New York’s TMDL Strategies to Protect Downstream Waters
Nutrient TMDLs in NY

• Historically focused on phosphorus in ponded waters with small watersheds

• Interstate TMDLs

• Have recently been using strategies from interstate TMDLs protecting downstream waters to develop larger watershed TMDLs in NY
Examples of whole watershed approaches

1. Interstate TMDLs – Chesapeake Bay

2. Protect flowing drinking waters at the mouth of a large watershed – Mohawk River*

3. Flowing upstream waters and receiving ponded water – Wallkill River*
Chesapeake Bay TMDL

• Susquehanna and Chemung Rivers are the northern headwaters of the Bay

• Portions of 19 counties in NY are within the watershed boundary

• NY assigned targets for nutrients delivered annually to the Bay by 2025:
  • TN: 11.79 million lbs
    ▪ Reduction of 1.04 million
  • TP: 0.476 million lbs
    ▪ Reduction of 0.072 million
History of Water Quality Issues

- **1980’s**: Multi-state program formed to address dead zones caused by excessive nutrients
- **2000**: NY signs MOU with other states to help restore the Bay
- **2010**: EPA releases Total Daily Maximum Load (TMDL) for the Chesapeake Bay
- **2014**: NY signs Chesapeake Bay Watershed Agreement
- **2021**: Third and final NY Watershed Implementation Plan Released
- **2025**: Implementation Deadline
NY’s Water Quality

Acres of Land

- 849,507 (21%)
- 366,185 (9%)
- 2,794,298 (70%)

Total Nitrogen per Acre Loads and Trends: 2011-2020

- Trend Direction:
  - No Trend
  - Improving
  - Degrading

- Average Load (lbs/ac)
  - 1.27 - 7
  - 8 - 14
  - 15 - 32.6

Total Phosphorus per Acre Loads and Trends: 2011-2020

- Trend Direction:
  - No Trend
  - Improving
  - Degrading

- Average Load (lbs/ac)
  - 0.11 - 0.45
  - 0.46 - 0.89
  - 0.9 - 1.69

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Implementation of TMDL

NY Water Quality Grant Programs
- Wastewater upgrades
- Agricultural BMP systems
- Green Infrastructure/ Urban Stormwater projects

Capacity building through Upper Susquehanna Coalition
- 19 Soil and Water Conservation Districts
- Agriculture, Riparian Buffer, Stream Restoration, and Wetland Teams
Mohawk River TMDL - Proposed Approach

- Set site specific targets for protection of drinking water segments
- Base targets upon relationships between TP, organic material, and formation potential of disinfection byproducts
- Implementation and funding will be expected to occur watershed-wide
Wallkill River Watershed – Proposed Approach

4 segments with highest best uses of primary or secondary recreation

Ultimate basin is an impaired ponded water

3 flowing water segments impaired based on downstream impairment

Develop targets based on downstream ponded water
Thank You

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