



LAND&WATER
RESOURCES
DEPARTMENT

Adaptive Management / Water Quality Trading Update

Kyle Minks, Watershed Manager
February 9th, 2023



Background

 WISCONSIN STATE LEGISLATURE

HOME SENATE ASSEMBLY COMMITTEES SERVICE AGENCIES

Docs OPTIONS HELP  

Search in Department of Natural Resour Search

Menu » Administrative Rules Related » Administrative Code » Department of Natural Resources (NR) » Chs. NR 100-199; Environmental Protection – General
» Chapter NR 102

Chapter NR 102

WATER QUALITY STANDARDS FOR WISCONSIN SURFACE WATERS

Subchapter I — General

- NR 102.01 Purpose.
- NR 102.02 Applicability.
- NR 102.03 Definitions.
- NR 102.04 Categories of surface water uses and criteria.
- NR 102.05 Application of standards.
- NR 102.06 Phosphorus.
- NR 102.07 Assessing phosphorus concentration.
- NR 102.10 Outstanding resource waters.
- NR 102.11 Exceptional resource waters.
- NR 102.12 Great Lakes system.
- NR 102.13 Fish and aquatic life waters.
- NR 102.14 Taste and odor criteria.

Subchapter II — Water Quality Standards for Temperature

- NR 102.20 Purpose.
- NR 102.22 Definitions.
- NR 102.23 Categories of standards applicable to temperature.
- NR 102.24 General water quality criteria for temperature.
- NR 102.245 Temperature criteria for limited aquatic life communities.

What is it



Adaptive Management (AM)

NR 217.

- Improved water quality at a watershed scale
- Measured water quality change



Water Quality Trading (WQT)

NR 283.

- Improved water quality at a project scale
- Calculated reductions/offsets

Why Dane County is collaborating

*The Land & Water Resources Department strives to **protect and enhance** the natural, cultural, and historic resources of Dane County...*

*and **support** residents, communities, local governments and other agencies and organizations in their resource management and protection activities*



Extensive network of partners

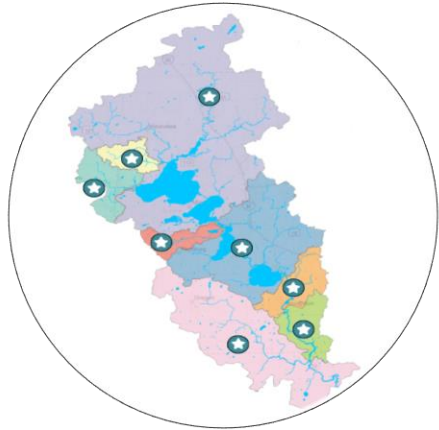


Certified and technical staff



Successful funding and cost share

Active Service Agreements



Yahara WINS



**Springfield Clean
Water**



Dane Iowa



Cross Plains



Blue Mounds

WDNR projects



Water Quality Trading

- 4 sites



Adaptive Management

- 8 sites



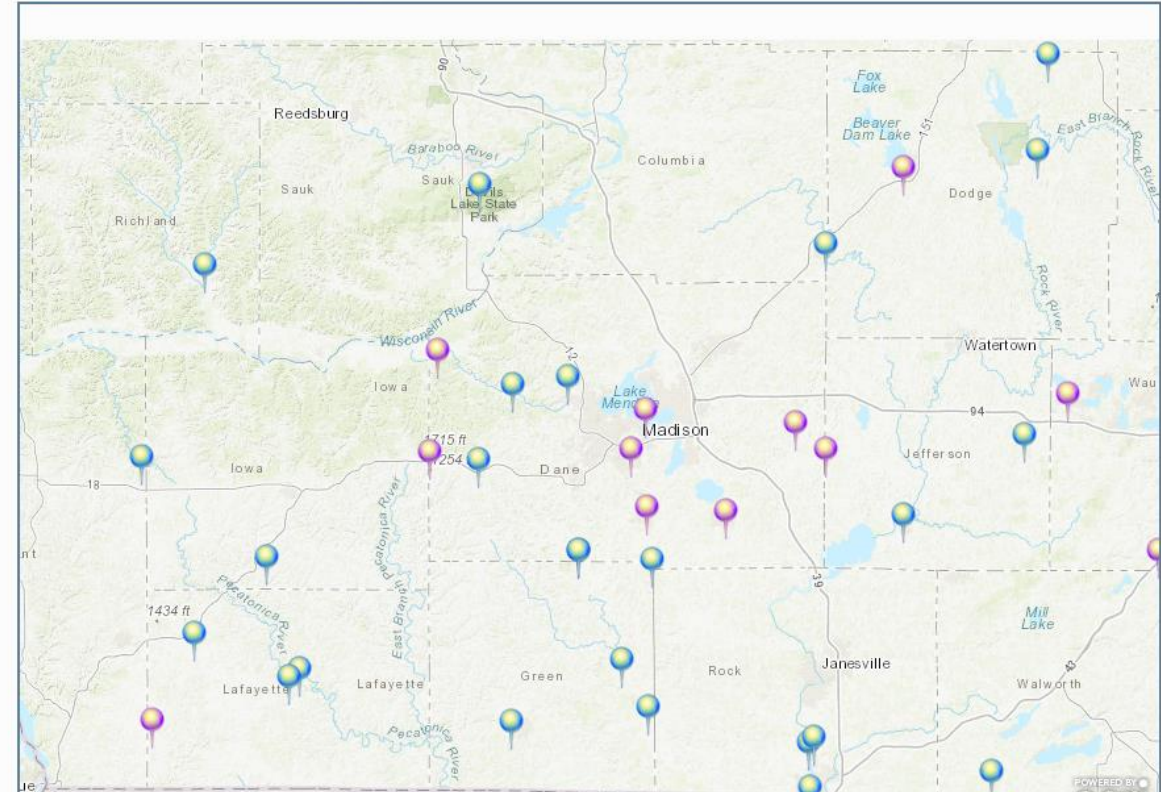
Map Key



Water Quality Trading site



Adaptive Management site



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Program history



Accomplishments

Dane Iowa



- 1,000 ft. stream restoration
- **150 pounds of Phosphorus reduced**

Springfield Clean Water



- Three grassed waterways
- **150 pounds of Phosphorus reduced**

Cross Plains



- One barnyard project
- **150 pounds of Phosphorus reduced**

Blue Mounds



- 68 acres of cropland
- **80 pounds of Phosphorus reduced**



Accomplishments (Yahara WINS)



21,838 pounds of Phosphorus reduced

Over \$6.5 million in cost share



- Over \$2 million in RCPP
- Not including staff time
- Not including other programs (legacy sediment, etc.)

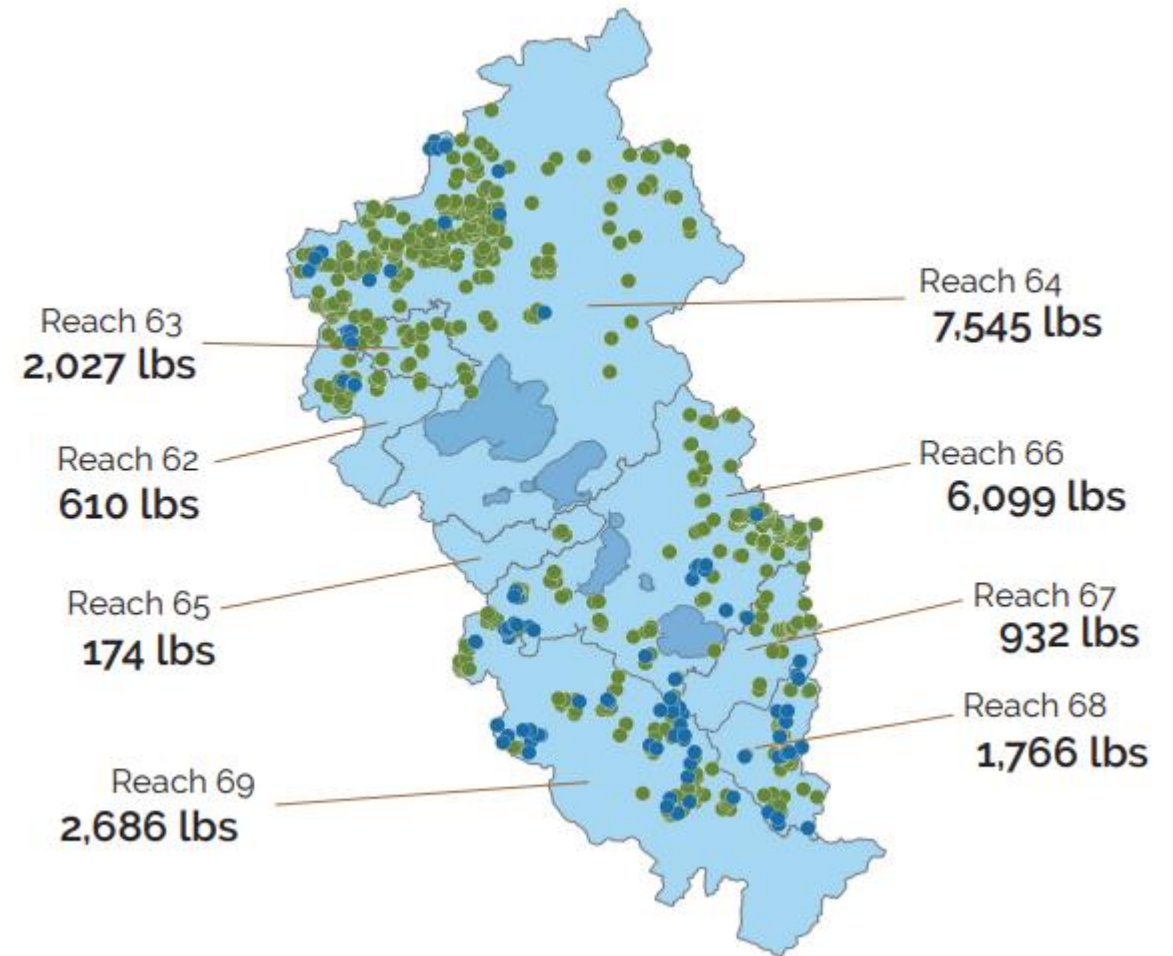


Over 1,000 practices completed

- 100 – 200 practices completed annually



53,8000 acres of NMPs



937 practices implemented from 2008-2020 (green on map)
113 practices implemented in 2021 (blue on map)

For more information...

<https://lwr.danecountyofdane.com/what-we-do/watershed-management/adaptive-management-wqt>



Dane County Land & Water Resources Department

Adaptive Management and Water Quality Trading

The Wisconsin Department of Natural Resources has numeric water quality standards for phosphorus in surface waters. Facilities that have a permit to discharge phosphorus (known as point sources) can upgrade their facility to comply with the phosphorus limits, which can be very costly, or they can offset their pollution through Water Quality Trading (NR 283) or Adaptive Management (NR 217). These programs allow the facility to fund conservation practices in the watershed that reduce phosphorus which is typically a more cost effective alternative to facility upgrades.

Dane County is collaborating with permitted facilities to explore permit compliance options with the goal of bringing both point and nonpoint sources together creating a holistic watershed approach to improve water quality. The long standing relationships that staff have with landowners, communities, agencies, and organizations has resulted in the ongoing success of these projects.


Current Projects

Yahara Watershed Improvement Network (WINS) | 21,838 lbs phosphorus reduced
Project Area: Yahara River Watershed - 536 square miles (344,000 acres)
Assisted agricultural producers in implementing over 1,100 conservation practices. View the [2021 Annual Report](#) (PDF) for more information.

Yahara WINS Adaptive Management Dane County Land & Water Resources | 2021 Annual Report

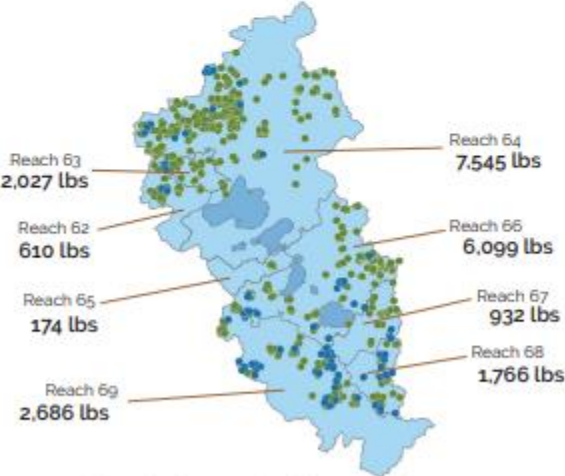
The Dane County Land & Water Resources Department continued its adaptive management partnership in 2021 with the Yahara Watershed Improvement Network (WINS). County assistance included helping rural landowners and agricultural producers with the voluntary implementation of various conservation practices. In addition to helping identify resource concerns, Dane County staff continued to track, calculate and report the associated phosphorus reductions.

Dane County continued to aid landowners with technical and financial assistance for conservation implementation through the challenges of the COVID-19 pandemic. 2021 marked the tenth year of collaboration for Dane County with Yahara WINS. Alongside other municipal entities, landowners and industry partners, the County continues to address resource concerns by supporting the implementation of agricultural conservation practices that will reduce phosphorus and sediment loss.




2021 Conservation Highlights


Reduced annual phosphorus load by 21,838 lbs (reductions by reach on figure below)




Reach	Phosphorus Load (lbs)
Reach 63	2,027
Reach 62	610
Reach 65	174
Reach 69	2,686
Reach 64	7,545
Reach 66	6,099
Reach 67	932
Reach 68	1,766



JUST ONE POUND OF PHOSPHORUS ENTERING THE LAKES CAN CREATE 500 LBS OF WET ALGAE... THE AMOUNT OF PHOSPHORUS REDUCED IN 2021 COULD HAVE BEEN RESPONSIBLE FOR ALMOST 11 MILLION POUNDS OF ALGAE GROWTH!



937 practices implemented from 2008-2020 (green on map)
113 practices implemented in 2021 (blue on map)





THANK YOU

Courtesy Shan Bartus



LAND & WATER
RESOURCES
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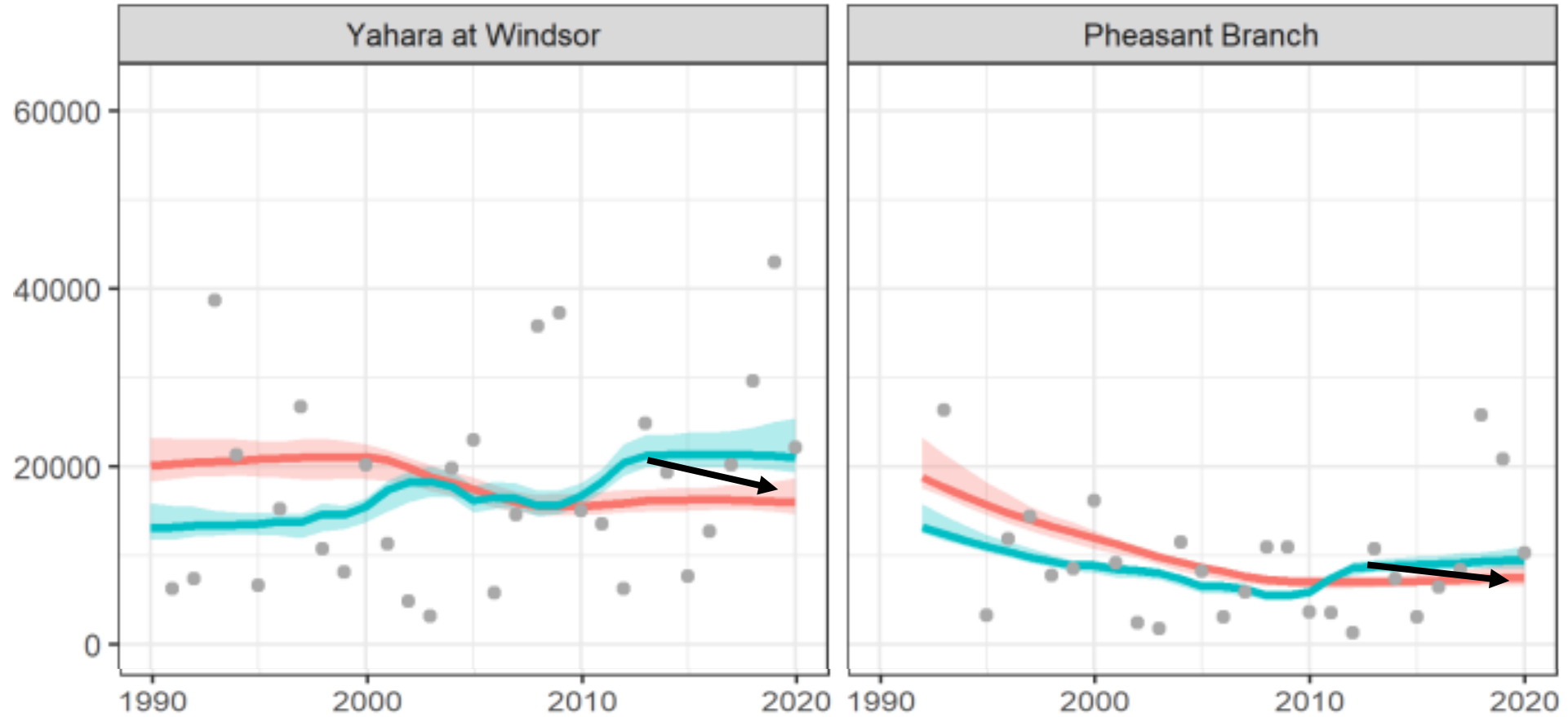
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Progress

Type  Long-Term Flow-Normalized  Short-Term Flow-Normalized



30% - 40% Decrease