



Fox River Park Streambank Stabilization Project

Marissa Castello | Senior Conservation Specialist

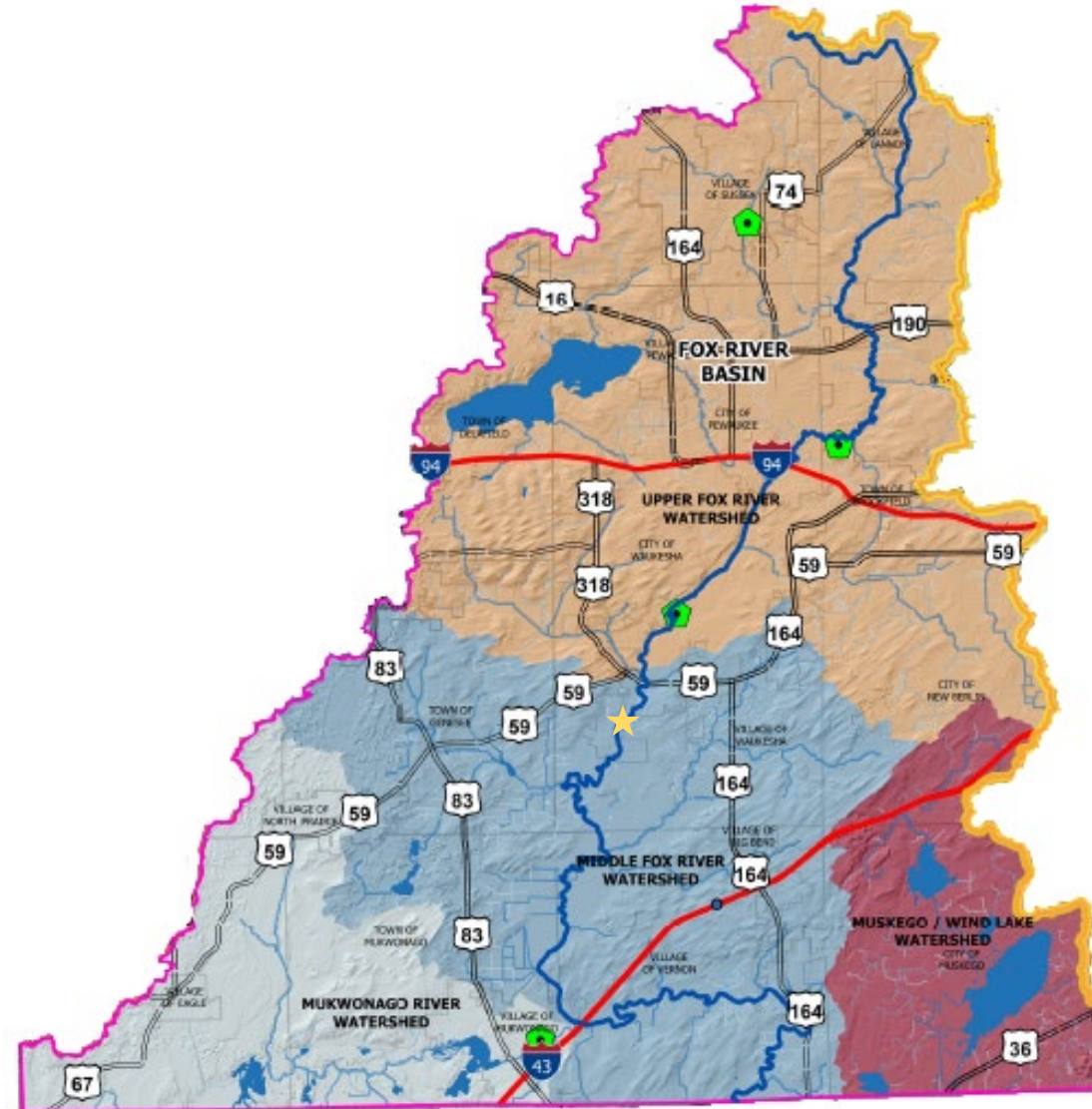


Outline

- Watershed Overview
- Project Location
- Project Background and Site Evaluation
- Project Planning, Budget, and Funding
- Project Construction
- Water Quality Improvements
- Summary/Next Steps

Fox River Watershed

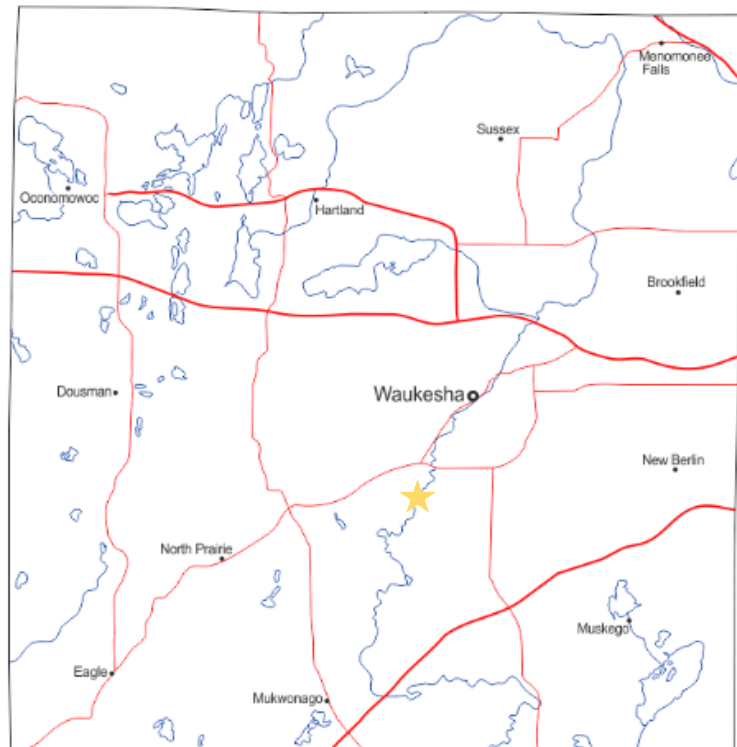
- 2658 Square Miles across 2 states
- 7 watersheds
 - Upper and Middle Fox River and Mukwonago River are located in Waukesha County
- Significant impairments (TSS, TP, PCBs)
- TMDL in development



Fox River Shoreline

- Site was identified in a 2013 erosion study completed by SEWFRC on the main stem of the Fox River as the highest priority site
- High energy section of stream along an outside bend
- Bank heights ranging from 1' to 8'
 - Average bank height of 5.6'
- Based on GIS measurements bank erosion rates varied between 0.2' and 0.65' per year
 - Average yield of 38.3 tons of sediment per year
- Access and safety concerns were also an issue as area is an essential portage location for canoeing and kayaking

Project Location





Existing Conditions



Project Planning

2019

Project Concept and
Initial Design

Multiple Funding
Sources and Partners
Acquired

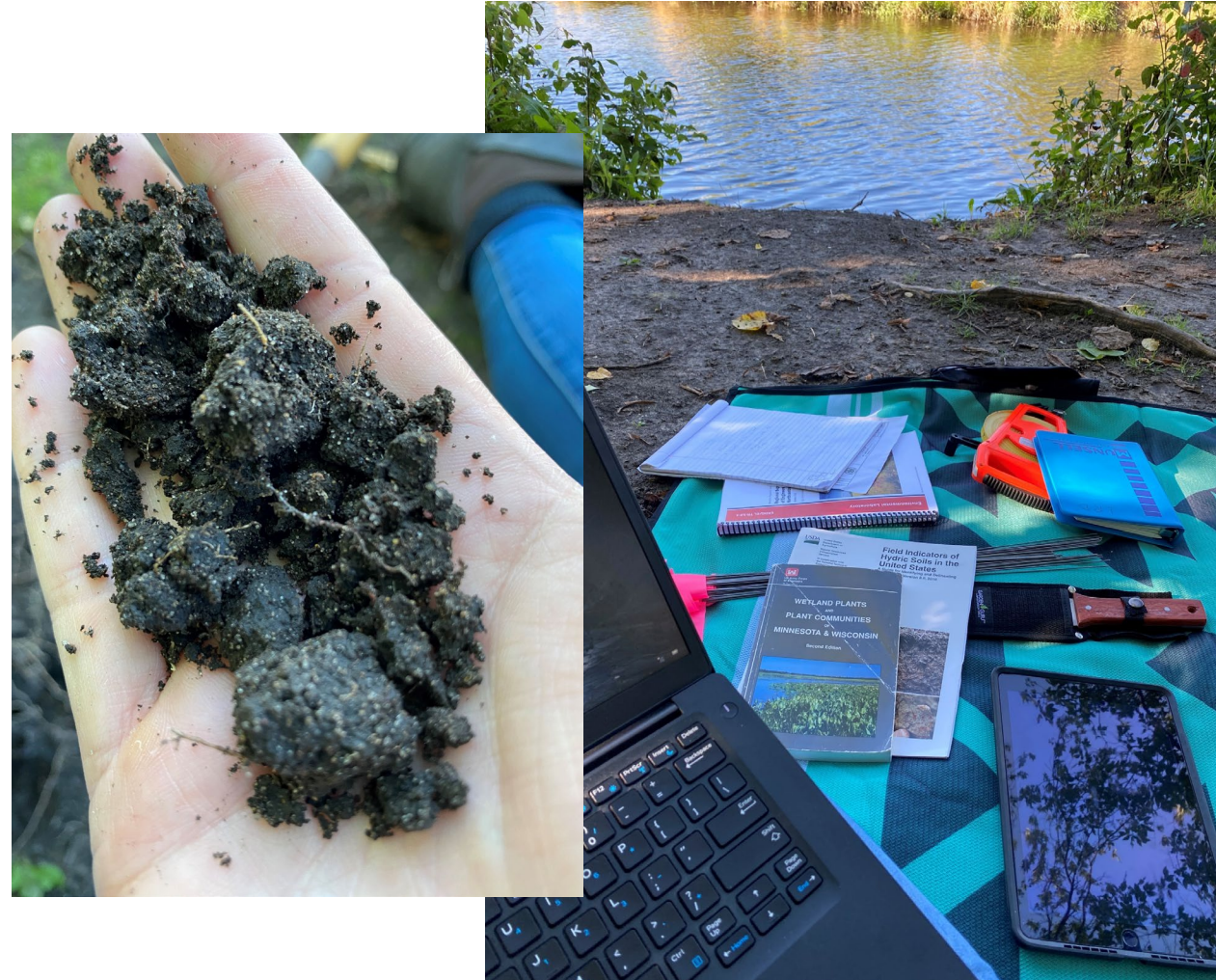
2021

Capital Improvement
Project
Project Plans Finalized

Multiple Project
Benefits

Site Assessments

- Wetland delineation work
- Soil testing
- Bank measurements
- Mussel surveys
- ER and Historical Review

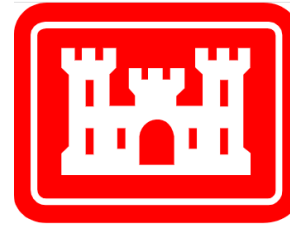


Fox River Park Shoreline Restoration Waukesha County



Permits and Regulatory Oversight

- Waukesha County Stormwater and Erosion Control
- WI DNR Chapter 30 Permits
- USACE
- Village of Waukesha



**US Army Corps
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Partnerships

- SEWFRC
- Village of Mukwonago
- WI Dept. of Agriculture, Trade and Consumer Protection
 - Design
 - Funding
- Waukesha County Parks



**Waukesha County
Department of
Parks and Land Use**



Project Construction

- Anticipated start date of October 2022
 - Actual start date of December 2022
- Substantial completion January 2023
- Contractor modifications were made
- Temporary erosion control practices
 - Turbidity barrier
 - Erosion control matting
 - Seeding
- Late season stabilization requirements pertained



During Construction



Post Construction

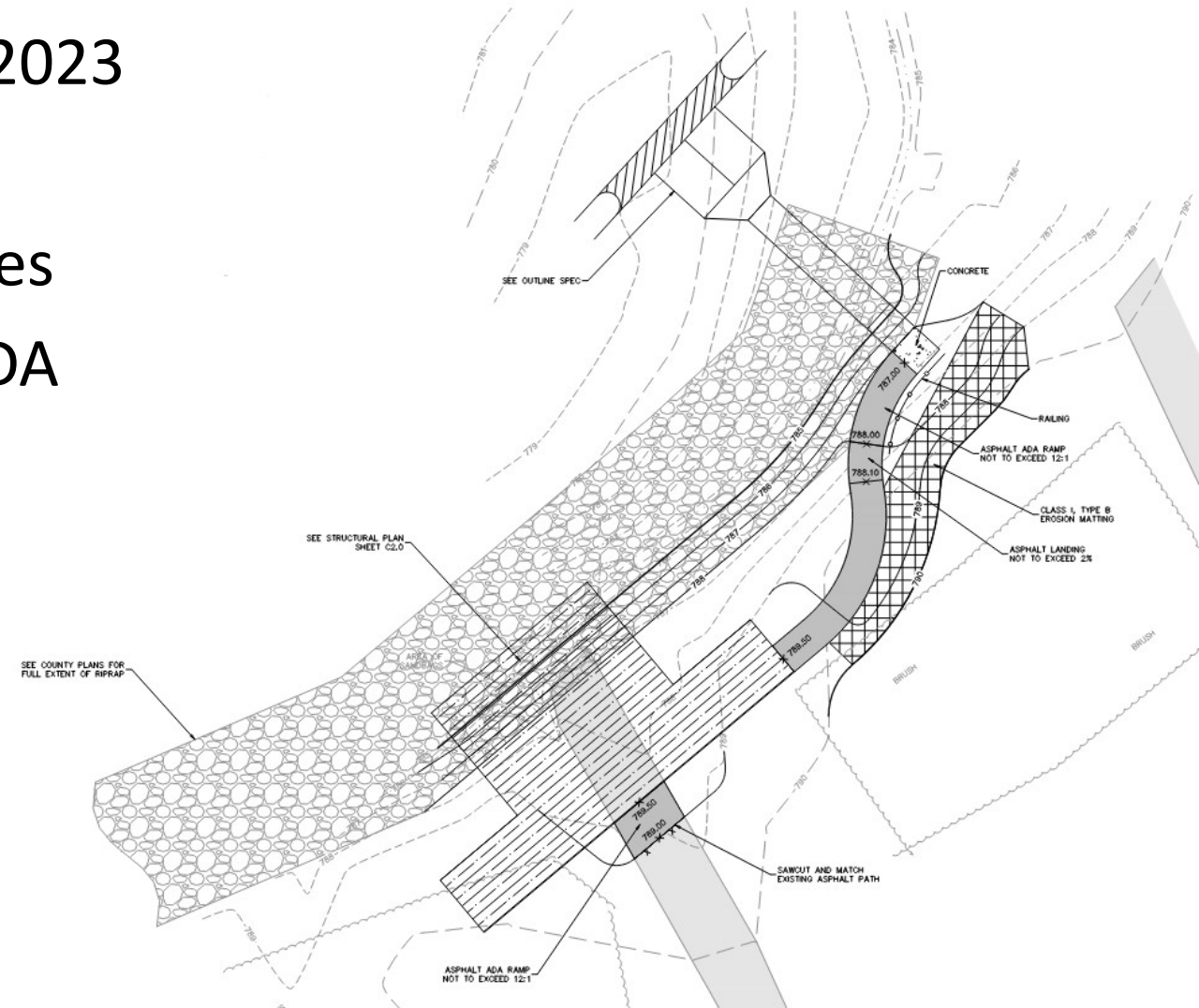


Adaptive Management and Water Quality Improvements

- Waukesha County partnered with Village of Mukwonago on the project utilizing the anticipated TP reductions as credit towards the Village's Adaptive Management Plan
- Calculations are being done utilizing the NRCS Streambank Erosion Estimator
 - 0.5 lbs per year of Phosphorus
 - 38.3 tons of sediment
- Additional soil tests will be completed to verify (low) results

Next Steps

- Final stabilization of site in spring 2023
- Addition of NVM to top of bank
- Replacement of priority tree species
- Installation of a fishing pier and ADA accessible kayak launch
- Additional permitting
 - Floodplain impacts
 - Work below the OHWM



An aerial photograph of a pond with a wooden boardwalk and a sandy area. The pond is surrounded by trees and a path. The water is dark and reflects the surrounding environment. The boardwalk is made of wooden planks and runs along the edge of the pond. The sandy area is in the foreground, and there are some trees and bushes around it.

Questions?

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Parks and Land Use

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