

A Nonpoint Source Nutrient Financing Approach:

Wisconsin's PHOSPHORUS Multiple Discharger Variance

Region 10 Technical Roundtable on Nutrients – 5/3/22

Matt Claucherty

Wisconsin Department of Natural Resources



Today's Discussion:

- MDV Basics:
 - Numeric Phosphorus Criteria - NPDES Implications
 - Introduction to Wisconsin's Phosphorus MDV
 - Implementation Basics: number of facilities covered over time, county payments made, number of counties participating
 - Optimization of phosphorus removal – effluent trends over time
- County Payment System
 - County reporting overview
 - Numbers submitted thus far – load reductions
 - Summary / discussion

2010 Phosphorus Rule

- Numeric Water Quality Standards for Phosphorus • NR 217 Promulgated



Rivers

100 µg/L



Streams

75 µg/L



Reservoirs

- Not Stratified = 40 µg/L
- Stratified = 30 µg/L



Inland Lakes

Ranges from 15-30 µg/L

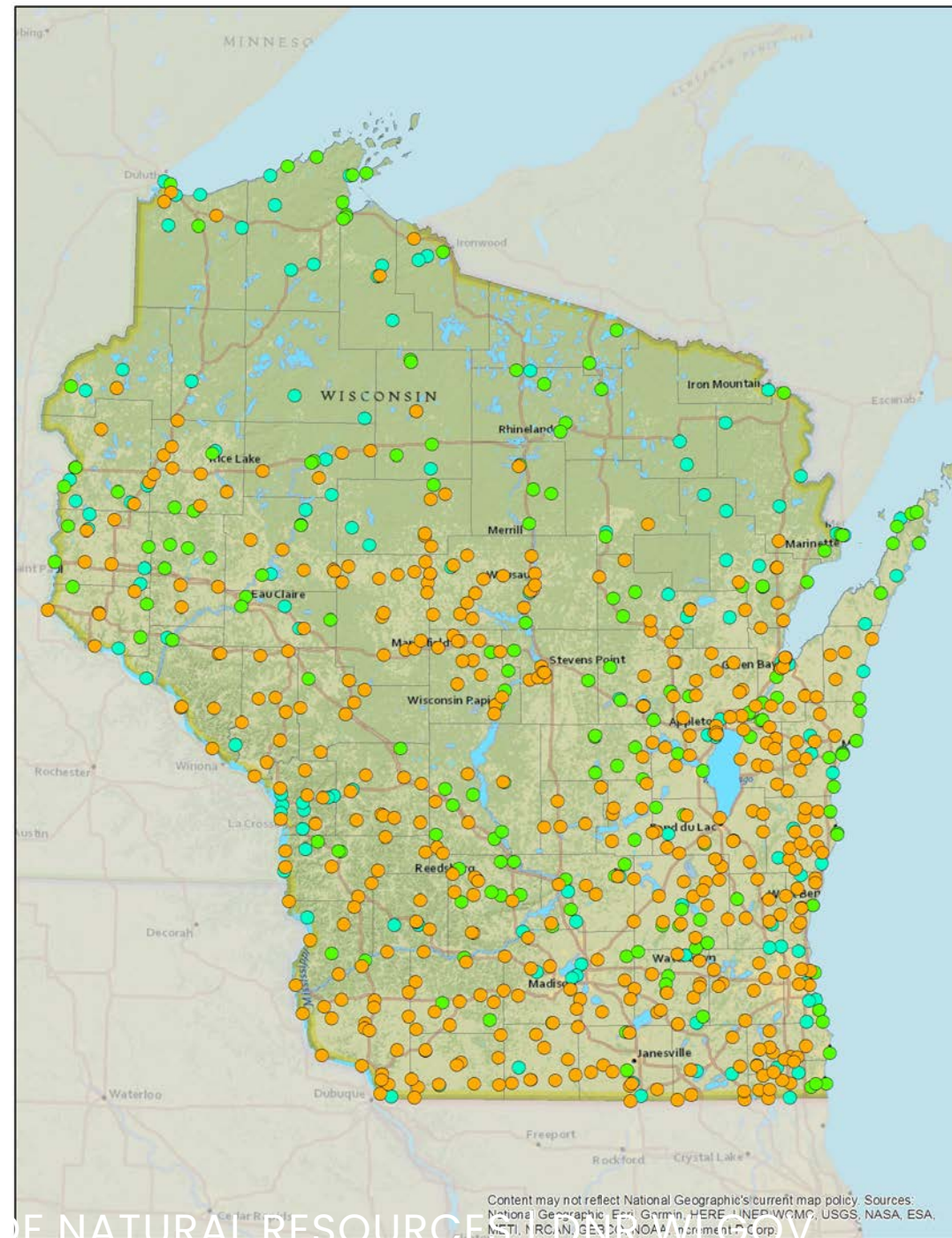


Great Lakes

- Lake Michigan = 7 µg/L
- Lake Superior = 5 µg/L

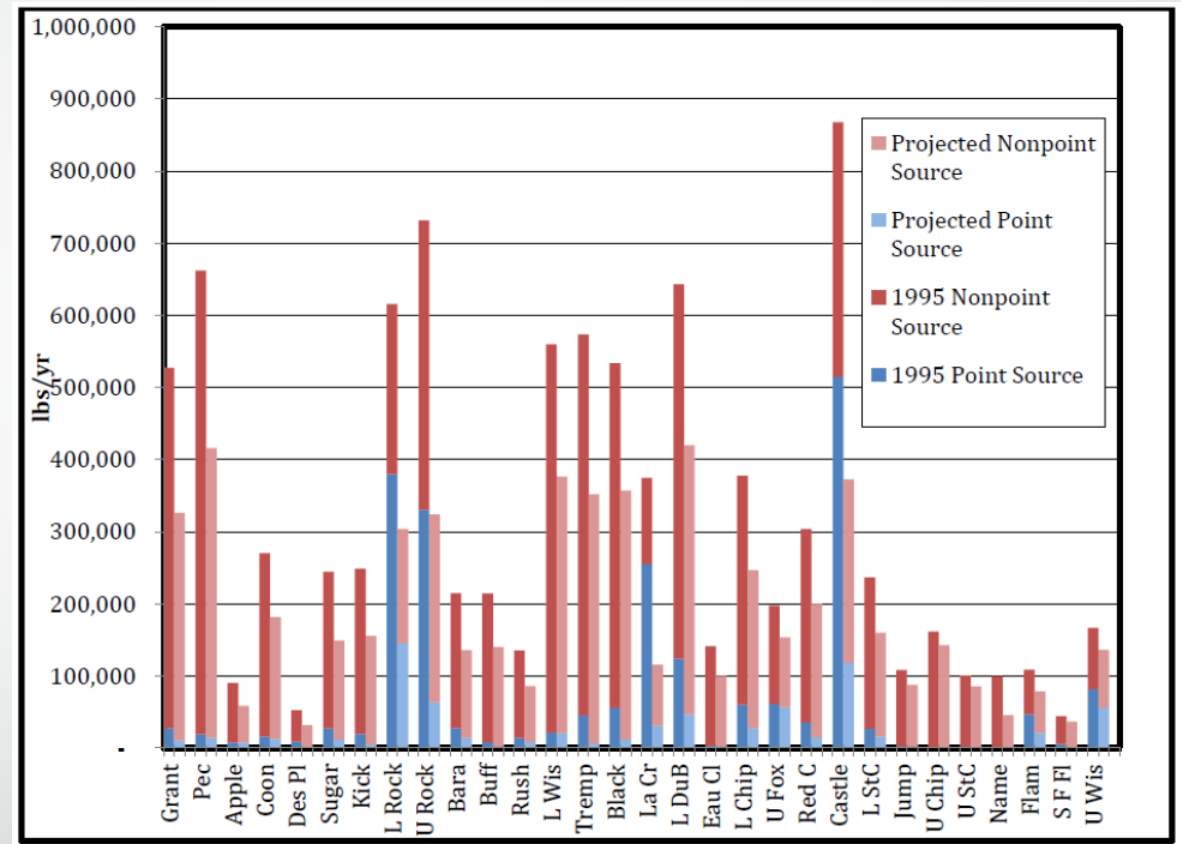
Statewide Distribution of Phosphorus Limits

- No Limit Applicable
Blue Markers
- Limit > 0.3 mg/L
Green Markers
- Low-level phosphorus
limit
Orange Markers



2010 Phosphorus Rule

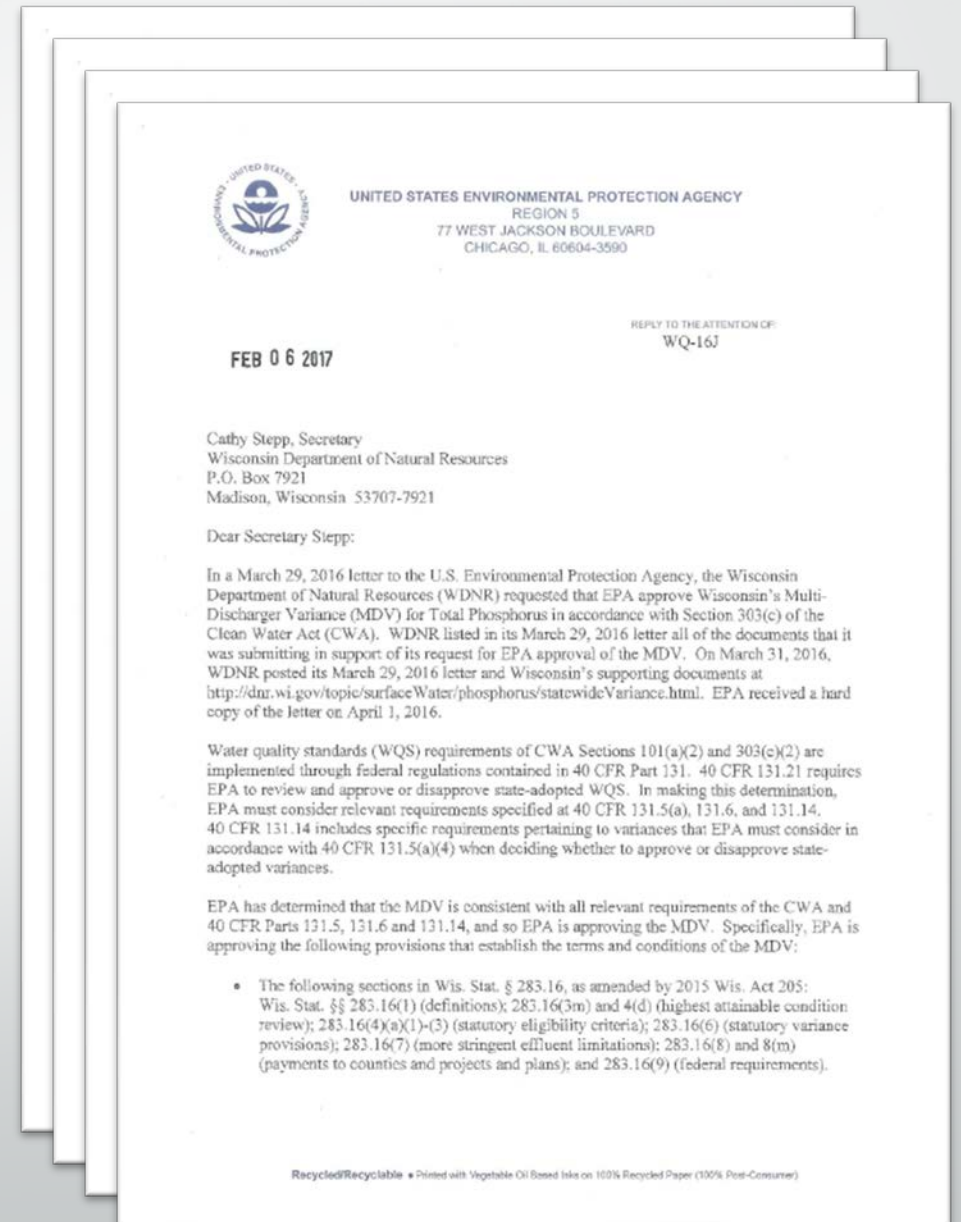
- ~60% of facilities initially had effluent limits (WQBEL) set at the criterion
- Filtration required in many cases
- Creates an economic driver for alternative compliance strategies and innovation in treatment systems
- New alternatives developed for nonpoint phosphorus offsets:
 - Water Quality Trading
 - NR 217 Adaptive Management
- These alternatives are not always feasible



Baseline and Projected Point and Nonpoint HUC 8 Phosphorus Loadings

A Multiple Discharger Variance for Phosphorus

- Economic impact assessment in 2012
- Statutory provisions adopted in 2013 (s. 283.16 Wis. Stats.)
- Improved EIA analysis and Widespread / Substantial Determination - 2015
- MDV receives federal approval in February of 2017



MDV's "Two-pronged" Approach :

Phosphorus Effluent Reductions

- Mandated by statute and permit
- Ongoing optimization required
- Driven by economic incentive to reduce nonpoint source offset requirement



Nonpoint Source Reductions

- Mandated by statute and permit
- Self-directed, Third-party, and County Payment Options
- County Payment Option
 - Dischargers pay \$50/lb for phosphorus discharged
 - Relies on pre-established nonpoint source implementation framework (counties)
 - NR 151 Ag Performance Standards
 - Counties are required to prioritize when planning and quantify reductions achieved

MDV: Now in “full-swing”

	2017	2018	2019	2020	2021
Number of facilities covered	2	34	73	98	119
Total County Payment	\$2,606.02	\$619,363.60	\$938,116.95	\$937,241.50	\$1,144,247.72
Counties Participating	1	25	34	35	26



Participation growing steadily

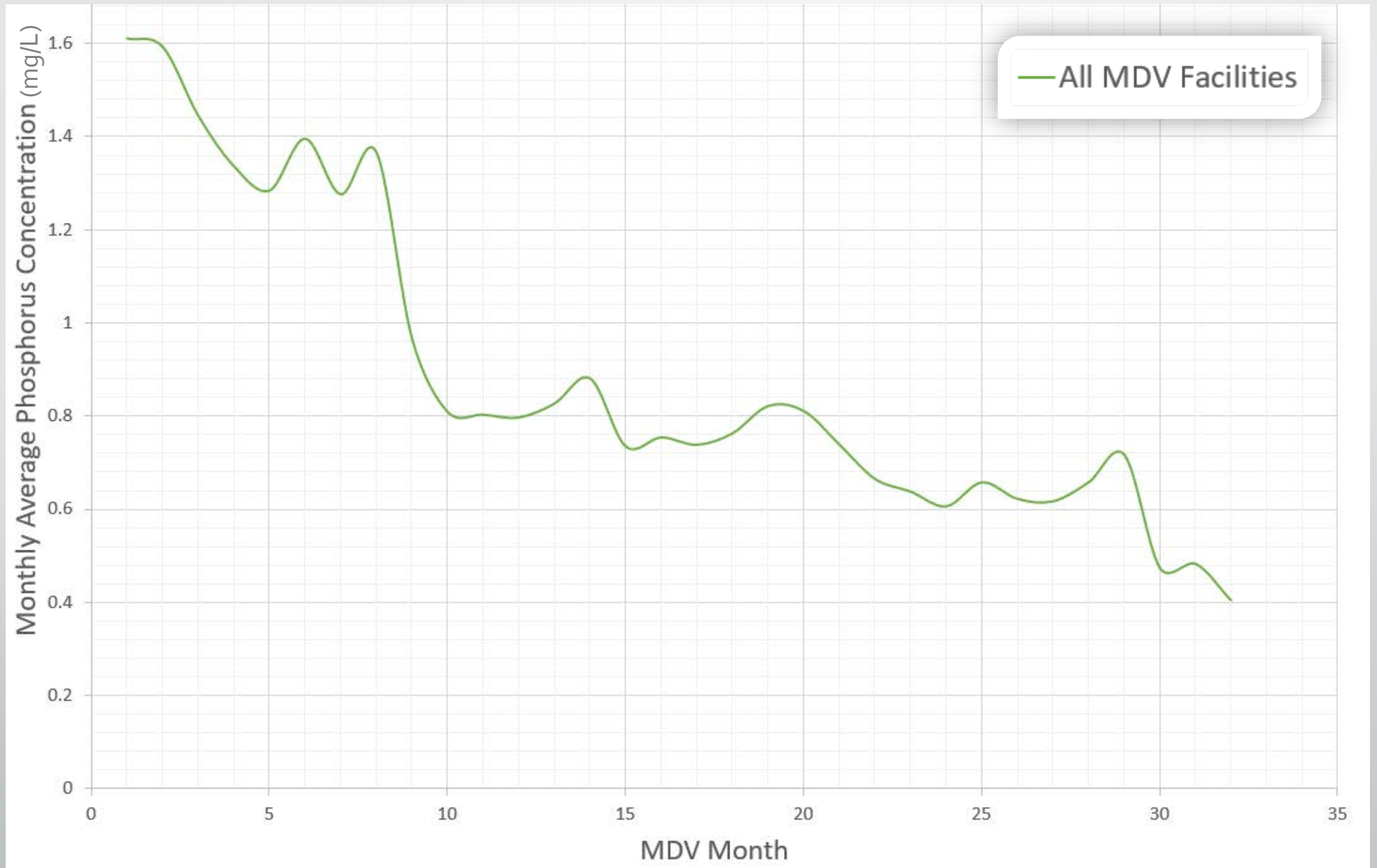
- ▶ Overall well received by dischargers and counties
- ▶ Will see the curve level off after 2022-2023

MDV Self-directed / Third-party Projects

	Richland Center	Galesville	Norwalk	Marathon City
Year	2018	2019	2019	2020
Phosphorus Load Reduction (lbs/yr)	850	515	88	475
Practices Implemented	Streambank Stabilization	Perennial Vegetation, Streambank Stabilization	Streambank Stabilization	Cover Crops, Perennial Vegetation

- ▶ Permittees must establish a binding, written agreement to reduce phosphorus on their own land, or on other land in the basin
- ▶ Projects represent cost savings over county payment option
- ▶ Standalone plans with robust documentation
- ▶ All facilities plan to transition to water quality trading when able

Optimization of Phosphorus Removal



Implementation Logistics

Black2020MDV

Koss Hanson 2020

+ Plan - ✓

- MDV Practices -

→ MDV Practice - ✓

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PracticesPerformance

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BMP Type	Status	Quantity	Units	Total Cost	Date Installed	Design Life	Notes
Cover Crops	Needs Models Attachments	49.70	ACRES	\$0.00	10/13/2020	NA	
Waterway Systems	Needs Models Attachments	1.75	ACRES	\$0.00	05/21/2020	10	
Total:				0			


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Satellite InCounty50mi

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Find on map



Wisconsin DNR, Wisconsin Regional Orthophoto Consortium (WROC), 2010. | U. S. Department of A...
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- Tracking of MDV Projects (BITS)
- Updated MDV Guidance
- A look ahead to reapproval
 - 5-year HAC review due in ~9 months

Questions & Discussion

- Thanks for Listening!
- For more information:
<https://dnr.wisconsin.gov/topic/Wastewater/phosphorus/StatewideVariance.html>

Matt Claucherty

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Matthew.Claucherty@wisconsin.gov

