

Phosphorus Update

Ken Johnson

Administrator, Water Division
Department of Natural Resources





Why do care about phosphorus?

- **IT'S ABOUT PLANT GROWTH**

- Phosphorus is one of 17 key nutrients for growth
- The two key nutrients are nitrogen and phosphorus
- Plant growth is good
- All fisheries need plants

- **TOO MUCH OF ANYTHING IS BAD**

- Control phosphorus and you control plant growth
- One pound of phosphorus = 500 pounds of algae
- Excessive plant growth results in low DO and an impaired fishery
- Excessive phosphorus results in B/G algal blooms and toxins

Significant Nutrient-related Water Quality Problems





How did we get here and can I go back the way I came?

• **THE PATH TO HERE**

- Citizen Law suit filed under the CWA
- EPA agreed to over promulgate DNR permits using federal P standards
- DNR agree to new rules rather than face EPA direct regulations
- December 2011 NR 217 and NR106 became effective

• **THE PATH BACK**

- DNR is a designated CWA agency
- EPA has adopted DNR P Standard
- EPA major initiative is to have every state adapt a nutrient reduction standard
- EPA will not agree to rescind NR 217
- If DNR rescinds EPA issues P limits in all Wisconsin permits (zero flexibility)



It's the other guy

- **IT'S AGRICULTURE**

- Statewide 80% of the phosphorus comes from agriculture
- A lot of agriculture runoff happens in non growing season

- **IT'S POINT SOURCES**

- Statewide 20% of the phosphorus comes from point sources
- Happens year round
- Happens even during low flows when it can be 100% of the issue/

Objective One is Blue Water not Green Water

- Balanced point source - nonpoint source approach





Objective Two is implementation in a least cost and fair way.

- Reasonable compliance schedules and implementation options
 - Must be consistent with Clean Water Act

Point Source Phosphorus Control





Compliance Tools

- Extended Compliance
- Bricks and mortar
- Trading
- Adaptive Management
- Site Specific Phosphorus Standards
- TMDLs
- Variances



EPA/DNR agreed Compliance schedule

- New Permits issued in 2013 include a final WQB effluent limit
- The limit is final unless the permit notifies the DNR that they wish to pursue adaptive management or trading by month 59.



EPA/DNR agreed Compliance schedule for second permit

- I decide to do nothing
 - Brick and Mortar addition 2 to 4 years into the second term
- I decide to trade
 - Permit is revised to reflect proposed trade with expected implementation in 2 years
- I decide to pursue Adaptive management
 - Adjusted permit limit of 0.6 mg/l



Watershed Adaptive Management Option

- Nonpoint source dominated watersheds
- Up to three permit terms (10 to 15 years)
- Interim limit (e.g. 0.6 mg/L)



Watershed Adaptive Management Option (continued)

- Watershed project -- urban and rural sources
- Must demonstrate progress
- Water quality monitoring required
- Potentially higher effluent limit



WPDES Permits

- NR 217 and NR 106
- *Guidance for water quality trading*
- *Guidance for the watershed adaptive management option*



Approved TMDLs

- Generally less stringent limits
- Rock River Basin - approved
- Lower Fox/Lower Green Bay - very soon
- Wisconsin River Underway




Variances

- Other options not affordable
- “Widespread social and economic impact”

Nonpoint Source Phosphorus Control





NR 243 & NR 151 Phosphorus Index

- Performance standard for farmlands

- Maximum average of 6



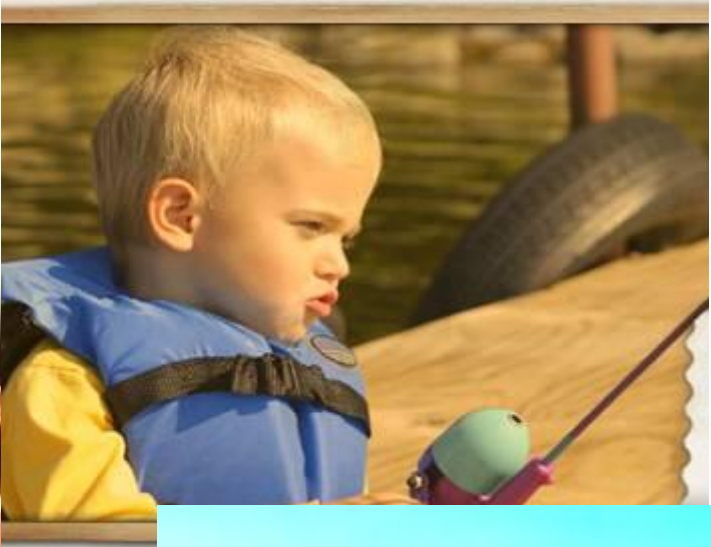
- Based on crop rotations, slope and amount of phosphorus in soil

- Required to receive income tax credits



Closing

- Balanced point source - nonpoint source approach
- Reasonable compliance schedules and implementation options
 - To extent allowed under Clean Water Act
- Challenge -- affordability



Questions?

Rock River at Afton, WI

