

# Using Compliance Schedules for Meeting Nutrient Limits in NPDES Permits

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# NPDES Permits in Massachusetts

- MA is one of three states not authorized to administer the NPDES programs
- NPDES permits are jointly issued by EPA Region 1 and MassDEP
  - Most permits drafted by EPA and then reviewed by DEP
- Permit document serves as both a federal NPDES permit and a state surface water discharge permit
- Compliance and enforcement is shared responsibility of both agencies

# Nutrients in Massachusetts

- Nutrients are one of leading causes of impaired waters in MA
  - Sources are primarily urban runoff and wastewater discharges
- Final Phosphorus TMDLs for 127 waterbody segments
  - Primarily lakes, some rivers
- Final Nitrogen TMDLs for 110 waterbody segments
  - Primarily coastal areas with no point source wastewater discharges
- Many NPDES permits have limits or monitoring requirements for phosphorus and/or nitrogen (with or without TMDLs)

# Options for Compliance Schedules

- Incorporated in permit
- In a separate compliance order
- Pros and cons for each option



# Regulatory Basis

- Federal Regulations
  - 40 CFR 122.47: The permit may, when appropriate, specify a schedule of compliance leading to compliance with CWA and regulations.
- State Regulations (Surface Water Quality Standards)
  - 314 CMR 4.03(b): A permit may, when appropriate, specify a schedule leading to compliance with the MA and Federal Clean Water Acts and regulations. The purpose of a schedule of compliance generally is to afford a permittee adequate time to comply with one or more permit requirements or limitations that are based on new, newly interpreted or revised water quality standards that became effective after both issuance of the initial permit for a discharge and July 1, 1977.

# Factors Considered in Compliance Schedules

- Current performance
- Affordability
- Scope of upgrades needed
- Other ongoing activities by permittee
  - Limits for other pollutants
  - CSOs
  - Infiltration/Inflow
  - Other upgrades

# Assabet River Phosphorus TMDL

- Effluent-dominated streams with many impoundments
- Phosphorus TMDL completed in 2004
- 4 municipal WWTPs discharging to the river
- TMDL implemented through renewal of NPDES permits
  - 0.1 mg/l TP monthly average April - October
  - 1.0 mg/l TP monthly average November – March
- All facilities given compliance schedule to achieve limit in 4.5 years

# Example Compliance Schedule

- Within twelve (12) months of the issuance date of the permit, the Permittee shall submit to EPA and DEP a status report relative to the planning and design of the facilities necessary to achieve the permit limits.
- Within twenty-four (24) months of the issuance date of the permit, the Permittee shall complete design of the Facility improvements required to achieve the total phosphorus limits.
- Within thirty (30) months of the issuance date of the permit, the Permittee shall initiate construction of the Facility improvements required to achieve the total phosphorus limits.
- Within forty-two (42) months of the issuance date of the permit, the Permittee shall submit to EPA and DEP a status report relative to construction of the Facility improvements required to achieve the total phosphorus limits.
- Within fifty-four (54) months of the issuance date of the permit, the Permittee shall complete construction of the Facility improvements required to achieve the total phosphorus limits.



# Assabet River Phosphorus Phase II

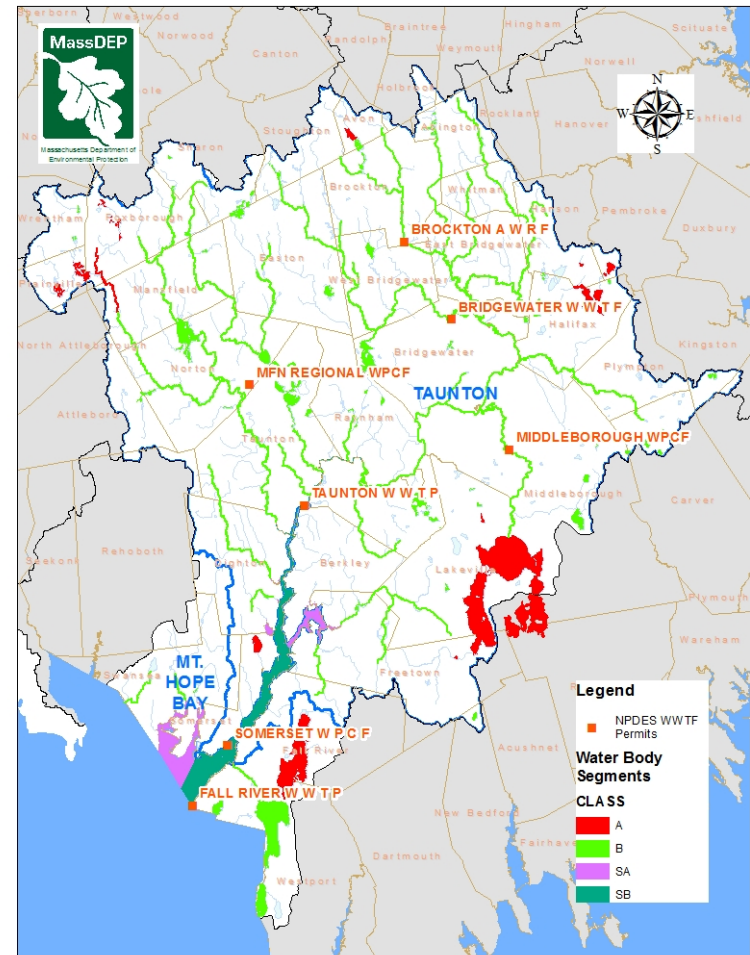
- Phase I limits met by all facilities
- In addition to phosphorus limits, TMDL recommended dam removal, but no dams removed at this time
- As an alternative, reduced cold season winter phosphorus limits proposed (in draft permits)
  - April-October 0.1 mg/l TP remains
  - November-March reduced to 0.2 mg/l TP
  - No compliance schedules anticipated

# Nitrogen in Taunton River Watershed

- Taunton River and Estuary identified as impaired for DO and nitrogen, but no TMDL developed yet
- 6 major municipal WWTPs discharging to the watershed
- In absence of TMDL, EPA Region 1 developed analysis to determine nitrogen limits for each major facility
- 5 of 6 permits issued between 2014 and 2017, 1 permit remaining to be issued
- No nitrogen limits for minor facilities

# Nitrogen in Taunton River Watershed

- Facilities assigned mass-based limit equivalent to either 3 mg/l or 5 mg/l at design flow, depending on size of facility
- Some facilities also have phosphorus limits
- All facilities given compliance schedule, but schedule varies by facility
- Schedules to meet final limit range from 4.5 to 10 years



# Example Compliance Schedule

- Within one year of the effective date of the permit, the Permittee shall submit to EPA and MassDEP a status report relative to the planning and design of the facilities necessary to achieve the total nitrogen and total phosphorus permit limits.
- Within two years of the effective date of the permit, the Permittee shall complete design of the facility improvements required to achieve the total nitrogen and total phosphorus permit limits.
- Within three years of the effective date of the permit, the Permittee shall initiate construction of the facility improvements required to achieve the total nitrogen and total phosphorus permit limits.
- Within four years of the effective date of the permit, the Permittee shall submit to EPA and MassDEP a status report relative to construction of the facility improvements required to achieve the total nitrogen and total phosphorus permit limits.
- The permit limits of 131 lbs/day total nitrogen and 0.17 mg/l total phosphorus shall go into effect sixty (60) months from the effective date of the permit. Until such date the existing permit limit of 0.20 mg/l total phosphorus shall remain in effect.
- The permittee shall notify EPA and MassDEP of its compliance or noncompliance with the requirements of this part in writing no later than 14 days after each interim or final date of compliance.

# Questions?

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