The
State of Phosphorus Compliance Options
Address

Government Affairs Seminar 2020

Matt Claucherty, Phosphorus Implementation Coordinator
Wastewater Program - Wisconsin Department of Natural Resources
Phosphorus Standards and Water Quality

- A numeric standard is the cornerstone of science-based regulatory action

- Targets for surface water set goals that correspond to designated uses (swimmable, fishable, etc.)

- Economics cannot be ignored

- Implementation in the WPDES program is solution-focused
I have a low phosphorus limit, what are my options?

- Upgrade treatment process to meet the limit
  - Median cost: $3 - $4 million (DOA Economic Impact Analysis)
- Water Quality Trading
  - Offset pollution elsewhere, where less expensive
- Adaptive Management
  - Longer-term plan to restore the receiving water
- Multi-Discharger Variance for Phosphorus
  - Temporary option when economics impacts are widespread/substantial
  - Statewide solution utilizing economy of scale
- Individual Phosphorus Variance for Phosphorus
  - Used when economic impacts are widespread/substantial
  - Facility works towards compliance as funding allows
Phosphorus Planning Outcomes Statewide

- No Limit: 136
- TBEL Only: 61
- Limit > 0.3 mg/L: 107
- Upgrade to Meet a Low Limit: 51
- Water Quality Trading: 44
- Adaptive Management: 21
- Individual Phosphorus Variance: 42
- Multi-discharger Variance: 118
- Planning Phase: 156
- TBEL Only: 61
Planning Phase

• Low-level phosphorus limits come with a 7-9 year compliance schedule
• The first four years are often devoted to evaluating options
• Situations where facility is currently planning:
  – Limit issued between 2015 and now
  – TMDL will impose a new or lower limit

21%
156 Facilities
No Limit Applicable

- No phosphorus in waste stream
- Receiving water with very high assimilative capacity
Limit not “Stringent”

- Generally, limits >0.3 mg/L can be achieved by chemical phosphorus removal
  - Actual threshold varies from facility to facility
- A growing category, thanks to development of TMDLs
  - Load allocation vs. wasteload allocation
- Technology-based limits only (+61 Facilities)
Statewide Distribution of Limits

- No Limit Applicable
- Blue Markers

- Limit > 0.3 mg/L
- Green Markers

- Low-level phosphorus limit
- Orange Markers
Upgrade to meet a low limit

- Generally, limits <0.3 mg/L require filtration
- Some have proposed ABNR or CPR
- Six-month average limit helps address variability
- Larger investment
  - Clean Water Fund priority funding category
- Also included: Regionalizing, Land App
Water Quality Trading

- 26 Facilities Approved
- 11 Facilities Currently Developing Plans
- Average Credit Need = 430 lbs/yr
- Average Project Size = 785 lbs/yr
- Average trade ratio = 1.8:1
Water Quality Trading

• Common Threads:
  – Small facility or already discharging close to limit
  – People or groups with watershed expertise are involved
  – Planning ahead (being proactive with the approach)

• Other Factors (optional):
  – An excellent opportunity presented itself
  – Municipality / industry already working on the landscape

44 Facilities

6%
Adaptive Management

- 17 Facilities Approved
- 4 Currently Developing
- 1700 Square Miles of Watershed Area
- 1790 Stream Miles (642 Named)
- ~200,000 Lbs of Annual Phosphorus Load Reduction
Common Threads:

- Project leader (municipality, firm, etc.) willing to work over the long term
- Can recruit partners also seeking water quality improvement
- Willing to accept a larger overall pollutant reduction goal (more time, partners, funding opportunities, flexibility are granted in return)

Other Factors (optional):

- Municipality / industry already working on the landscape
- New/innovative pollutant control strategies
Multiple Discharger Variance (MDV)

- Temporary relief from low-level phosphorus limits (not a compliance option)
- 41 permittees covered by MDV in 2018
- 75 permittees covered by MDV in 2019
- Payment to counties totaling $629,000 (2018) $938,000 (2019)
- 101 Facilities currently approved
MDV Facilities – Common Threads:

- Installing chemical phosphorus removal
  - Interim limit requirements
  - Minimizing the county payment
- Working towards compliance via trading
- Can work to “bridge the gap” to a higher TMDL limit
Individual Phosphorus Variance

• Common Threads:
  – Small municipal systems
  – Economic indicators a strong player
  – Unable to participate in MDV due to minimum requirements (county payment or interim limit)
  – Pollutant minimization plan tailored to facility

• Other Factors:
  – Pursuing water quality trading (looking for an excellent opportunity)
  – Planning for alternative solution (regionalization, land application)
Looking Ahead

Questions?
Matt Claucherty
Matthew.Claucherty@Wisconsin.gov
(608) 264 - 9244