

Phosphorus Reduction Case Study: Watershed Experiences from Racine County

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Options to Meet your Wisconsin Pollutant Discharge Elimination System (WPDES) Requirements

1. Water Quality Trading

- Focus on compliance with a discharge limit of any given pollutant in the effluent.
- Permittee purchases credits to achieve compliance.
- Permit compliance compares discharge data, available credits and permit limits.

2. Adaptive Management

- Focuses on meeting the phosphorus criteria (typically phosphorus only).
- Permittee improves water quality by reducing in-stream phosphorus concentrations.
- Permittee eventually achieves water quality criteria.

3. Multi-Discharger Phosphorus Variance

- Focuses on reducing their phosphorus load each permit term.
- Implement a “Watershed Project” to help reduce non-point source of phosphorus pollution

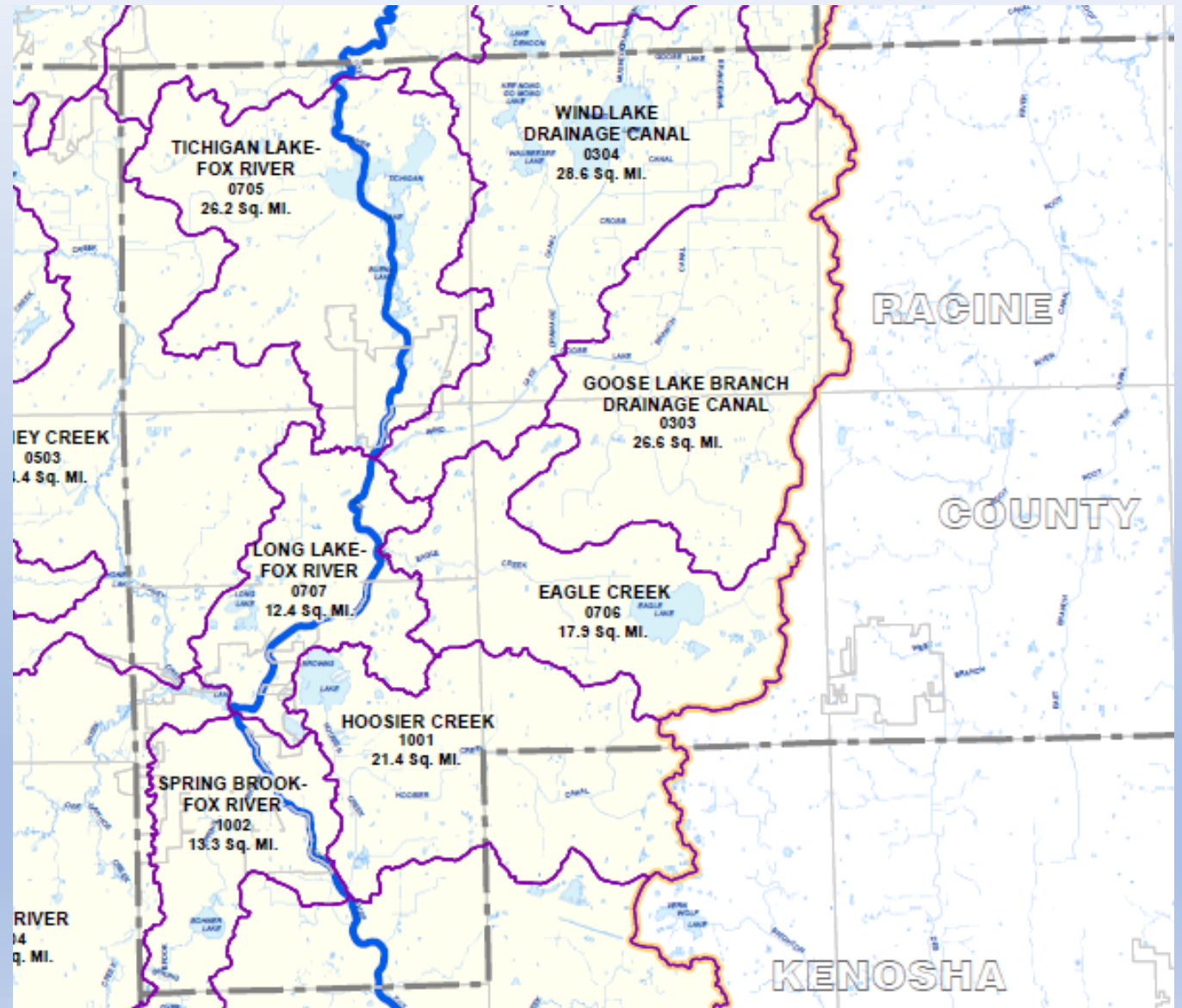
Watershed Plans – Racine County

Current Plans in Racine County include “Watershed Projects” that need Best Management Practices (BMP’s) to reduce soil erosion and associated runoff, such as phosphorus.

- Racine County Land and Water Resource Management
- Southeastern Fox River Commission Implementation Plan
- Eagle Lake Watershed Management Plan
- Root River Restoration Plan
- Pike River Restoration Plan
- Wind Point Restoration Plan

Implementing a Watershed Project

- One option is to make payments to County Land Conservation Departments.
- Payments are \$50 per pound times the number of pounds of phosphorus their discharge exceeds the target value.



Multi-Discharger Variance Funds

- To receive MDV funds, Racine County is required to make an annual application and submit a watershed project(s).
- From 2019 – 2021 the Racine County Land Conservation received \$21,080.65 from 8 different wastewater treatment facilities.
- At least 65% of the money must be used for projects, while up to 35% can be used to support staffing costs.
- In Racine County, 100% of the money will be used for cost-share on agricultural erosion control projects that will reduce phosphorus.

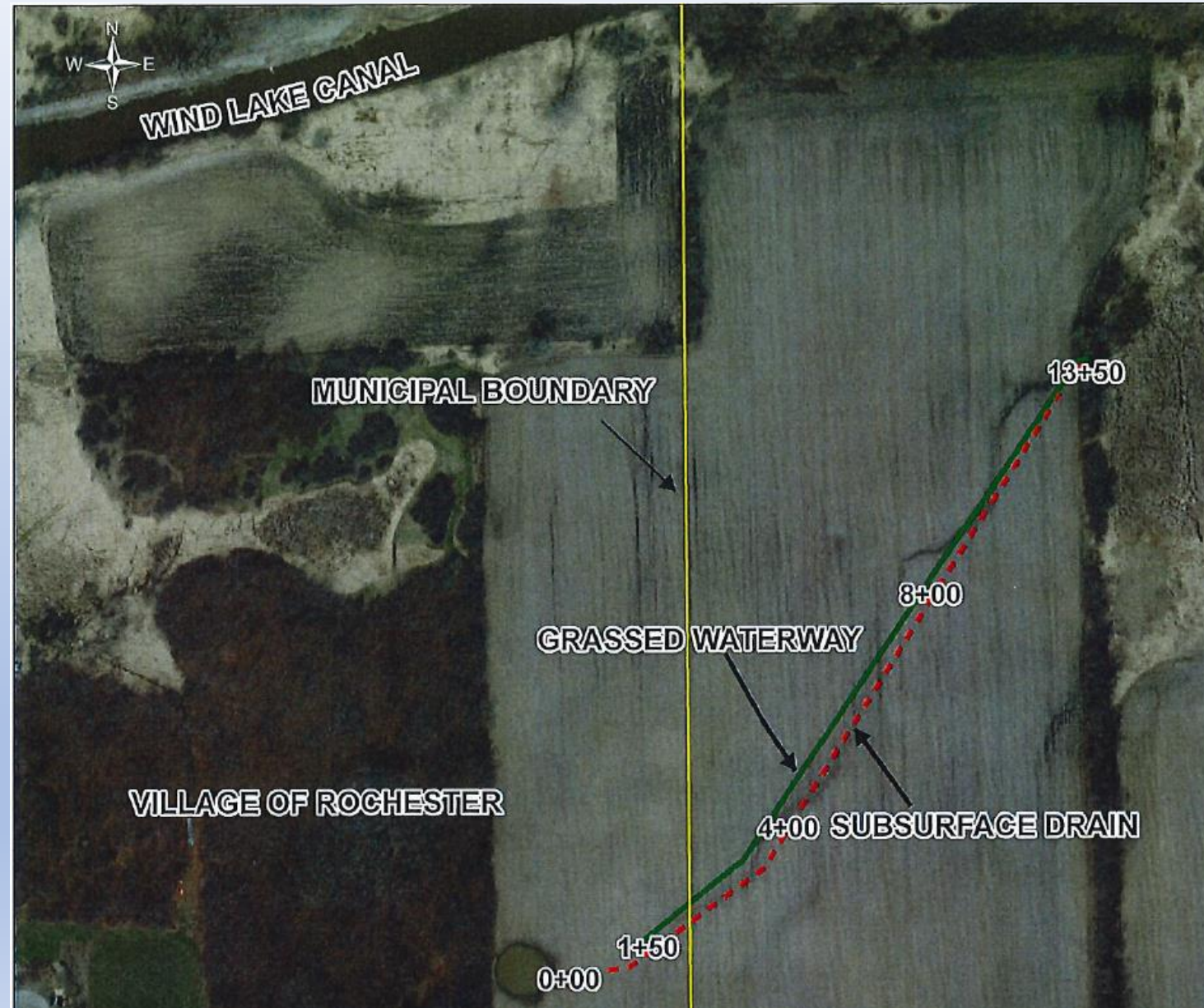
Selecting a Project

LAND CONSERVATION- STAFF MEETING

October 15, 2021 – Project List

Land & Water Resource Management Program (Bond Funds): (contracts, plans, construction)

		<u>Construction - 2021</u>	<u>Planned for 2022 or later</u>
1. SA	(Dover)	Waterway, tile	Construction Completed. All Paid. Reim Rec.
2. BA	(Dover)	Waterway, tile	Construction Completed. Need FSA \$ info
3. KW	(Yorkville)	WASCB, tile	Construction Completed. All Paid. Reim sent
4. AW	(Yorkville)	WASCB, tile	Construction Completed. All Paid. Reim sent
5. BL	(Dover)	Outlet Repair	Construction Completed. All Paid. Need C sheet
6. RB JV	(Yorkville)	WASCB	Construction Completed. All Paid. Reim sent
7. KR	(Waterford)	Diversion, 2wascb	Construction Completed. All Paid. Reim Rec.
8. TW	(Burlington)	Waterway, Tile	Construction Completed. Need FSA \$ info
9. EM	(Yorkville)	Waterway, tile+	Construction Completed. Need final \$ amount
10. EM	(Dover)	Waterway, Tile	Ready for construction, GT contractor
11. KJ	(Norway)	WW repair, Tile	Construction Started, GT contractor
12. AJ	(Raymond)	Grassed WW	Construction Started, MG contractor
13. JK	(Rochester)	Waterway, tile	Ready for construction, select contractor?
14. LS	(Yorkville)	Waterway, tile	Ready for construction, GT contractor
15. GH	(Raymond)	Diversion	Ready for construction, GT contractor
16. BR	(Raymond)	Waterway/Dvrsion	Ready for construction, need to select contractor
17. RH	(Yorkville)	Streambank Riprap	Need estimates. Need additional grant funds.
18. ST	(Dover)	Grassed WW	Need survey this fall, design this winter
19. DF	(Raymond)	Grassed WW	Need estimates
20. TH	(Dover)	Grassed WW	Need estimates
21. KH	(Dover)	Grassed WW	Need estimates
22. JR	(Norway)	WW, tile, wetland	Design complete. Need to sign-up for CRP.
23. RB	(Raymond)	Diversion, tile	Draft plan mailed to B, awaiting response
24. VG	(Yorkville, UG)2 stage channel		Needs final design, plan to Village
25. MS	(Norway)	Barnyard	Needs CNMP, needs survey, design NRCS EQIP
26. HK	(Caledonia)	WW, WASCB, etc	Needs design, NRCS designing
27. GK	(Dover)	WASCB	Needs survey this fall, design this winter
28. JP	(Norway)	Waterway, Tile	Needs survey this fall, design this winter
29. JS	(Dover)	Grassed WW, tile	Needs survey this fall, design this winter
30. R	(Caledonia)	WASCB, tile	Needs survey this fall, design this winter
31. JS	(Caledonia)	WASCB, tile	Needs survey this fall, design this winter



Before Photos: Erosion Transporting Sediment - Phosphorus



Project Completed Photos:

August 31, 2021



November 30, 2021



Wisconsin DNR Tracking and Reporting BMP Implementation Tracking System (BITS)



- Racine County enters:
 - Soils Information
 - Contributing Drainage Area (in acres)
 - Best Management Practices used
- BITS computes:
 - Sediment Load Reduction (ton/year)
 - Phosphorus Load Reduction (lb/year)
 - Nitrogen Load Reduction (lb/year)
- Watershed Project Implemented:
 - Sediment Load Reduction (45 tons/year)
 - Phosphorus Load Reduction (66 lb/year)
 - Nitrogen Load Reduction (not calculated)

Connect with Partners to meet compliance

- Wisconsin DNR – Water Quality Bureau
- Local County Land and Water Conservation Departments
 - <https://wisconsinlandwater.org>
- WI DATCP's Producer Led Groups (contact farmer's directly)
 - https://datcp.wi.gov/Pages/Programs_Services/ProducerLedProjects.aspx

Watershed Protection Committee of Racine County

www.wpcracinecounty.org

Photos: Conservation Minded Farmers Hosting A Summer Field Day



Questions?

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