A Nonpoint Source Nutrient Financing Approach:

Wisconsin's PHOSPHORUS Multiple Discharger Variance

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

Matt Claucherty



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

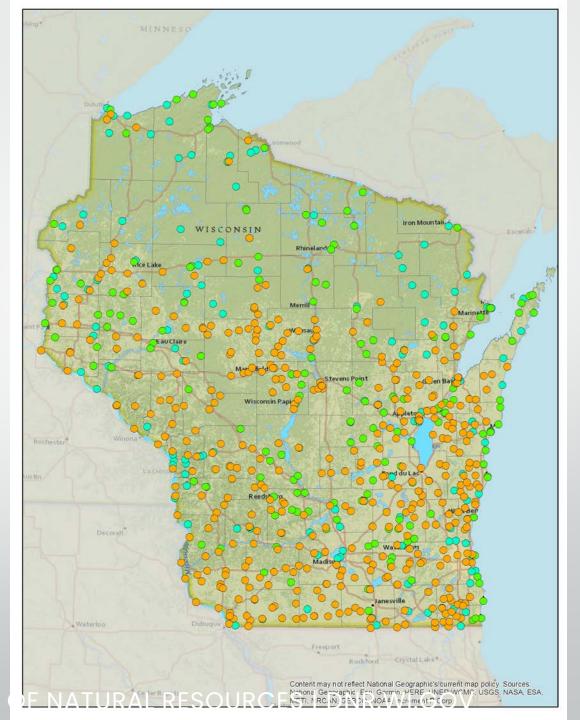
Ranges from 15-30 μg/L

Great Lakes

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

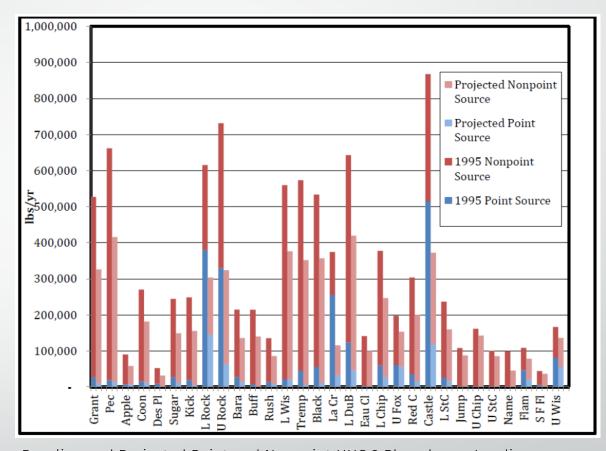
Statewide Distribution of Phosphorus Limits

- No Limit Applicable Blue Markers
- Limit > 0.3 mg/LGreen Markers
- Low-level phosphorus limitOrange 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 feasbile



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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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WO-161

FEB 0 6 2017

Cathy Stepp, Secretary Wisconsin Department of Natural Resources P.O. Box 7921 Madison, Wisconsin 53707-7921

Dear Secretary Stepp:

In a March 29, 2016 letter to the U.S. Environmental Protection Agency, the Wisconsin Department of Natural Resources (WDNR) requested that EPA approve Wisconsin's Multi-Discharger Variance (MDV) for Total Phosphorus in accordance with Section 303(c) of the Clean Water Act (CWA). WDNR listed in its March 29, 2016 letter all of the documents that it was submitting in support of its request for EPA approval of the MDV. On March 31, 2016, WDNR posted its March 29, 2016 letter and Wisconsin's supporting documents at http://dnr.wi.gov/topic/surface/Water/phosphorus/statewide/Variance.html. EPA received a hard copy of the letter on April 1, 2016.

Water quality standards (WQS) requirements of CWA Sections 101(a)(2) and 303(c)(2) are implemented through federal regulations contained in 40 CFR Part 131. 40 CFR 131.21 requires EPA to review and approve or disapprove state-adopted WQS. In making this determination, EPA must consider relevant requirements specified at 40 CFR 131.5(a), 131.6, and 131.14. 40 CFR 131.14 includes specific requirements pertaining to variances that EPA must consider in accordance with 40 CFR 131.5(a)(4) when deciding whether to approve or disapprove state-adopted variances.

EPA has determined that the MDV is consistent with all relevant requirements of the CWA and 40 CFR Parts 131.5, 131.6 and 131.14, and so EPA is approving the MDV. Specifically, EPA is approving the following provisions that establish the terms and conditions of the MDV:

The following sections in Wis. Stat. § 283.16, as amended by 2015 Wis. Act 205:
 Wis. Stat. §§ 283.16(1) (definitions); 283.16(3m) and 4(d) (highest attainable condition review); 283.16(4)(a)(1)-(3) (statutory eligibility criteria); 283.16(6) (statutory variance provisions); 283.16(7) (more stringent effluent limitations); 283.16(8) and 8(m) (payments to counties and projects and plans); and 283.16(9) (federal requirements).

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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

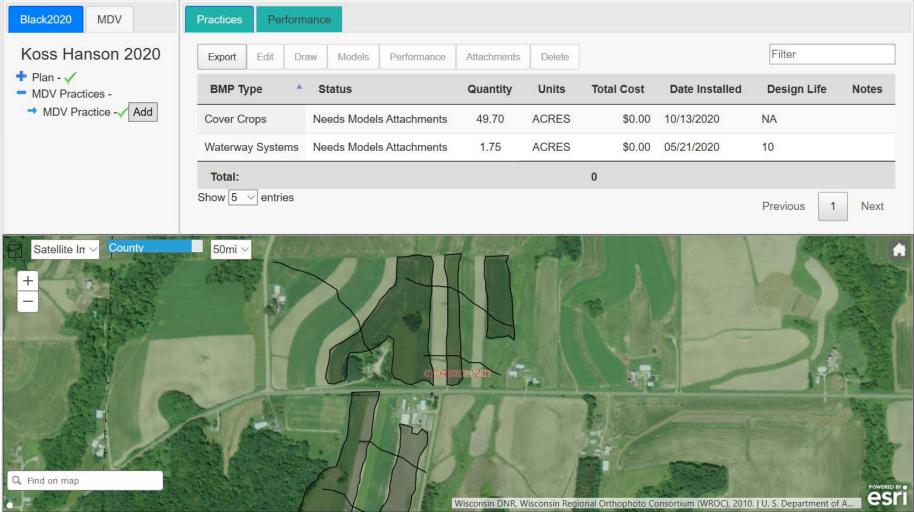
	Richland Center	Galesville	Norwalk	Marathon City
Year	2018	2019	2019	2020
Phosphorus Load Reduction (lbs/yr)	850	515	88	475
Practices Implemented	Streambank Stabilization	Perennial Vegetation, Streambank Stabilization	Streambank Stabilization	Cover Crops, Perennial Vegetation

- 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



- BMP IMPLEMENTATION TRACKING SYSTEM
- Tracking of MDV Updated MDV Projects (BITS) 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/p
 hosphorus/StatewideVariance.html

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