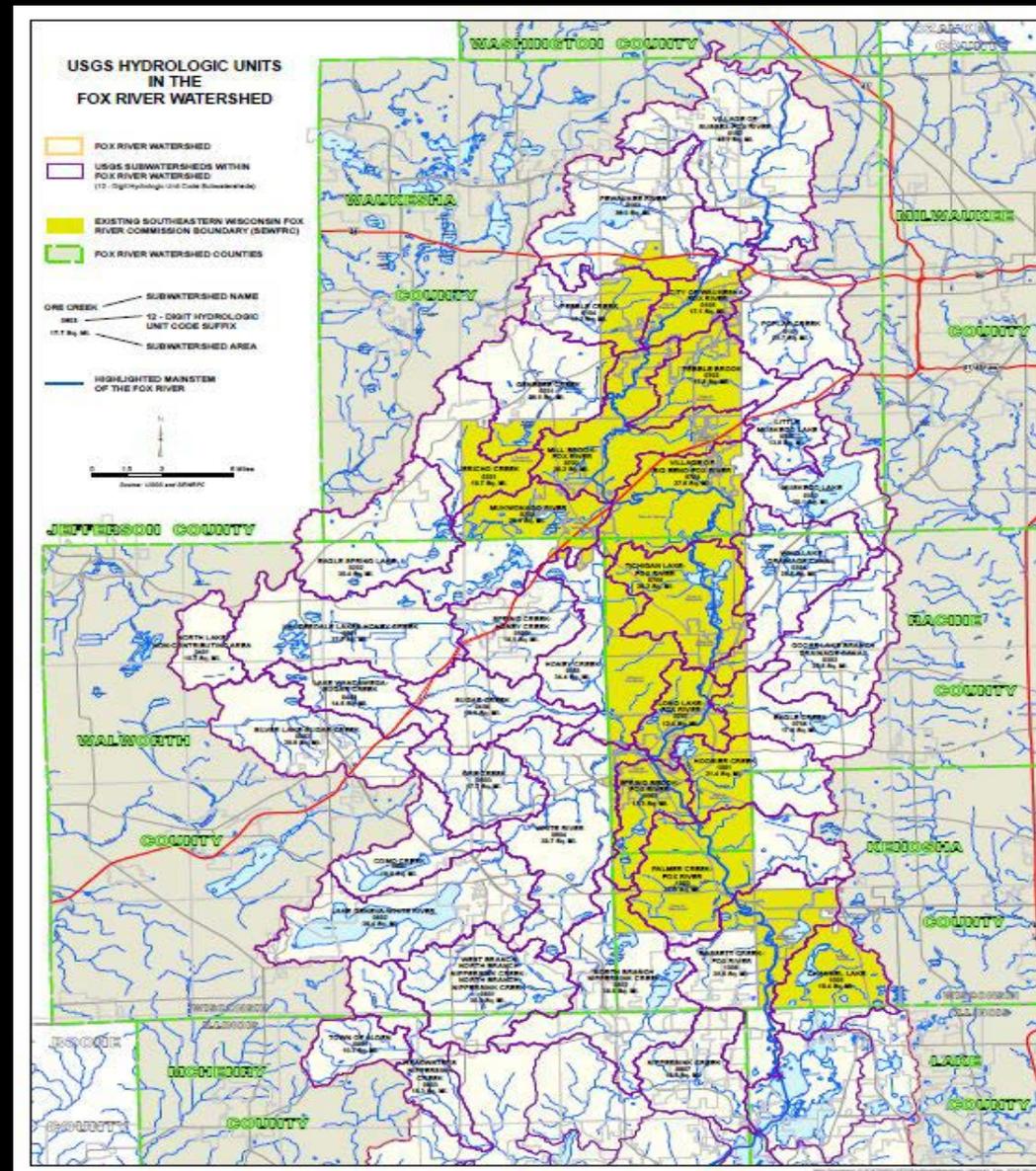


Senate Bill 548 signed on 3-1-2016



Membership:

- Counties
 - Racine, Waukesha, Kenosha
- Municipalities
 - City of
 - Waukesha, Burlington
 - Village of
 - Waterford, Big Bend, Rochester,
 - Mukwonago, Silver Lake
 - Town of
 - Burlington, Mukwonago, Vernon,
 - Waterford, Waukesha, Salem,
 - Wheatland



- *Ex Officio*

- Wisconsin Department of Natural Resources (1)
- Southeastern Wisconsin Regional Planning Commission (1)

(per § 33.55(1), Stats.)

Funding



- SEWFRC has been funded historically through direct appropriations administered by WDNR
- Approximately \$1.45 Million to date
- Legislature envisioned funding by the counties (and/or municipalities); SEWFRC also may be grant eligible
- Racine County has funded \$10,000/year

Partnerships with government

- Counties and Municipalities



- Special purpose units of government



- Waterford Waterway Management District
- Waterford Sanitary District No. 1
- Waterford Drainage District No. 1

- Other governmental bodies

- Memoranda of Understanding

- Fox Waterway Agency (IL)



Partnerships with NGOs

- SE Fox River Partnership
- Fox River CAUSE (Citizens Against Underwater Sediment and Erosion)



- Mukwonago River Partnership
- Friends of the Mukwonago River
- Pewaukee River Partnership

- The Nature Conservancy
- Land Trusts



Goals

- The Commission wanted dredging in the impoundment, the main channel, and bays.
- Reduce sediment coming into the Fox River and Tichigan Lake.
- The Commission has completed numerous projects to meet this goal.

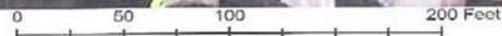
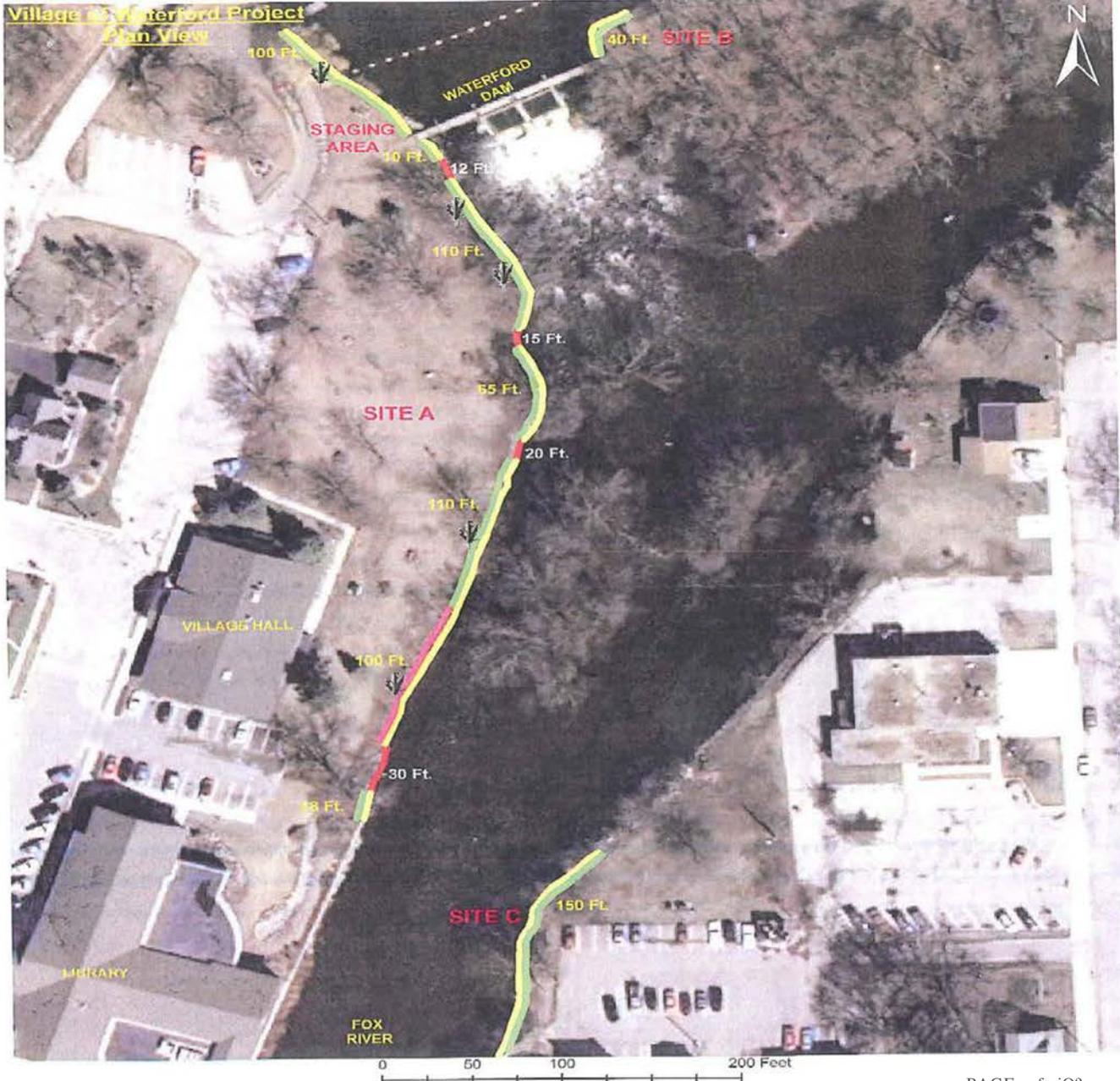
Project List

- Waterford Village Park - 2008
 - Streambank stabilization, access for public, rain garden, trees and native wildflower plantings.
- Highway 164 – Ravine Project – 2008, 2015
 - Rock Lined Channel for erosion control
- Wood Drive Erosion Control – Planned for 2016
 - Grassed waterway, tile installation, private driveway elevated with new culverts.

Waterford Village Park Project

- Village Park – Located on the Fox River
 - Immediately downstream of the Waterford Dam
- The Problem:
 - Eroding Banks
 - Minimal existing streambank protection
 - Much public use and manipulation
 - Need for public access
 - Some planned native vegetation

Village of Waterford Project
Plan View



- P r o j e c t I n f o r m a t i o n
 L X c a v a t i o n w i l l b u t u n n o n h . t i d e o f P u b l i c A t . - C e . i l • u - l m o # 4
 N o . l i v e G r o s s S o r n i f) l a n t i n g i n s t a U e c J b y c o n t r . = i c i o r

Proposed Public Access Rock Structure
 Proposed Rock Riprap
 Proposed Locations of Transplanted Trees

Designed J.A./r
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Village Park in Waterford



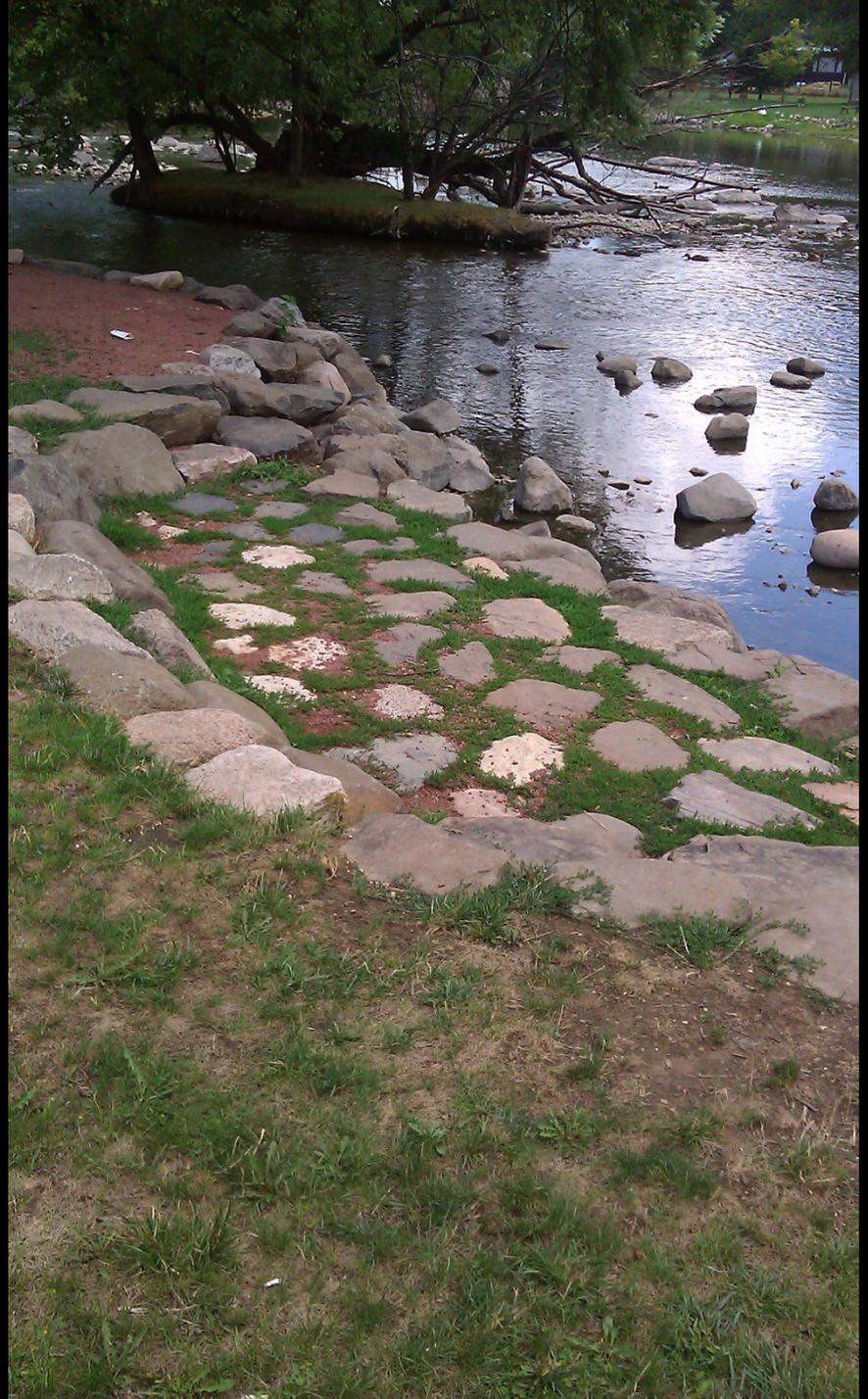


Project Details

- Village of Waterford
 - Conducted bidding procedure
- Total Cost: \$90,848
 - 90% funded by the SEWFRC: \$81,763
 - 10% funded by Village of Waterford: \$9,085
 - Racine County provided technical assistance
 - Prepared design, answered contractor inquiries
 - On-site materials and construction inspection
 - Volunteers assisted with planting native plants



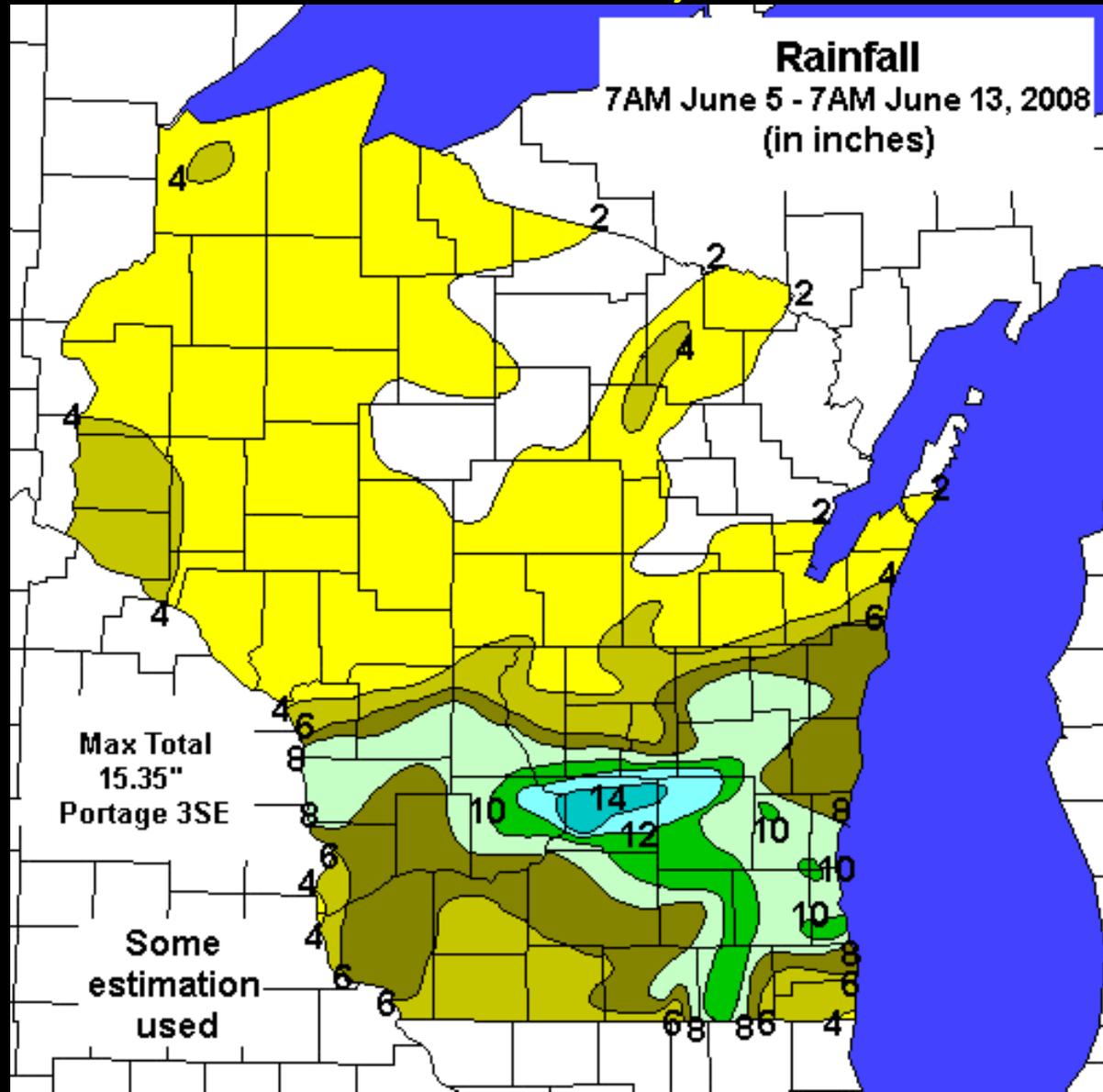




Project Completed
May 24, 2008

Cumulative Precipitation

June 1 – 15, 2008





06/13/2008



DAM

TAKE
OUT

06/13/2008



06/13/2008



06/13/2008



06/09/2008



06/13/2008



TEMPORARY
NO
PARKING

TEMPORARY
NO
PARKING

06/13/2008

Rain Garden

06/09/2008



Rain Garden



07/28/2010







HWY 164 Ravine Project

- Problem
 - 48 Acre Watershed Drainage Area
 - Drains to a 36" culvert under Hwy 164
 - Surface water flowing down a privately owned wooded ravine
 - Gully erosion
 - Sediment entering Tichigan Lake

TICHIGAN LAKE





Project Details

- Two private landowners owned the ravine in need of erosion control
- Proposed rock lined waterway from Hwy 164 down to the edge of the wooded area
 - Total Project Cost was \$22,167
 - SEWFRC cost-shared \$15,517
 - SWRM cost-shared \$6,650



Clear water down the Channel



36" Culvert under Hwy 164



Highway 164 Project - Culvert



Fast Forward to 2015



04/09/2015



04/09/2015

Broken Drain Tile

04/09/2015

Runoff from Cropland



04/09/2015

Runoff from Cropland



04/09/2015

Best Management Practices

- Grassed Buffer along the road ditch
 - Discussion with the Waterford Waterways Management District to offer \$500 / acre / year to plant and maintain a grass cover on approximately one acre of a field.
 - Met with the farmer on-site during a smaller rain event to discuss the proposal.
 - No commitment either way.
 - Farmer fixed the drain tile on his own \$

Proposed Project - 2015

- Continue Existing Rock Line channel to the Tichigan Lake and
- Rock Line a second channel
- Project approved by Commission
 - Total Cost \$32,000
 - SEWFRC cost-shared \$22,050
 - SWRM cost-shared \$9,950

Rock Pile







Rock Lined Waterway

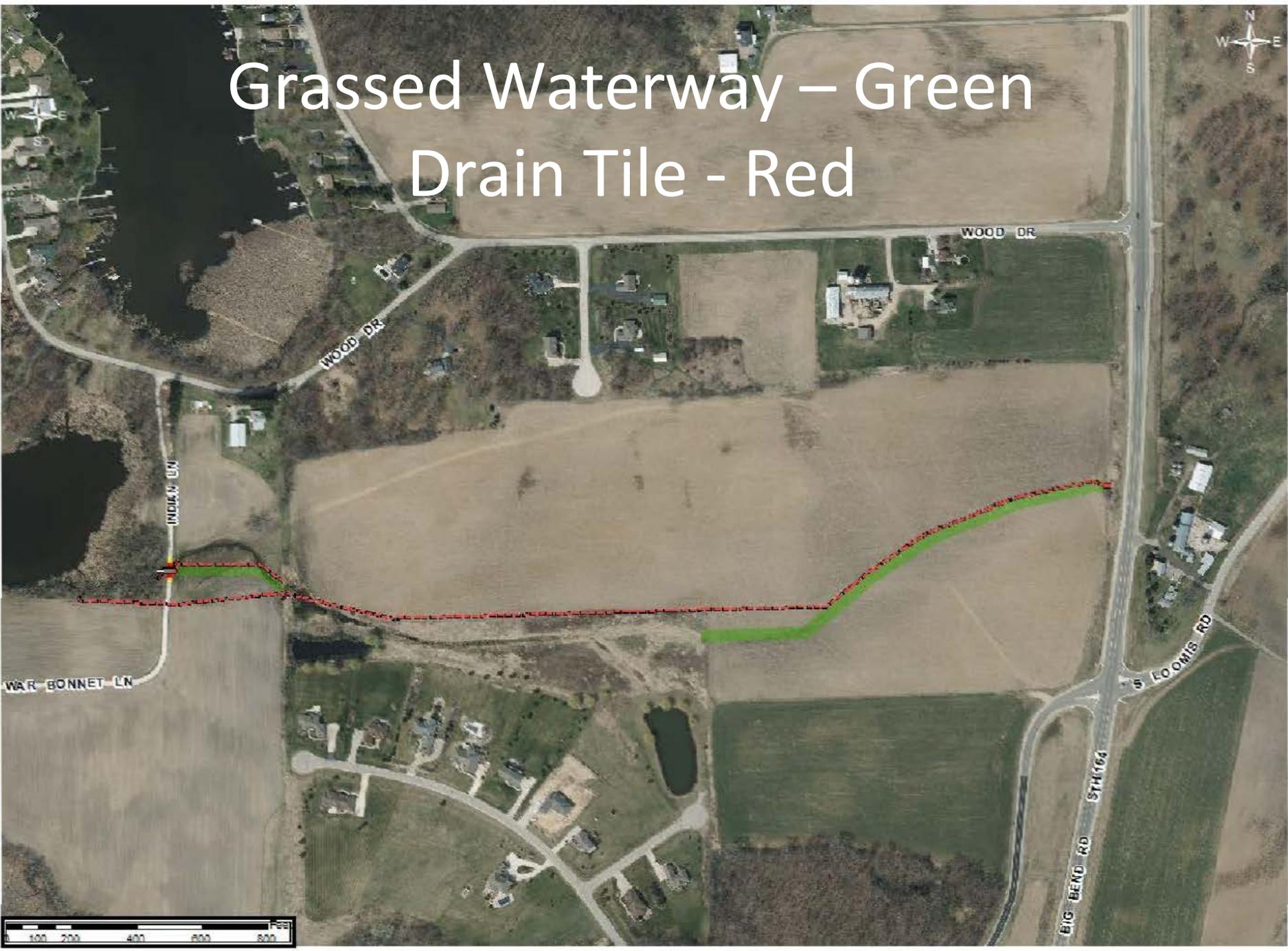


09/25/2015

Proposed Project - 2016

- Wood Drive Erosion Control
 - Grassed waterway, repair/replace drain tile, utilize existing stormwater ponds, replace culverts in private driveway
- Project approved by Commission
 - Total Cost \$55,474
 - SEWFRC cost-shared at \$21,000
 - SWRM (approximate) cost-shared \$26,300
 - Landowners Responsibility \$8,174

Grassed Waterway – Green Drain Tile - Red



Erosion in Corn Field



06/27/2014

Hay Field



06/27/2014

Culvert – Needs Replacement



06/28/2013

Delays

- Needs to be completed by June 30, 2016
- Wetland determination not completed
- Waterway navigability determination
- Cultural Resources needs further investigation
- Town of Waterford inquiries regarding project
- Landowners living on War Bonnet Lane have an easement, but are responsible for repair and maintenance costs of the private driveway and culverts.
- Who collects associated private driveway repair costs?
- One landowner has some concerns with the engineered plan
 - He feels the proposed culverts are too large
 - Not sure a grassed waterway is necessary

Questions?

Contact Information

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