



Massachusetts Statewide Total Maximum Daily Load for Pathogen-Impaired Waterbodies *Fact Sheet*

Introduction

The Massachusetts Department of Environmental Protection (MassDEP) is responsible for monitoring surface waters of the Commonwealth and identifying waters that do not meet applicable requirements as established in the Massachusetts Surface Water Quality Standards (MA SWQS; 314 CMR 4.00). MassDEP is then required by the federal Clean Water Act (CWA) to develop Total Maximum Daily Loads (TMDLs) to restore the health of these impaired waterbodies. A TMDL establishes the maximum amount of a pollutant that may be introduced into a waterbody and still ensure attainment and maintenance of water quality standards.

Key points

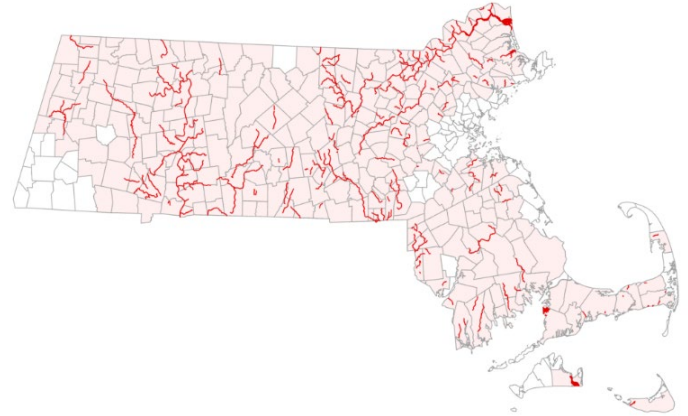
- The Final Statewide Total Maximum Daily Load for Pathogen-Impaired Waterbodies ("Final Statewide Pathogen TMDL Report") is a restoration plan and pollution budget.
- The Final Statewide Pathogen TMDL Report was developed for pathogen-impaired waterbodies listed in the [Final Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle](#)
- Goals are to protect designated uses established in the MA SWQS (e.g., public water supply, primary contact recreation, and shellfishing).

Statewide Approach

The Final Statewide Pathogen TMDL Report consists of a **core document** that includes applicable water quality standards and numeric targets, TMDL calculation methodology, and development of load and waste load allocations. Additionally, **watershed specific appendices** were developed to highlight detailed information on watershed characterization, existing water quality data, potential sources, and existing local management.

TMDL Summary

Indicator pathogens (enterococci, *E. coli*, and fecal coliform) were used to identify surface waters that were not meeting surface water quality standards. MassDEP seeks to reduce or eliminate sources of pathogen



impairments throughout the Commonwealth. The Final Statewide Pathogen TMDL Report includes 228 pathogen-impaired segments across 288 municipalities. All TMDL targets are based on attaining water quality criteria established in the MA SWQS. The report includes 212 TMDLs for *E. coli*, 18 TMDLs for fecal coliform, and 228 TMDLs for enterococcus.

Sources and Implementation

Pollutant sources may include failing septic systems, pet waste, wildlife waste, agriculture, recreational waters use management, combined sewer overflows (CSOs), stormwater, illicit sewer connections, failing infrastructure, and wastewater treatment plants or publicly-owned treatment works.

The Final Statewide Pathogen TMDL Report prioritizes implementation activities for pathogen-impaired surface waters based on several factors such as suspected illicit discharges, presence of public bathing beaches, risk of concentrated stormwater runoff, and measured bacteria concentration. However, all surface waters listed as impaired in the report will require remediation regardless of priority.

These TMDLs will be implemented through an iterative process that will require establishing realistic goals, source identification, and mitigation. MassDEP, the U.S. Environmental Protection Agency (EPA), local municipalities, watershed organizations, and other stakeholders can collaborate to identify and eliminate pathogen sources. Specific corrective actions will be

implemented at the watershed level and may include increased detection of illicit discharges, expanded public education, wastewater treatment facility upgrades, and prioritizing CSO abatement.

Public Participation

Three public information sessions were held on May 8, 2024 (in-person), May 9, 2024 (virtual), and June 13, 2024 (hybrid). At each session, MassDEP staff included a presentation explaining the TMDL and associated watershed-specific appendices. MassDEP then opened the floor for stakeholder input.

Public comments received during the information sessions and comments received in writing within a 45-day comment period following the first meeting were considered by the Department. The Final Statewide Pathogen TMDL Report includes a summary of the public comments, MassDEP's response to the comments, and attendance records from all meetings (**Appendix AC Response to Comments**).

EPA Approval

EPA approved the Final Statewide Pathogen TMDL Report on February 13, 2025.