



# Stormwater Permits in New England

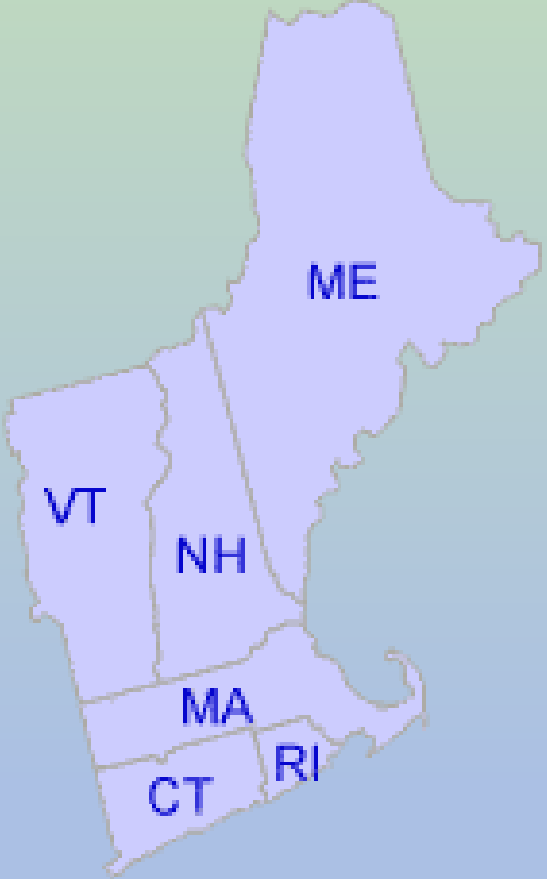
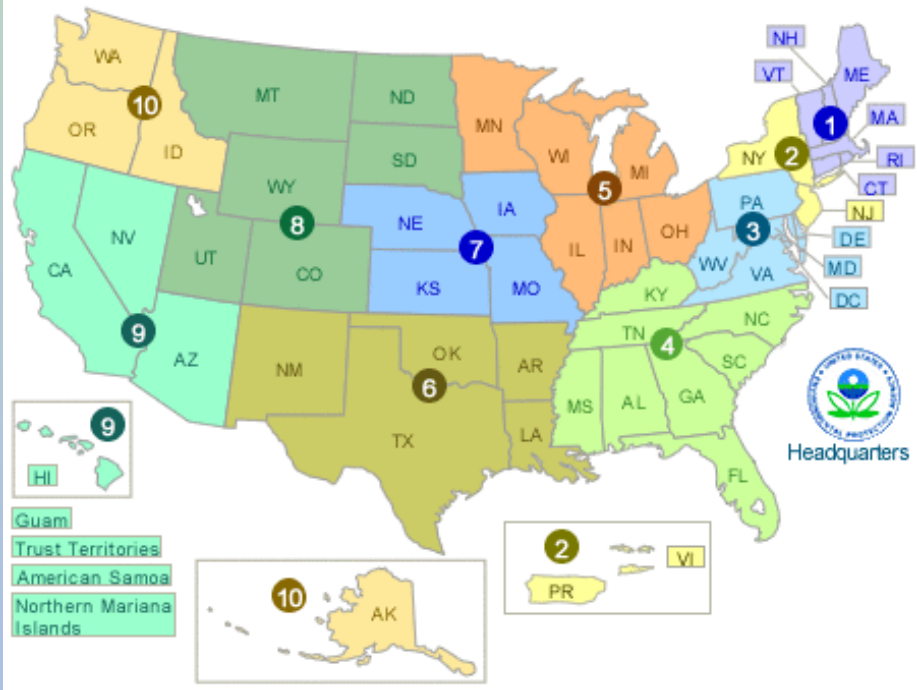
**Newton Tedder**

EPA Region 1

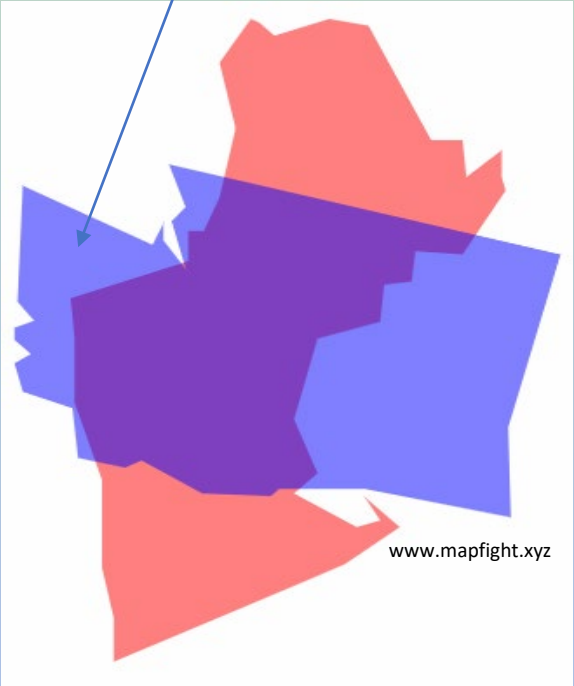
Boston, MA

[tedder.newton@epa.gov](mailto:tedder.newton@epa.gov)

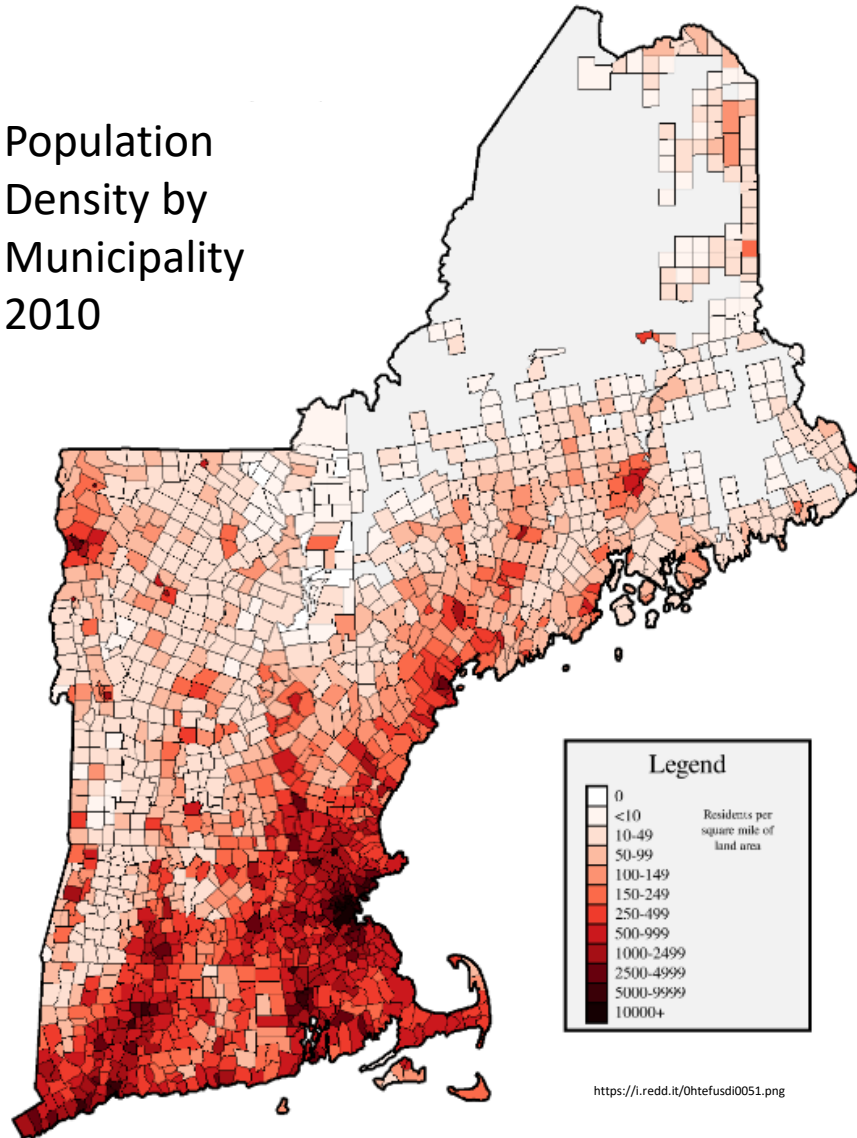
# EPA New England



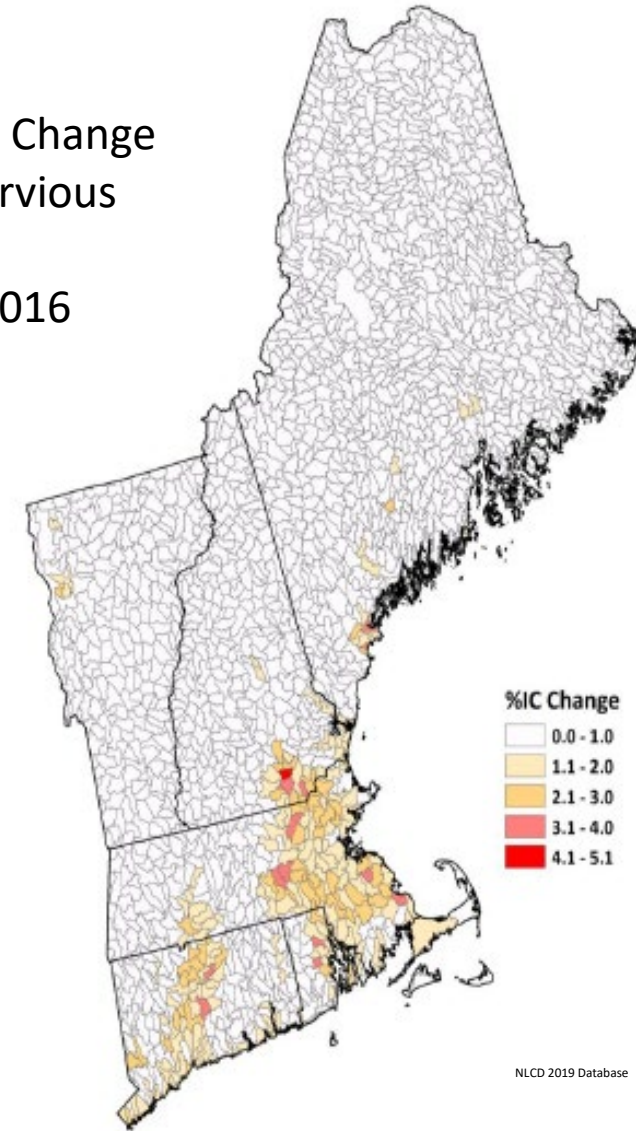
Washington State



Population  
Density by  
Municipality  
2010



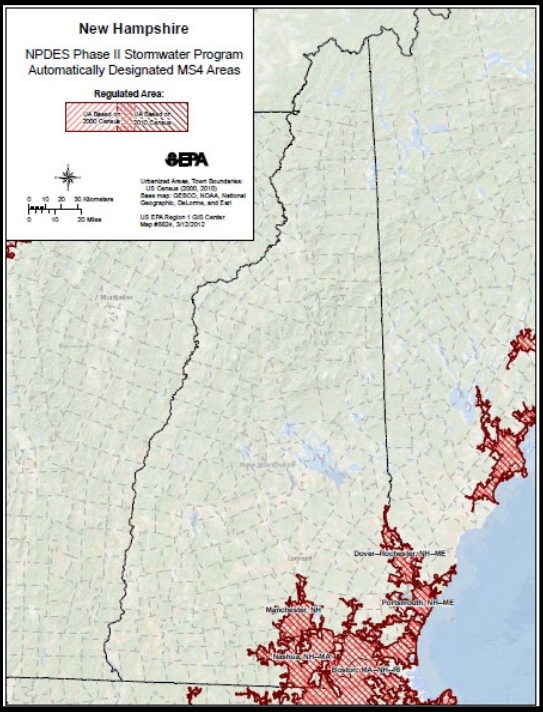
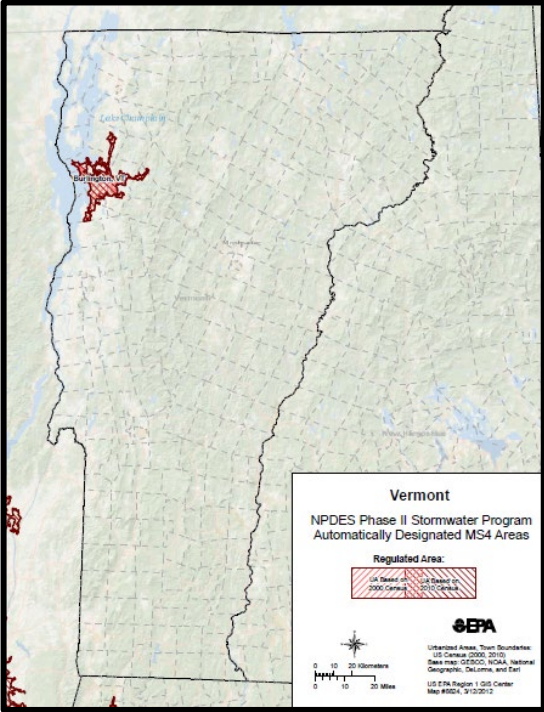
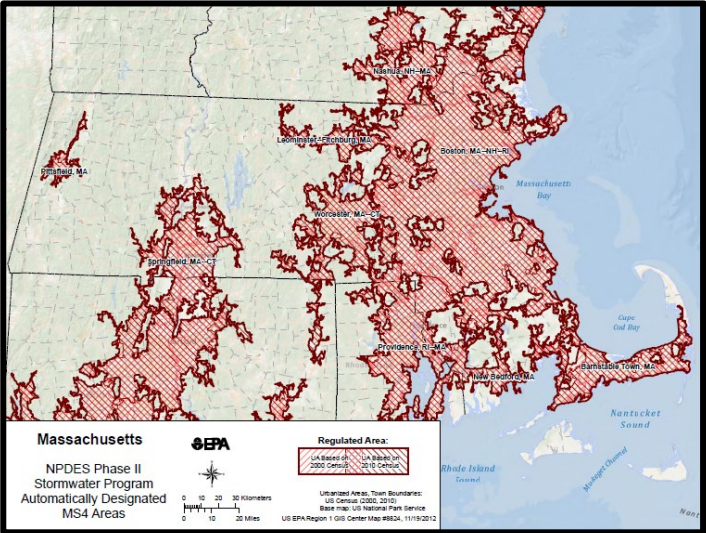
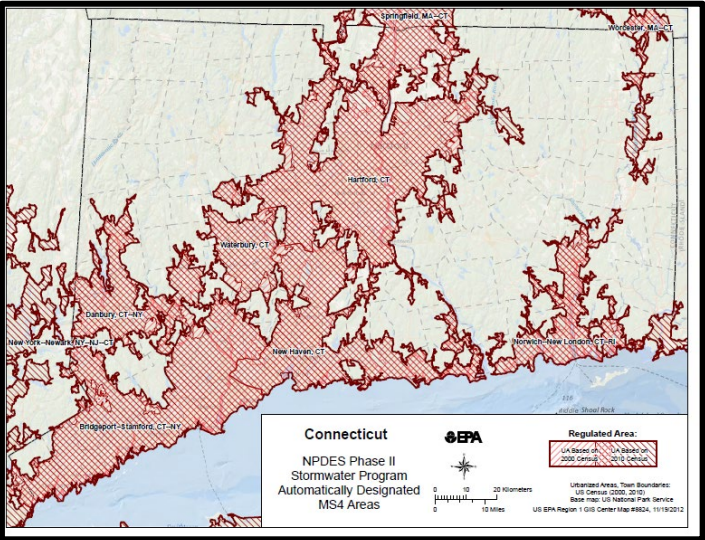
Percent Change  
in Impervious  
Cover  
2001 -2016





# Urbanized Area

2010 Census



# Current Status of MS4 Permits

## Connecticut

- Comprehensive GP
- Effective 2017
- Expired 2022

## New Hampshire

- Comprehensive GP
- Effective 2018
- Expires 2023

## Massachusetts

- Comprehensive GP
- Effective 2018
- Expired 2022

## Maine

- Two-Step GP
- Effective 2022
- Expires 2027

## Rhode Island

- ?
- Effective 2003
- Expired 2008

## Vermont

- Hybrid GP
- Effective 2018
- Expires 2023



# Largest Challenges in the MS4 World

## Permitting Challenges

- Nutrient Impacts
- Post Construction Requirements
- TMDL Requirements
- Discharges to Impaired Waters
- Quantifying Actions



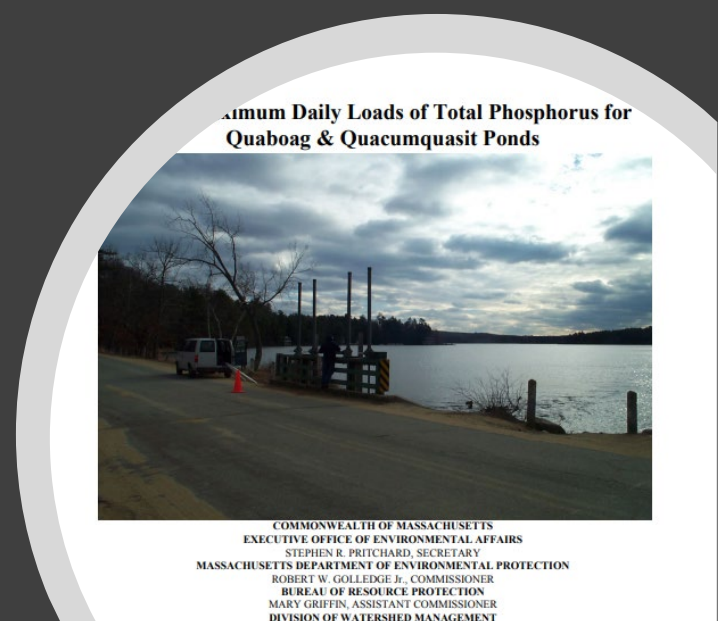
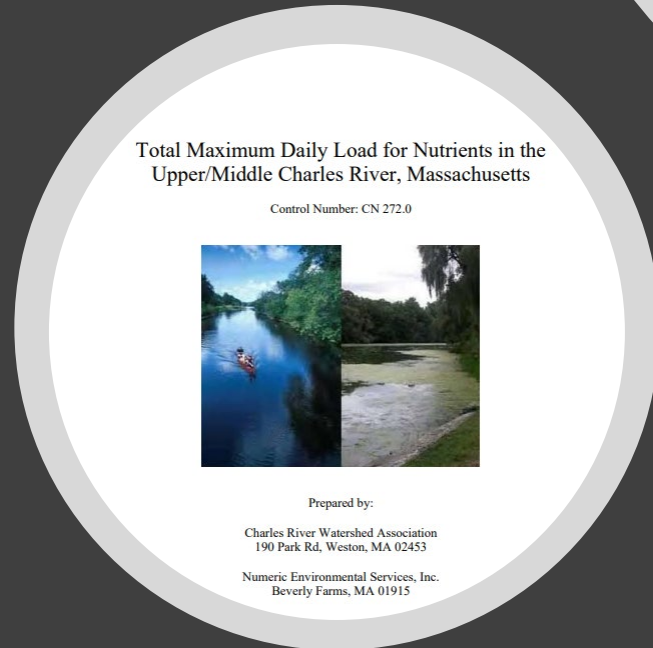
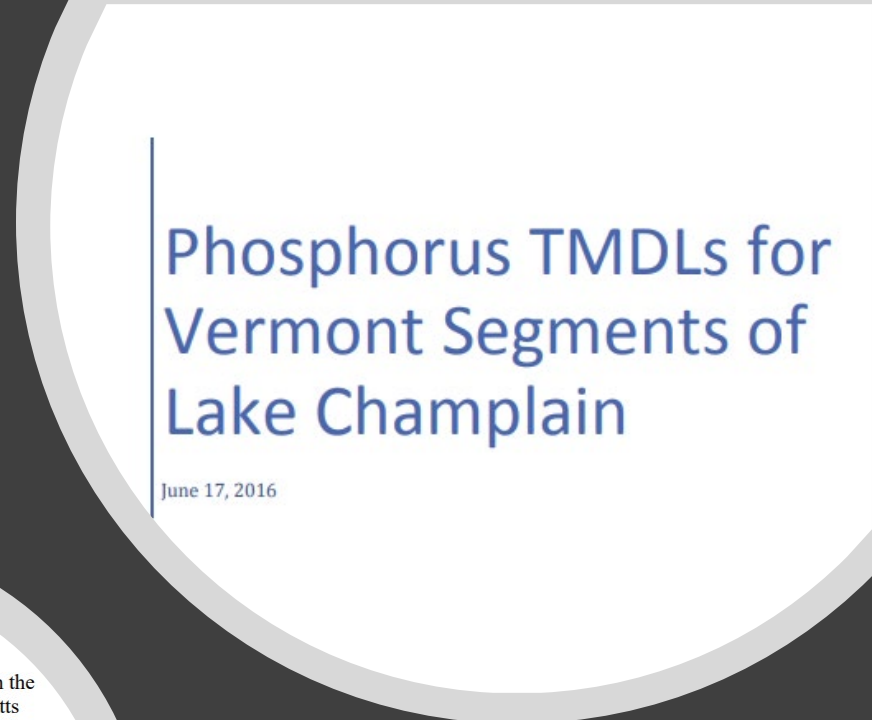
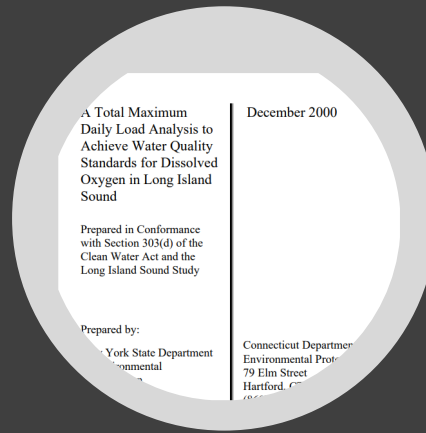
## Implementation Challenges

- Aging Infrastructure
- Lack of Dedicated Funding
- Tracking of Private BMPs



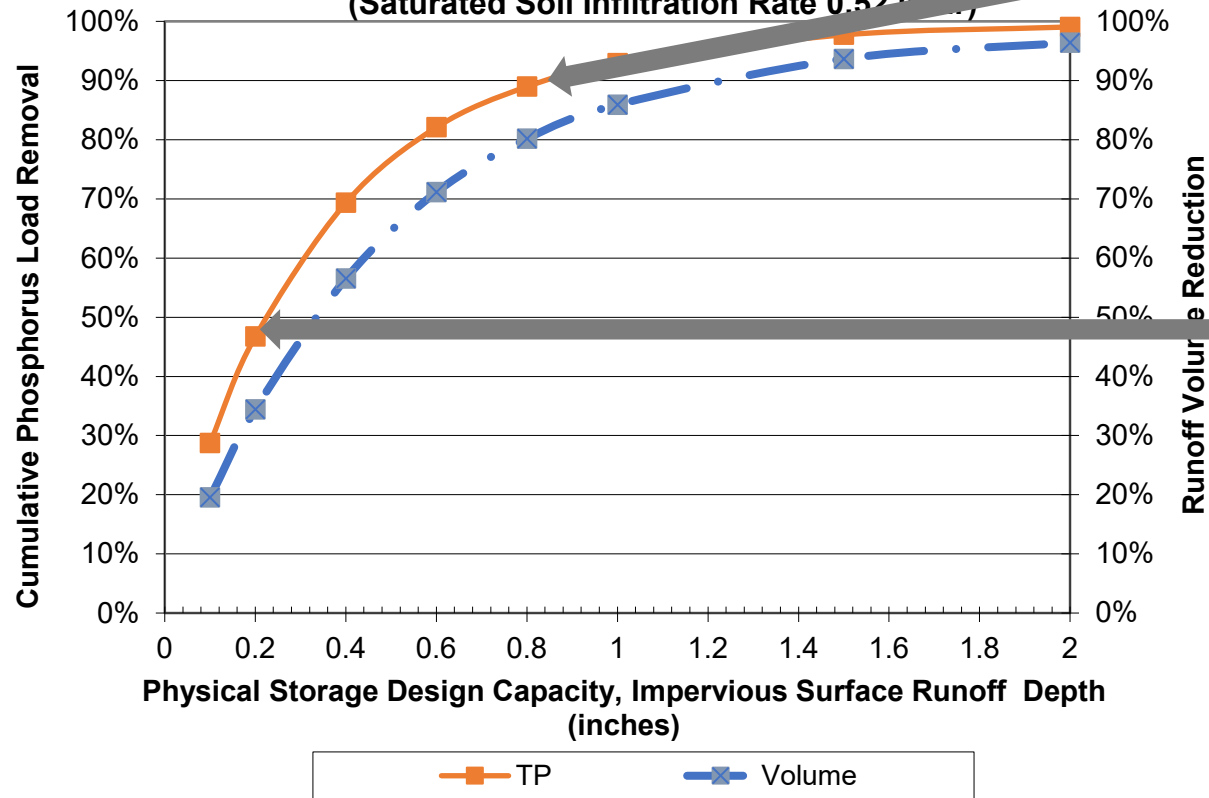
# R1 Approach to TMDLs

- Comprehensive Permit Approach ( MA and NH)
  - Permit sets numeric limits and provides way to account for meeting limit
  - Compliance is based on assumed performance of actions taken by permittee
  - Long schedules are given to hit reduction targets
- Two-Step Approach (VT and ME)
  - Permit requires a separate TMDL implementation plan to be submitted and approved by the permit issuing authority



# Crediting GI

**SW Control Performance Curves  
Surface Infiltration Practices  
rain gardens, swales, basins, etc.**  
(Saturated Soil Infiltration Rate 0.52 in/hr)





# Construction Stormwater Management Matters

Retention or treatment requirements on new and re-development is the only way to reduce pollution from stormwater over time without retrofitting the built environment

LID and GI techniques have been proven to reduce development costs

Unmitigated development can cost tax payers over \$50,000 per acre of development in future retrofits to offset pollution and flooding issues

# R1 Approach to Post-Construction (MA and NH)

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- Numeric nutrient and sediment annual load reduction requirements for new and re-development
- Pollution reduction calculations done with EPA tools used for TMDL implementation



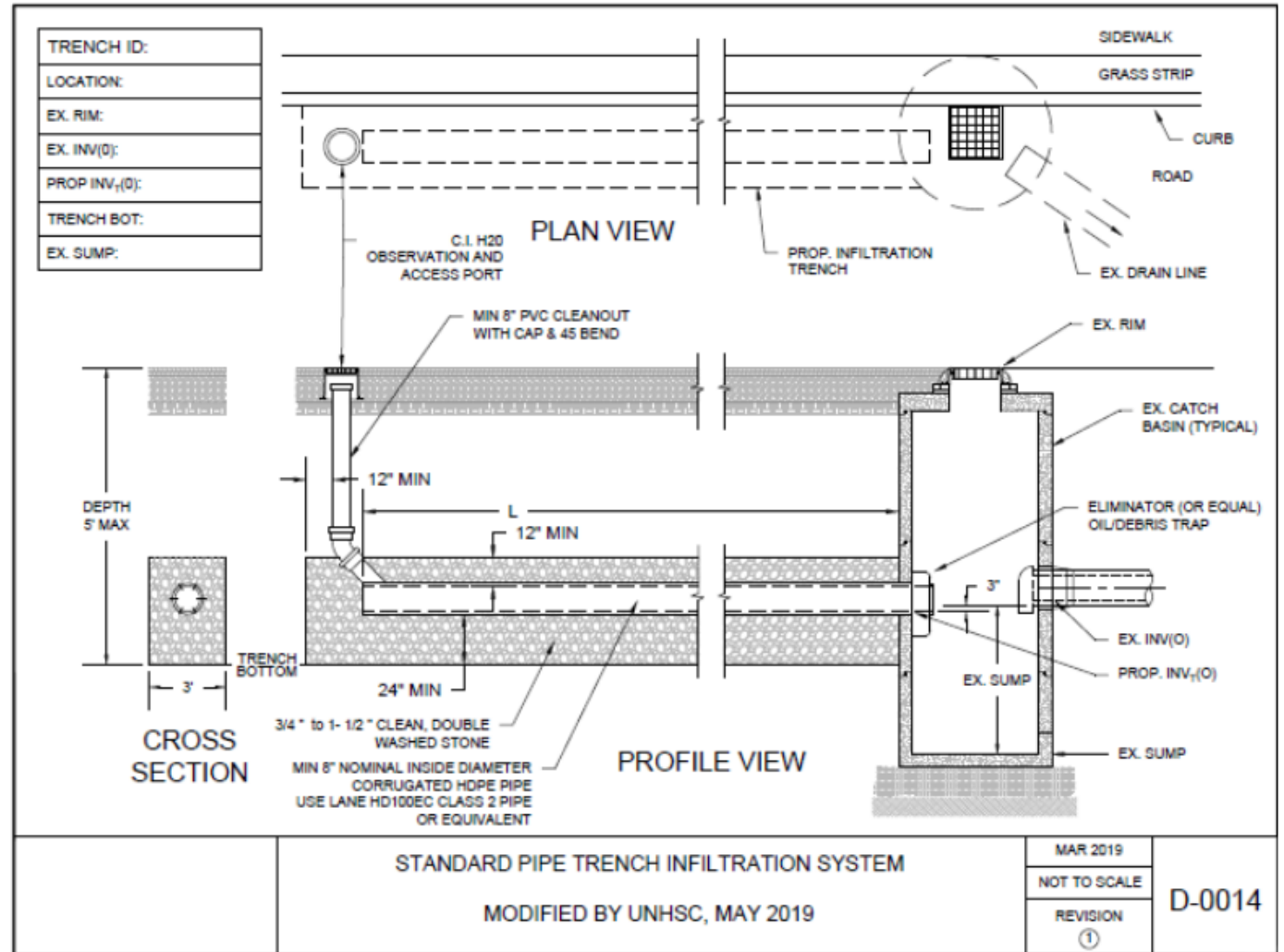
# Overcoming Barriers to Implementation

## Community Buy-in for Stormwater Funding: An EPA Roundtable Series

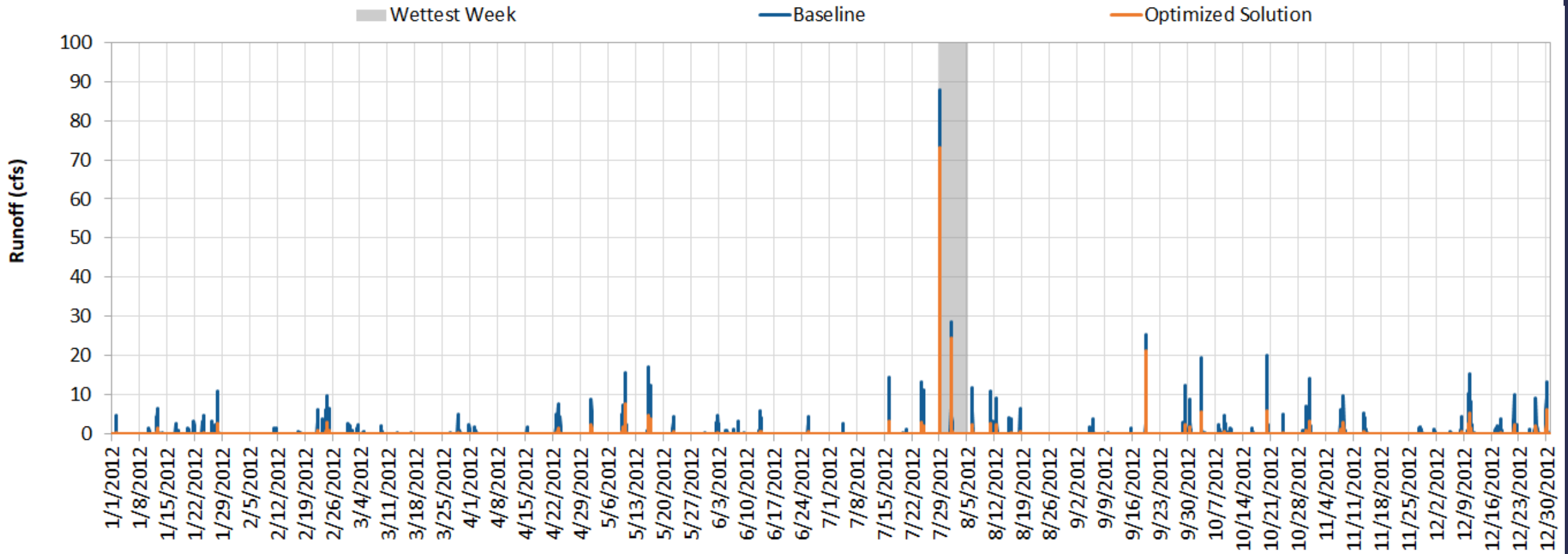
- Helped municipal staff build skills and strategies to understand community concerns, develop effective partnerships, and achieve community support for stormwater funding

## Capacity Building at the Local Engineering and DPW Level

- Helped municipal staff integrate GI designs into municipal operations







# GI and Municipal Operations

Moving from demonstration projects to normal practice

# Future Issues for Stormwater Permitting

- RDA
  - Used currently in MA, VT & ME
  - Petitions in CT and RI
- Setting pollutant reduction targets without a TMDL
- Broad adoption of strong post-construction stormwater standards

