

# Multi-discharger Variance Reauthorization

Public Listening Sessions

11/10/23 Madison  
11/13/23 Stevens Point

# Meeting Overview

- Housekeeping & Zoom Protocols
- DNR Presentation
  - Reauthorization Process
  - Information Currently Available
  - Program Implementation to Date
  - Opportunities for input
- Audience questions regarding presentation
- Public Participation –Attendee Comments (Planned)
- Public Participation – Other Comments

# Housekeeping and Zoom Protocol

- Please ensure you sign in (sheet near entrance)
- Facility notes
- Zoom information
- The meeting will be recorded

# MDV Basics – What is the phosphorus MDV?

- A variance from phosphorus water quality standards adopted in 2010
- Applicable to existing facilities only
- Temporary measure – up to four permit terms maximum
- Prevents low phosphorus limits from becoming effective when compliance costs would cause economic hardship
- Administrative steps bundled up front
- Each permittee's eligibility is evaluated on a case-by-case basis
- Permittees covered under MDV optimize phosphorus treatment and contribute to a nonpoint source phosphorus offset

# Establishing the MDV – 2012 to 2017

- Adopted into state statute (s. 283.16), 2013 Act 378 and 2015 Act 205
- Economic impact analysis was completed in 2015
- EPA approved the MDV on February 6, 2017
- The variance was authorized for 10 years (2017 – 2027)
- The MDV cannot be used by permittees after the expiration date

# Economic Justification

- Economic Impact Analysis completed in 2015
  - Estimated compliance costs
  - Projected sewer user cost increases
  - Modeled broader economic implications (REMI Model)
- 2015 DOA Determination- Attaining phosphorus standards is:  
“not feasible because it would cause substantial and widespread adverse social and economic impacts on a statewide basis.”
- 2023 Update- Does the 2015 determination “remain accurate?”



**ECONOMIC IMPACT ANALYSIS**  
Presented to the  
WISCONSIN DEPARTMENT OF ADMINISTRATION  
And  
WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
April 24, 2015



Attachment 2

# Economic Justification

To evaluate if the economic determination remains accurate DOA and DNR propose to use the following:

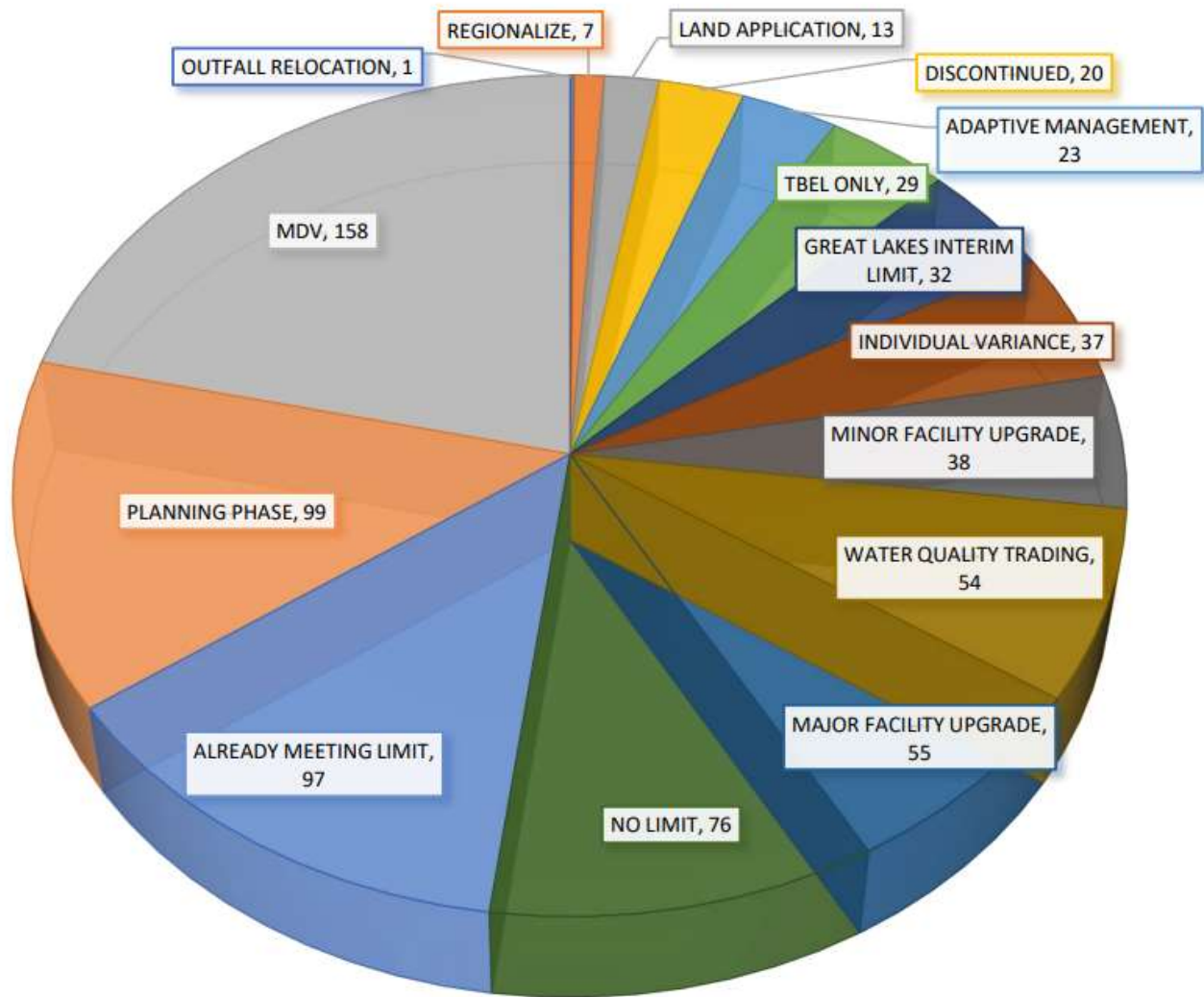
- Updated phosphorus limits (WQBELs)
- Current status of phosphorus compliance statewide
- Updated and site-specific compliance costs
- Updated secondary indicator scores

**Table 1: Phosphorus WQBEL Concentrations Statewide**

Limit range	Number of Facilities 2015 EIA	Number of Facilities 2023 Evaluation
<0.075 mg/L	20	29
=0.075 mg/L	344	211
0.075 mg/L - 0.2 mg/L	107	96
>0.2 mg/L	121	405
<b>Total</b>	<b>592*</b>	<b>741</b>

\*Though all WPDES permittees were evaluated, roughly 150 permittees were excluded from the 2015 analysis due to not needing to install phosphorus treatment technology. These would typically fall within the “>0.2 mg/L” category.





# Economic Justification: Capital Costs

## 2015 EIA:

Municipal: \$1,567,000,000  
Cheese Manufacturers: \$72,500,000  
Food Processors: \$43,900,000  
Paper Industry: \$1,187,000,000  
Aquaculture: \$51,700,000  
NCCW/Other Dischargers: \$93,800,000

## 2023 Evaluation:

Municipal: \$608,492,369  
Cheese Manufacturers: \$24,443,788  
Food Processors: \$15,177,700  
Paper Industry: \$104,079,224  
Aquaculture: \$19,464,049  
NCCW/Other Dischargers: \$33,410,899

## Appendix B. Secondary Indicator Scores for Municipal POTWs

Last Revised: August 2023

The following table provides the secondary indicator score for municipal POTWs as described in the Final Economic Determination. Please refer to Section 5 of that report for details on each economic metric, why it was selected, and how the scoring process worked. All shaded cells in this table indicate that the cell value exceeds the indicator threshold, and contributes to the secondary indicator value. The total secondary indicator value in the last column of this table provides the secondary indicator total, which is the value used to determine eligibility for the MDV.

	Personal Current Transfer Receipts Share of Total Income 2021 <sup>1</sup>	Jobs per Square Mile <sup>2</sup>	Population Change 2011 - 2021 <sup>3</sup>	Net Earnings Change 2011- 2021 <sup>4</sup> <b>(2points)</b>	Job Growth 2011-2021 <sup>5</sup>	Secondary Indicator Score
Adams	38.2%	6	0.19%	28.7%	- 0.3%	6
Ashland	36.3%	8	-0.78%	25.7%	- 5.6%	6
Barron	27.5%	25	2.16%	30.0%	1.5%	6
Bayfield	30.8%	3	7.59%	32.5%	4.1%	5
Brown	19.2%	294	9.14%	37.8%	7.5%	2
Buffalo	27.5%	6	-2.55%	26.9%	- 9.6%	6
Burnett	36.4%	6	7.30%	32.7%	2.2%	5
Calumet	17.0%	50	11.86%	39.2%	28.3%	3
Chippewa	24.9%	25	6.86%	38.5%	13.5%	4
Clark	26.1%	9	0.27%	47.5%	7.5%	5
Columbia	20.6%	29	3.15%	39.3%	7.2%	4
Crawford	32.0%	12	-3.06%	28.6%	- 7.6%	6
Dane	14.0%	291	18.43%	62.7%	14.4%	0
Dodge	23.9%	41	0.15%	26.7%	4.6%	6

# MDV Snapshot – Late 2023

- Number of permittees covered: 155
  - Municipal:133
  - Paper: 3
  - Cheese: 10
  - Food: 5
  - Fish:1
  - NCCW/Other: 3
- Second permit term coverage: 27
- Dropped MDV coverage: 16
  - Water quality trading
  - Meeting TMDL-based limits

# Nonpoint Offsets: County Payments

	2017	2018	2019	2020	2021	2022	2023
Number of facilities covered	2	34	73	98	119	139	155
Total County Payment	\$2,606.02	\$619,363.60	\$938,116.95	\$937,241.50	\$1,144,247.72	\$1,051,349.61	\$1,210,490.95*
Counties Participating	1	25	34	35	26	23	TBD

\*- Amount Estimated

Reduced Tillage / Residue Mgmt	4490 Acres
Cover Crop	4015 Acres
Waterway Systems	46 Acres
Streambank/Shoreline Protection	16719 Linear Ft
Critical Area Stabilization	11.6 Acres

County Reporting Year	Offset (lbs/yr)- Structural Practices	Offset (lbs/yr)- Annual Practices
2019	570.5	5.1
2020	2821.8	11059.6
2021	5981.2	6438.7
2022	13256.1	5682.6

Projects Total: ~46,000 lbs/yr

# Nonpoint Offsets: Self-directed/Third-party

Facility Name	Year Established	Phosphorus Load Reduction (lbs/yr)	Nonpoint Source Practices Implemented
Richland Center Wastewater Treatment Facility	2018	850	Streambank Stabilization
Galesville Wastewater Treatment Facility	2019	515	Perennial Vegetation, Streambank Stabilization
Norwalk Wastewater Treatment Facility	2019	88	Streambank Stabilization
Marathon Water & Sewer Department	2020	475	Cover Crops
Lakeside Foods - Belgium	2021	34	Perennial Vegetation
Ellsworth Wastewater Treatment Facility	2021	443	Streambank Stabilization
East Troy Wastewater Treatment Facility	2022	203	Cropping Practices
Whitewater Wastewater Treatment Facility	2022	114	Perennial Vegetation



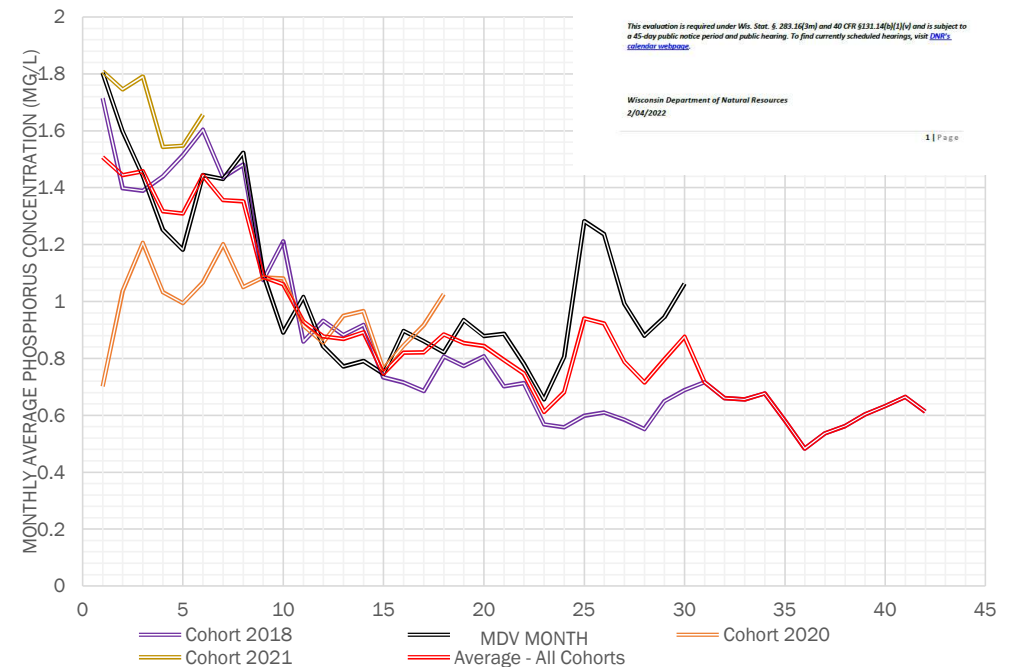
*DNR Verification of Cover Crops at Miltrim Farms (Marathon City Project)*

# Program Accomplishments



## Highest Attainable Condition Review of Wisconsin's Multi-discharger Phosphorus Variance

- 5-year review recently completed:
- Effluent phosphorus reduction has been highly successful
- County payments act as an incentive to optimize treatment
- Many facilities are adopting phosphorus treatment for the first time – and quickly!
- Overall point source reduction estimate: 127,602 lbs/year



# Nonpoint Offsets

- “EPA Evaluation of Phosphorus Loading Reductions Likely to be Achieved Under Wisconsin MDV”

Table 18. Cumulative TP load reduction if 1 MGD facility decreases its end-of-pipe TP concentration from 0.5 mg/L to 0.015 mg/L in year 5 of the MDV period.

Year	Volume discharged (L/d)	Concentration of discharge (mg/L)	Mass TP discharged (mg/d)	Mass TP discharged (lb./d)	Mass TP discharged (lb./yr.)	Cumulative reduction (lb.)
1	3785411.78	0.5	1892705.89	4.172702222	1523.036311	0
2	3785411.78	0.5	1892705.89	4.172702222	1523.036311	0
3	3785411.78	0.5	1892705.89	4.172702222	1523.036311	0
4	3785411.78	0.5	1892705.89	4.172702222	1523.036311	0
5	3785411.78	0.015	56781.1767	0.125181067	45.69108933	1477.345222
6	3785411.78	0.015	56781.1767	0.125181067	45.69108933	2954.69044
7	3785411.78	0.015	56781.1767	0.125181067	45.69108933	4432.03566
8	3785411.78	0.015	56781.1767	0.125181067	45.69108933	5909.38088
9	3785411.78	0.015	56781.1767	0.125181067	45.69108933	7386.7261
10	3785411.78	0.015	56781.1767	0.125181067	45.69108933	8864.07132

- Projects point source reductions via treatment (single facility)
- Projects nonpoint source reductions via offsets (single facility)
- Conclusion: nonpoint offsets almost always better than meeting the WQBEL
- DNR can provide an updated analysis with real-world data

EPA Evaluation of Phosphorus Loading Reductions Likely to be Achieved Under Wisconsin MDV  
WQSTS #WI2016-668

Date: FEB 06 2017

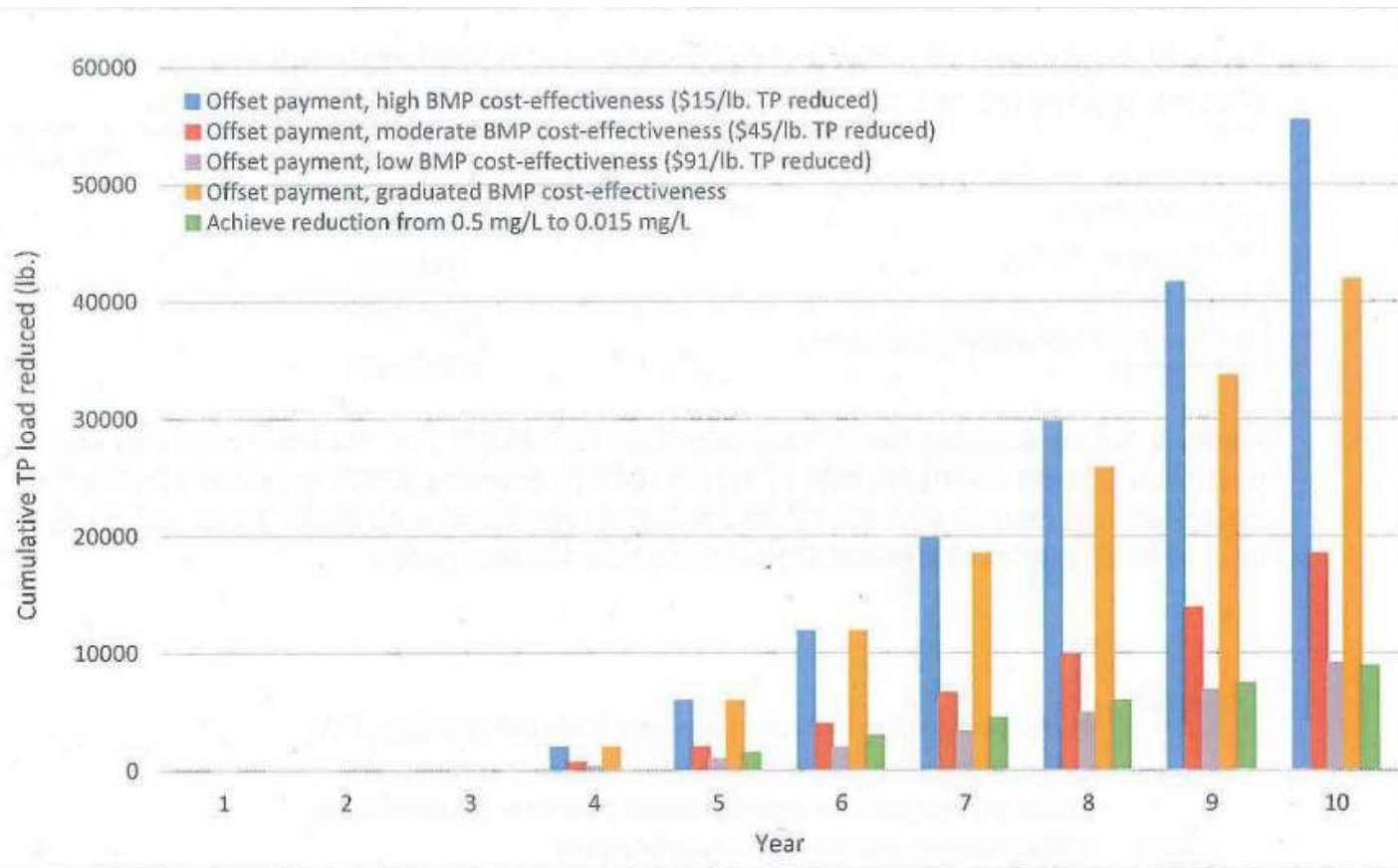
A key component of the Wisconsin multi-discharger variance for phosphorus (MDV) is that, in lieu of requirements to comply with total phosphorus (TP) effluent limits reflecting the phosphorus loading reductions that could be achieved from installation and operation of treatment facilities to remove phosphorus from point source discharges, point source dischargers can instead implement measures that will reduce phosphorus loadings into area waters from nonpoint sources. For the reasons explained below, it is expected that, in most instances, the amount of phosphorus loadings that will be reduced from the nonpoint source measures required by the MDV will be greater (oftentimes significantly greater) than the reductions that would likely have occurred if the MDV instead required installation and operation of additional treatment facilities to remove phosphorus from point source discharges.

Under the MDV, dischargers have two options. First, a discharger could choose to be required to pay to a county \$50 per pound of phosphorus it discharges over a target value of either 0.2 mg/L or a limit based on a wasteload allocation in a total maximum daily load (TMDL) approved by EPA on or before April 25, 2014 (this option is referred to as an “offset payment” in this document). Second, a discharger could choose to be required to implement, or enter into an agreement with a third party to implement, a plan or project to achieve annual reductions of phosphorus from other sources in the watershed in an amount equal to the difference between what the discharger discharges and the target value of 0.2 mg/L or a limit based on a wasteload allocation in a TMDL that was approved by EPA on or before April 25, 2014 (this option is referred to as a “direct offset” in this document). Both are evaluated below.

#### I. Phosphorus loading reductions if facility installed point source treatment technology

As a starting point, EPA considered the load reduction associated with achieving an end-of-pipe TP concentration of 0.015 mg/L, which is substantially more stringent than any limit that would actually be included in an NPDES permit if the MDV required installation of feasible phosphorus treatment equipment on point sources rather than the MDV’s nonpoint source load reduction provisions. This limit is substantially more stringent than those limits because it reflects the most stringent phosphorus water quality based effluent limit (WQBEL) that would be included in any NPDES permit based upon Wisconsin’s unvaried phosphorus criteria. No permittee covered by the MDV would be required to comply with a WQBEL reflecting the unvaried phosphorus criteria because the reason for variances is to avoid substantial and widespread economic and social impact by allowing permittees to be subject to less stringent limits than ones based on the unvaried phosphorus criteria. To state this differently, a permittee that is covered by a variance would be subject to limits that are less stringent than the WQBEL that the permittee would be otherwise required to meet if it did not have the variance because, if the permittee was subject to the WQBEL that the permittee would otherwise be required to meet, then the permittee would actually not be receiving a variance. Thus, by definition, permittees who are covered by a variance will have limits that are less stringent than limits reflecting the





#### EPA Scenario Assumptions:

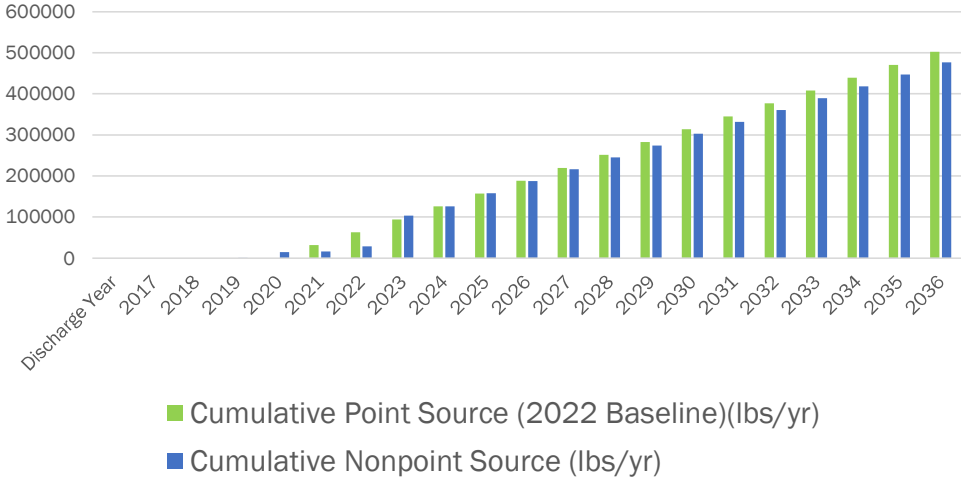
- NPS reductions installed year 3, begin to accrue year 4
- Treatment installed by year 5
- WQBEL = 0.015 mg/L
- Various nps practice cost effectiveness
- Practices remain on landscape, continue to accumulate

Figure 5. Cumulative TP load reductions associated with BMP implementation, vs. meeting an end-of-pipe effluent limit of 0.015 mg/L. Cumulative TP load reductions: highly cost-effective BMPs: 55,439 lbs.; moderately cost-effective BMPs: 18,480 lbs.; least cost-effective BMPs: 9,138 lbs.; graduated BMP cost-effectiveness: 41,905 lbs.; achieving 0.015 mg/L limit in year 5: 8,864 lbs.

# Nonpoint Offsets

County Reporting Year	Offset (lbs/yr)- Structural Practices	Offset (lbs/yr)- Annual Practices
2019	570.5	5.1
2020	2821.8	11059.6
2021	5981.2	6438.7
2022	13256.1	5682.6

Cumulative Phosphorus Loading Reductions - Meeting WQBELs via Treatment vs. Nonpoint County Payment Offsets – Most Conservative Scenario



Early 2023: 30,967 lbs/yr

Projects total: ~46,000 lbs/yr

Points sources meeting WQBELs:  
~31,381 lbs/yr reduction

Understanding nonpoint practice longevity is critical to this analysis

# Program Elements Moving Forward

- DNR has worked closely with EPA for:
  - Program reporting metrics
  - Eligibility questions
  - Reauthorization expectations
- MDV Guidance was updated in 2021 with minor program refinements
- Guidance will be updated again for reauthorization
  
- Main MDV implementation challenge:  
Facilities discharging below target value - \$0 county payments

# Stakeholder Process & Input

- Section 283.16(3), Wis. Stats. outlines the reauthorization process relative to the variance justification (Factor 6).
- Calls on Department of Administration (DOA) to determine if the initial economic determination remains accurate.
- DOA must prepare a report and consult with permittees and other interested parties when preparing the report
- Consultation accomplished by soliciting input on preliminary information (released 10/19/23)
- Listening sessions to occur on 11/10/23 and 11/13/23
- Accepting written input until 12/1/2023
- Final report and preliminary determination will be public noticed per s. 283.16(3)(d)
- 30-day public comment period, comments considered when making final determination