Nutrient Permitting In Michigan

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The Great Lakes State

- Surrounded by freshwater
- 99.9% of our waters drain to the Great Lakes
- Efforts to reduce nutrient enrichment in MI began early
“Nutrients originating from industrial, municipal, or domestic animal sources shall be limited to the extent necessary to prevent adverse effects on water treatment processes or the stimulation of growths of algae, weeds and slimes which are or may become injurious to the designated use.”
History of Nutrient Issues in Michigan
History of Nutrient Issues in Michigan

- WWTP upgrades in ’83

- 1986 - Implementation of 1 mg/l effluents standard (Rule 60)
  - Rule 323.1060 Plant Nutrients.
    Rule 60. (1) Consistent with Great Lakes protection, phosphorus which is or may readily become available as a plant nutrient shall be controlled from point source discharges to achieve 1 milligram per liter of total phosphorus as a maximum monthly average effluent concentration unless other limits, either higher or lower, are deemed necessary and appropriate by the department.

(2) In addition to the protection provided under subrule (1) of this rule, nutrients shall be limited to the extent necessary to prevent stimulation of growths of aquatic rooted, attached, suspended, and floating plants, fungi or bacteria which are or may become injurious to the designated uses of the surface waters of the state.
History of Nutrient Issues in Michigan
A Water Body-specific Nutrient Criteria Approach

1. Model current Total Phosphorus (TP)
2. Predict ‘expected condition’ (TP)
3. Identify thresholds in biological responses to TP
4. Use an algorithm to develop WB-specific criteria

≈ Reference condition
History of Nutrient Issues in Michigan

• We got really far....

• We were really excited....

• And then .......

• We lost our authority to promulgate Water Quality Rules on December 31, 2006.
History of Nutrient Issues in Michigan

• So we continued our work where we could……

Phosphorus Policy Advisory Committee
Final Report
March 15, 2007

Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions
SO, WHERE ARE WE TODAY?

- Ambient monitoring programs
- Nonpoint Source Program
- Conservation Reserve Enhancement Program (CREP)
- Michigan Agriculture Environmental Assurance Program
- Phosphorus banned in turf grass fertilizers and dishwasher detergent
- Education and outreach programs, and working with stakeholders to develop Watershed Management Plans to minimize nutrient inputs.
- Measures of Success
- We haven’t adopted numeric nutrient criteria but we continue to work on it.
• ~1500 NPDES permits (non-storm water) are effective in Michigan
• ~670 permits contain some type of TP control
• ~350 permits contain numeric TP Limits (concentration and/or load)
• TP limits range from <0.02 mg/l to 1.0 mg/l.
Lake Erie...
Questions??

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