



Rhode Island's TMDL Program

2008 SRF National Workshop

October 21, 2008

Elizabeth Scott, Deputy Chief

RI Department of Environmental Management

Office of Water Resources





Overview of Presentation

- Background on WQ issues facing State
- Rhode Island's TMDL Program
- Focus of TMDL implementation efforts
- Financing available for TMDL implementation



Water Quality Management Framework

Define Assessment Units & Assign Water Quality Standards

Monitor and Assess Standards Attainment

Problem
Identification

List Impaired Waters

Problem
Solving

Develop TMDL, Determine Needed Pollutant
Reductions and Allocate Among Sources

Issue Point Source
Permits - including
Stormwater Phase II

Control Non Point Sources
Technical & Financial Assistance



WQ Assessment: Rivers

2008 Integrated Report

- Of the 1,498 river miles in the state, 49% are considered assessed and of these, 45% are impaired, and 35% are impaired and scheduled for a TMDL.
- Most significant causes of impairment for rivers & streams are pathogens, metals, biological integrity, low DO, and nutrients.
- Potential sources causing impairment include CSOs, municipal, industrial discharges & separate storm sewers, & NPS such as urban runoff, septic systems, & wildlife/waterfowl.





WQ Assessment: Lakes

2008 Integrated Report

- Of the 20,917 acres of lakes & ponds in the state, 78% are considered assessed and of these, 53% are impaired, and 10% are impaired and scheduled for a TMDL.
- For lakes and ponds, the major causes of impairment are metals (mercury), nutrients, oxygen depletion, & bacteria.
- Major pollution source is urban stormwater runoff. Internal nutrient recycling, agriculture, septic systems & waterfowl/wildlife are other sources.





WQ Assessment: Estuarine Waters 2008 Integrated Report

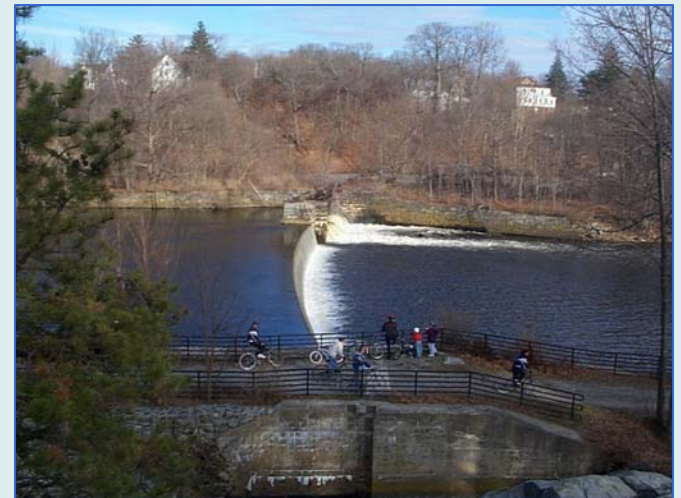
- Of the 158.5 sq. miles of estuarine waters, nearly 100% are considered assessed; of these, 35% are impaired, and 33% are impaired & scheduled for a TMDL.
- The major causes of impairment in RI's estuaries are oxygen depletion, pathogens, & nutrients.
- The major sources of bacterial contamination are CSOs in the upper Bay & stormwater discharges in other estuarine waters.
- WWTFs & urban runoff are major sources of nutrient enrichment & oxygen depletion.





303d List & TMDL Scheduling

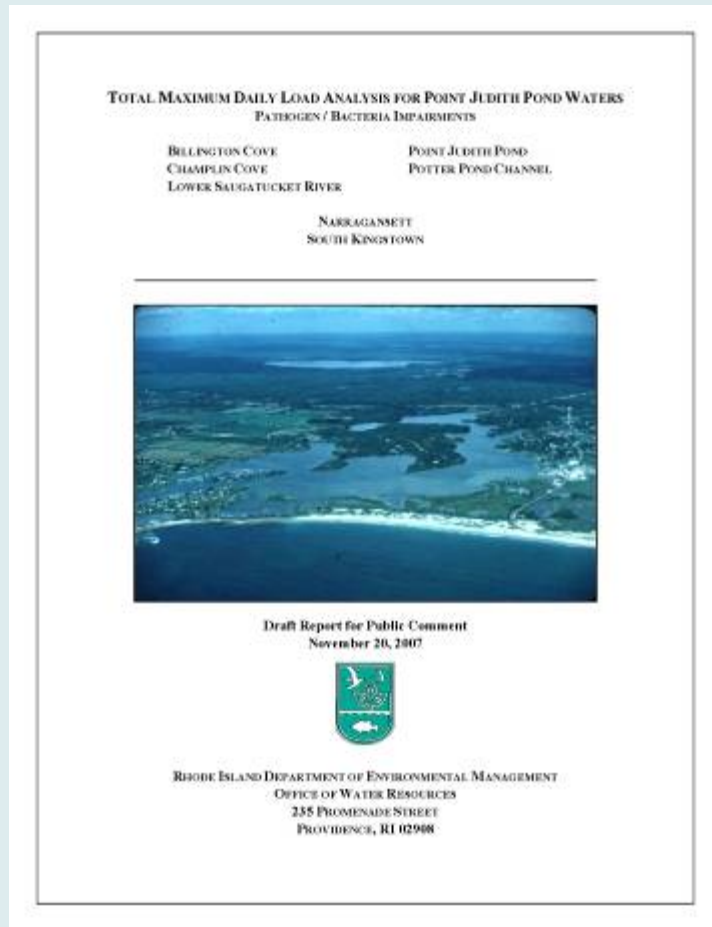
- 2008 303(d) list identifies 112 waterbodies with 196 impairments
- Each waterbody impairment is scheduled for TMDL development
- High priority given to drinking water & shellfish use impairments
- Scheduling reflects adaptive management approach
- Consideration also given to alignment of TMDL development with other monitoring or watershed protection/restoration efforts





TMDL Program Highlights

- To date, DEM has completed TMDLs addressing impairments in 76 waterbodies
- Majority address pathogen & stormwater related impacts
- Emphasis on identification of pollution sources causing impairment
- Recommend specific pollution abatement actions which provide technical basis to guide investments in water quality restoration projects
- Not under court ordered Consent Decree

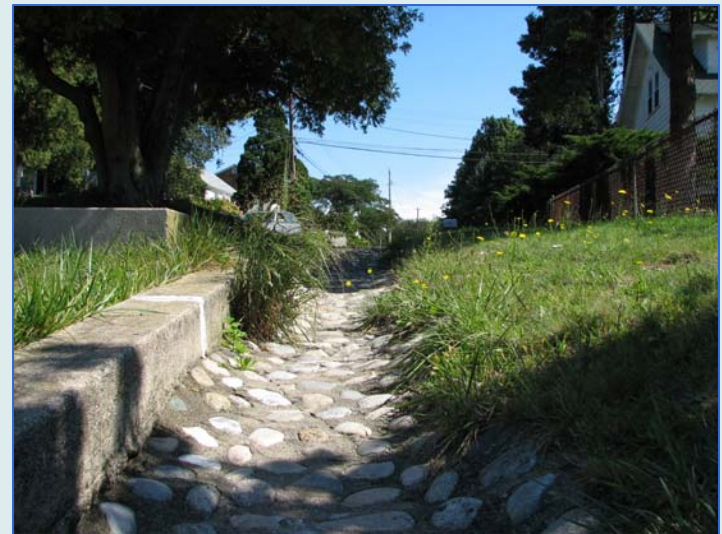




Additional Stormwater Management Requirements Associated with TMDLs

If TMDL identifies stormwater controls are necessary to address impairment:

“The operator...must comply with (RIPDES Phase II stormwater) permit requirements that modify or are in addition to the minimum control measures based on an approved TMDL or equivalent analysis...”





Additional stormwater management requirements associated with TMDLs

Phase II TMDL Implementation Plan:

- Prioritized schedule for the design and construction of BMPs to reduce both volume of runoff and pollutant load to the *maximum extent feasible*.
- Catchment area feasibility analysis of prioritized outfalls to identify locations & BMP treatment options - preference over upland locations versus end-of-pipe.
- Assessment of remaining outfalls to determine significance relative to the pollutant(s) of concern, and prioritization for BMP construction





TMDLs and SRF

- Priority list puts higher emphasis on projects addressing pollution due to pathogen
- More rating points awarded to projects that implement TMDLs than non-TMDL projects
- Good linkage: Use of SRF directed to mitigation of municipal point sources and PS solutions to NPS problems (e.g. sewerage to address failed OWTs)
- TMDLs directing retrofit of existing stormwater infrastructure. To date, SRF not used extensively to design/construct stormwater BMPs.
- Availability of State/federal grants not sufficient to meet need
- Increasing reliance on local revenue & loans



Challenges to Restoring Water Quality

- Building local capacity to address stormwater and other non-point sources of pollution
- Securing steady revenue stream to construct and maintain stormwater infrastructure - emergence of stormwater utilities and greater reliance on SRF loans
- Getting (and maintaining) public support for pollution prevention and abatement actions





State of Rhode Island and Providence Plantations
Department of Environmental Management



<http://www.dem.ri.gov/programs/benviron/water/quality/rest/index.htm>