



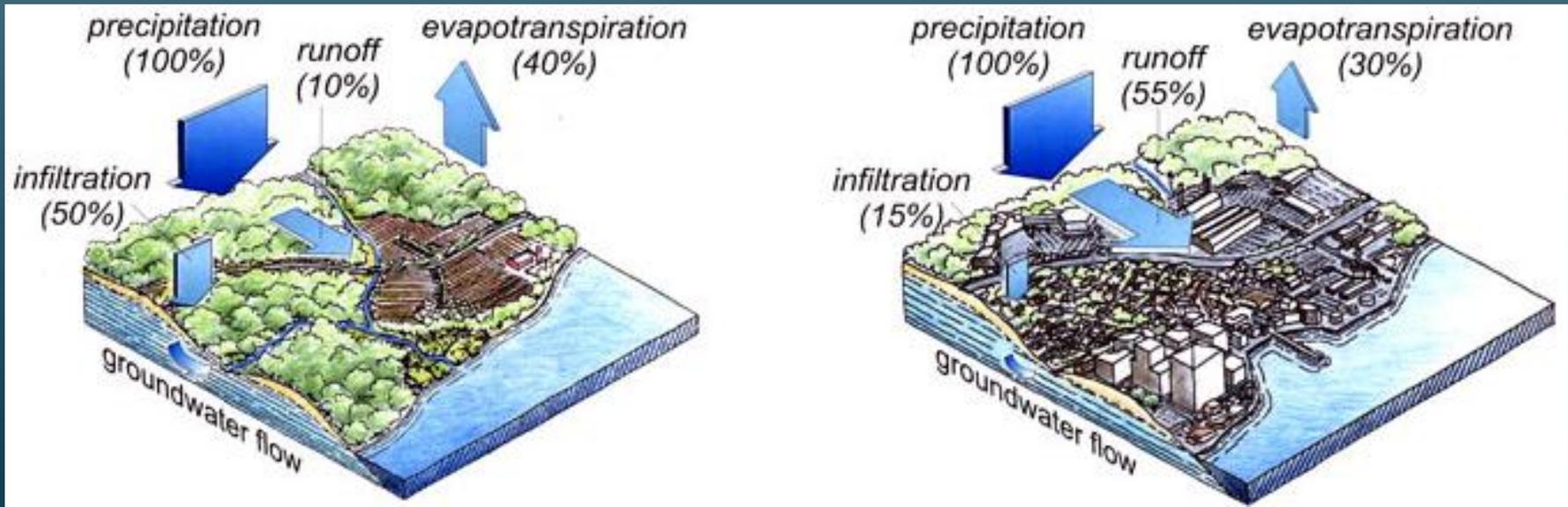
# Funding Stormwater Management

*Strategies to support stormwater management at the municipal level*

# Stormwater Overview

Stormwater is a natural result of rain storms and other wet weather events.

However, with an increase in impervious surfaces, stormwater has become an issue that increasingly affects people's lives and the environment.



**DRINKING WATER**



**INFRASTRUCTURE**



**FLOODING**

**NATURAL RESOURCES**



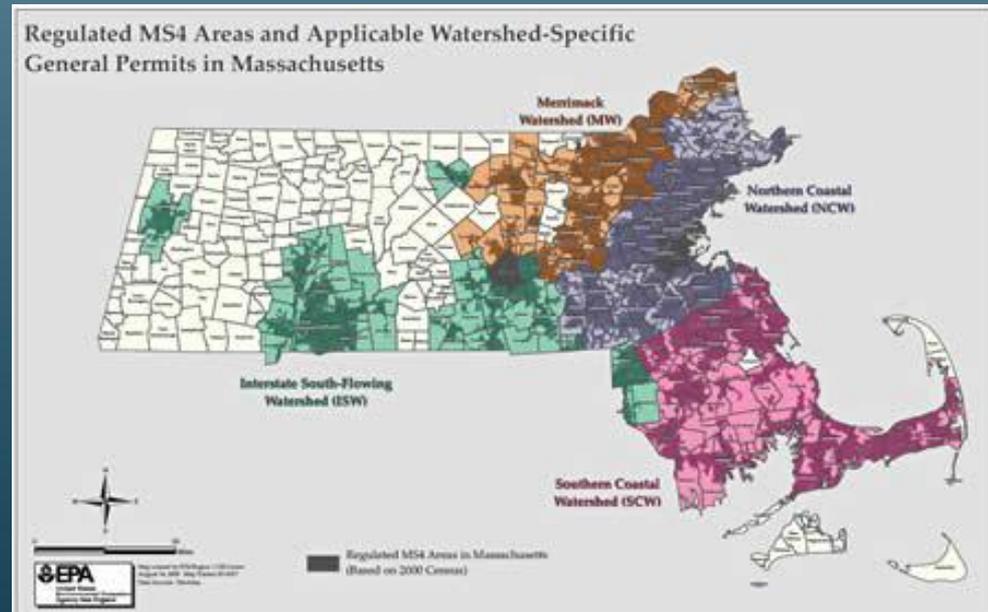
**WATER RECREATION**



# Stormwater Management Regulations

Due to these potential impacts, stormwater has come under more scrutiny and regulation.

Since 2003, National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer Systems (MS4) general permit.



# Local Stormwater Management under MS4



**Public Outreach and Involvement**



**Illicit Discharge Detection and  
Elimination (IDDE)**



**Construction Site Runoff Control**

# Local Stormwater Management under MS4



**Post-Construction Runoff  
Control**



**Pollution Prevention/Good  
Housekeeping**

*Additional requirements anticipated as EPA  
prepares new NPDES MS4 general permit.*

# Draft Residual Designation for the Charles River

Due to continued impacts of phosphorous through stormwater runoff, Charles River is focus of possible additional regulations.

Use of Residual Designation Authority (RDA) is now under consideration by the EPA.

The screenshot shows the EPA website's "Urban Rivers in New England" section. The header includes the EPA logo and navigation links. The main content area is titled "Charles River" and features a photograph of swimmers on the river. Text on the page describes the river's length and recreational use, and mentions a draft permit for stormwater discharges. A sidebar on the left lists various resources related to the Charles River.

**EPA** United States Environmental Protection Agency

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You are here: [EPA Home](#) » [EPA New England](#) » [Rivers / Special Programs](#) » Charles River

## Charles River



Swimmers on the Charles River

The Charles River, which flows 80 miles through Massachusetts, from Hopkinton to Boston Harbor, is one of New England's crown jewels. One of the busiest recreational rivers in the world, the lower Charles is lined with boat houses, jogging paths, sports fields and performance facilities that are used by hundreds of thousands of city dwellers each year.

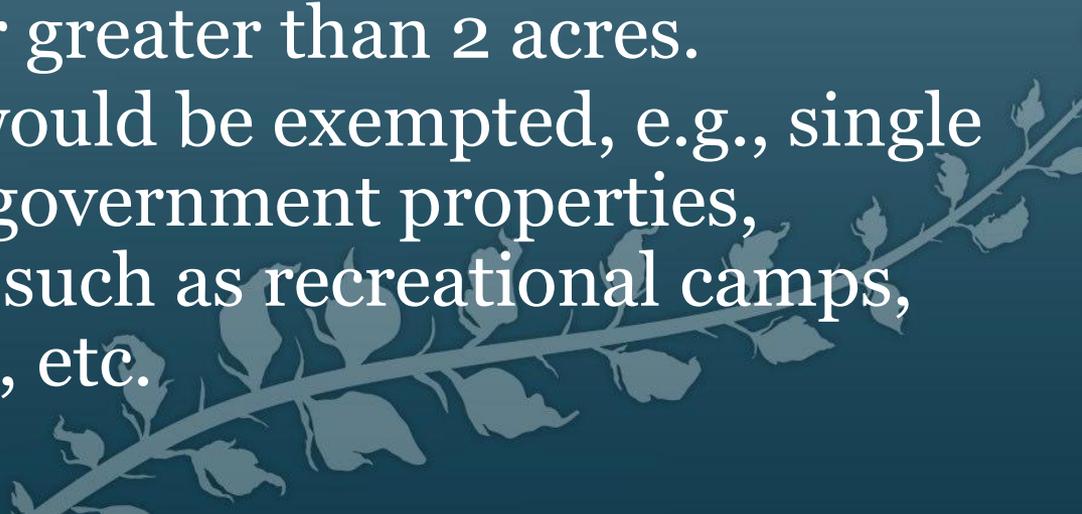
EPA is proposing a draft general permit for designated stormwater discharges in the Upper Charles River watershed, within the municipalities of Milford, Bellingham, and Franklin, Massachusetts

The Charles River has exhibited ecological problems stemming from human-induced pollution, and EPA has responded with a long-term effort to improve water quality and overall ecological health for the river. This effort began in 1995 and has continued to this day, bringing together the concentrated and coordinated effort of EPA, the State of Massachusetts, local officials and citizens, and concerned volunteer and citizen organizations.

Much progress has been made to reduce bacterial contamination in the Charles; however, the river continues to suffer from excessive levels of nutrients, most notably phosphorus in storm water run off.

**EPA NE Home**  
A-Z Index  
Charles River Home  
Basic Information  
History of Human Impacts on Charles River  
Clean Charles River Initiative  
Reducing Combined Sewer Overflows  
Addressing Nutrients in the Charles River (TMDL)  
Report Cards  
Enforcement / Assistance  
Science Reports (TMDL &

# Overview of Draft RDA for the Charles River

- Designation would cover Milford, Bellingham and Franklin.
  - Proposed for stormwater discharges from areas of the towns in the Charles River watershed.
  - Proposed to include properties with impervious surfaces equal to or greater than 2 acres.
  - Certain land uses would be exempted, e.g., single family residential, government properties, specified land uses such as recreational camps, mobile home parks, etc.
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# Funding Alternatives for Stormwater Management



# Funding Alternatives for Stormwater Management

- Property Taxes/General Fund

Current source, competitive, does not reflect the true cost of stormwater impacts.

- Grants

Available, competitive, typically one-time, local match.

- Bonds/Loans

Available, project readiness, require full repayment.

- Stormwater Permit/Connection Fee(s)

New developments, new connections, site specific.

# Funding Alternatives for Stormwater Management

- **Special Assessment/Benefit Districts**  
Area specific improvements, limited availability.
  - **Local Option Sales Tax on Meals**  
In addition to state tax, relation to general fund, competing demands.
  - **Stormwater Utility/Enterprise Fund**  
Dedicated fund, operated like a public service (e.g., electricity), assessment based on stormwater impacts.
- 

# Focus on Stormwater Utilities



# Focus on Stormwater Utilities

## ➤ Legal Framework

*MGL Chapter 83 (sec. 16)*: Provides authority for locality to develop a utility and charge fees to support stormwater management activities.

*MGL Chapter 40*: Defines a district for purposes of water pollution abatement, water, sewer, etc.

## ➤ Administrative Structure

A utility can be established as a new department or integrated into existing department (e.g., DPW).

# Focus on Stormwater Utilities

## ➤ Establishing a Work Program and Budget

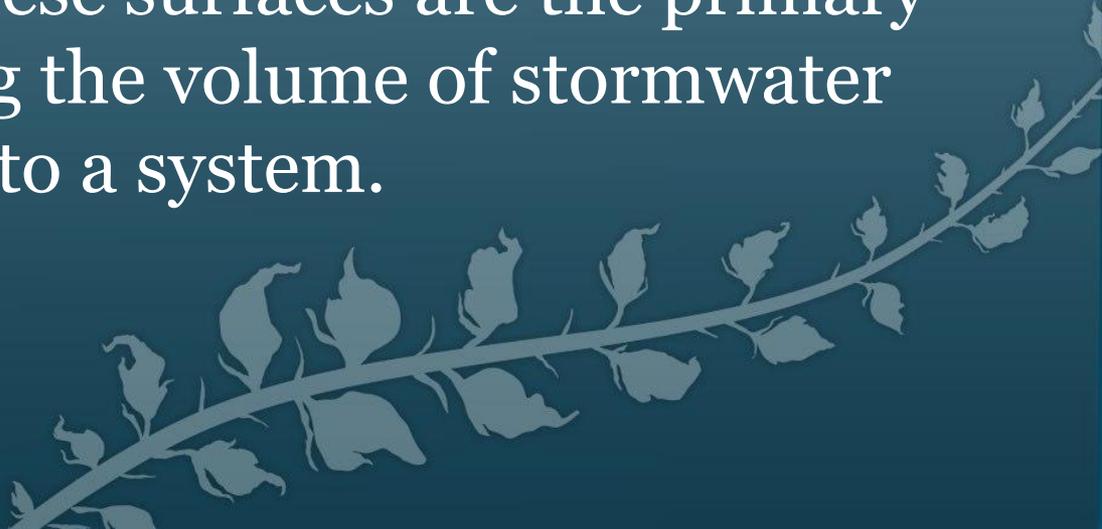
As part of developing a stormwater utility, staffing needs, capital projects (ongoing and proposed), and operations and maintenance activities should be inventoried (e.g., MS4 activities).

This provides a stormwater program overview and funding; should be performed in coordination with the establishment of stormwater fees in order to balance costs with projected revenue.

# Focus on Stormwater Utilities

## ➤ Establishing Stormwater Fees

A stormwater utility fee can be structured in a variety of methods. Typically, the fee is calculated in relation to the amount of impervious surface on a property, since these surfaces are the primary element influencing the volume of stormwater runoff contributed to a system.

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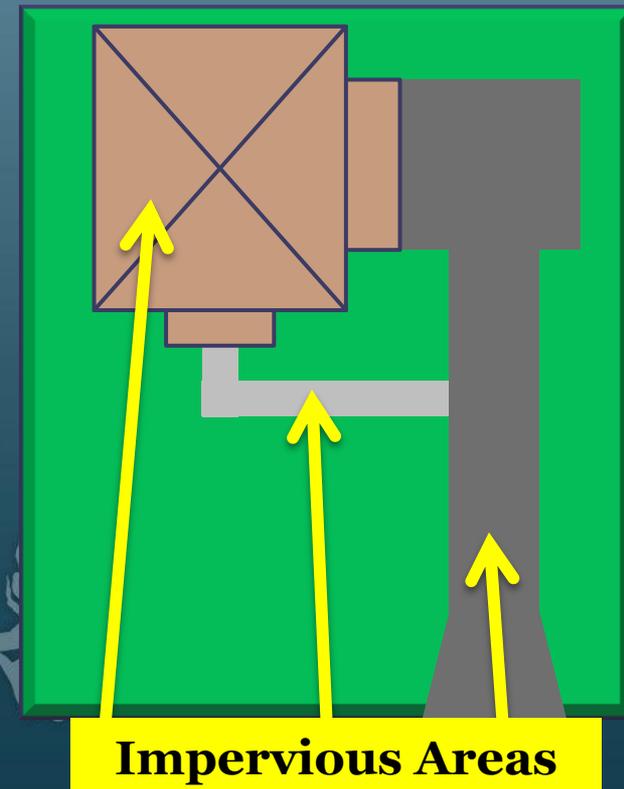
# Focus on Stormwater Utilities

## ➤ Establishing Stormwater Fees

The Equivalent Residential Unit (ERU) is most common fee method used.

Based on the effect/runoff from a typical Single Family Residential home's impervious area (= 1 ERU).

Fees for Commercial, Industrial and possible larger Residential parcels (Two-Family, Multi-Family, etc.) are calculated relative to ERU.



# Focus on Stormwater Utilities

## ➤ Establishing Stormwater Fees

Example Stormwater Fee Structures:

<i>Property Type</i>	<i>Town</i>	Town A	Town B	Town C
<b>Single- or Two-Family</b>		\$25/quarter	\$6.25/quarter	\$25/quarter
<b>Multi-Family</b>		\$40/ 3,210 sq. ft. (annually)	\$6.25/quarter	\$25/quarter
<b>Industrial or Commercial</b>		\$40/ 3,210 sq. ft. (annually)	\$37.50/quarter	\$0.45/1,000 sq. ft./quarter

# Focus on Stormwater Utilities

## ➤ Credits for Stormwater Mitigation Measures

Provide incentives for certain practices and opportunities for reductions in fee (e.g., installation of additional BMPs and increased maintenance).

## ➤ Methods of Billing

A stormwater fee can be handled through separate billing or inclusion with existing water and sewer bills. Most existing stormwater utilities integrate billing with existing water and wastewater bills.

# Focus on Stormwater Utilities

## ➤ Public Involvement

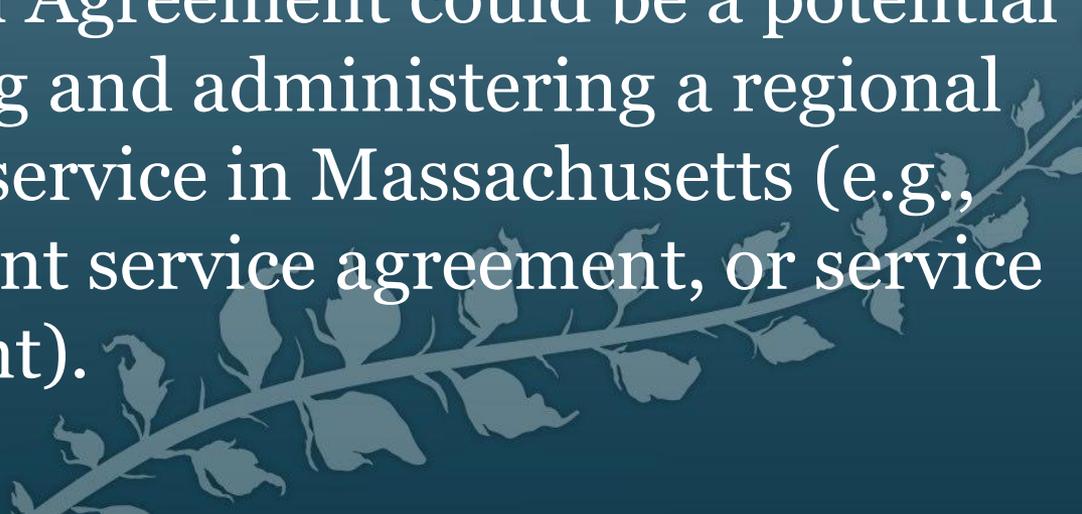
Public education and engagement is critical during development of utility. Outreach necessary to communicate benefits of a well-funded and managed stormwater program to local quality of life. Specific actions include outreach to properties that generate significant amounts of runoff and distribution of projected fee amounts to property owners in advance of actual billing.

# Focus on Stormwater Utilities

## ➤ Town Utility vs. Regional Utility

Although most utilities in the US are municipal, in states like Florida and Washington there are regional utilities.

An Inter-Municipal Agreement could be a potential tool for undertaking and administering a regional stormwater utility service in Massachusetts (e.g., formal contract, joint service agreement, or service exchange agreement).

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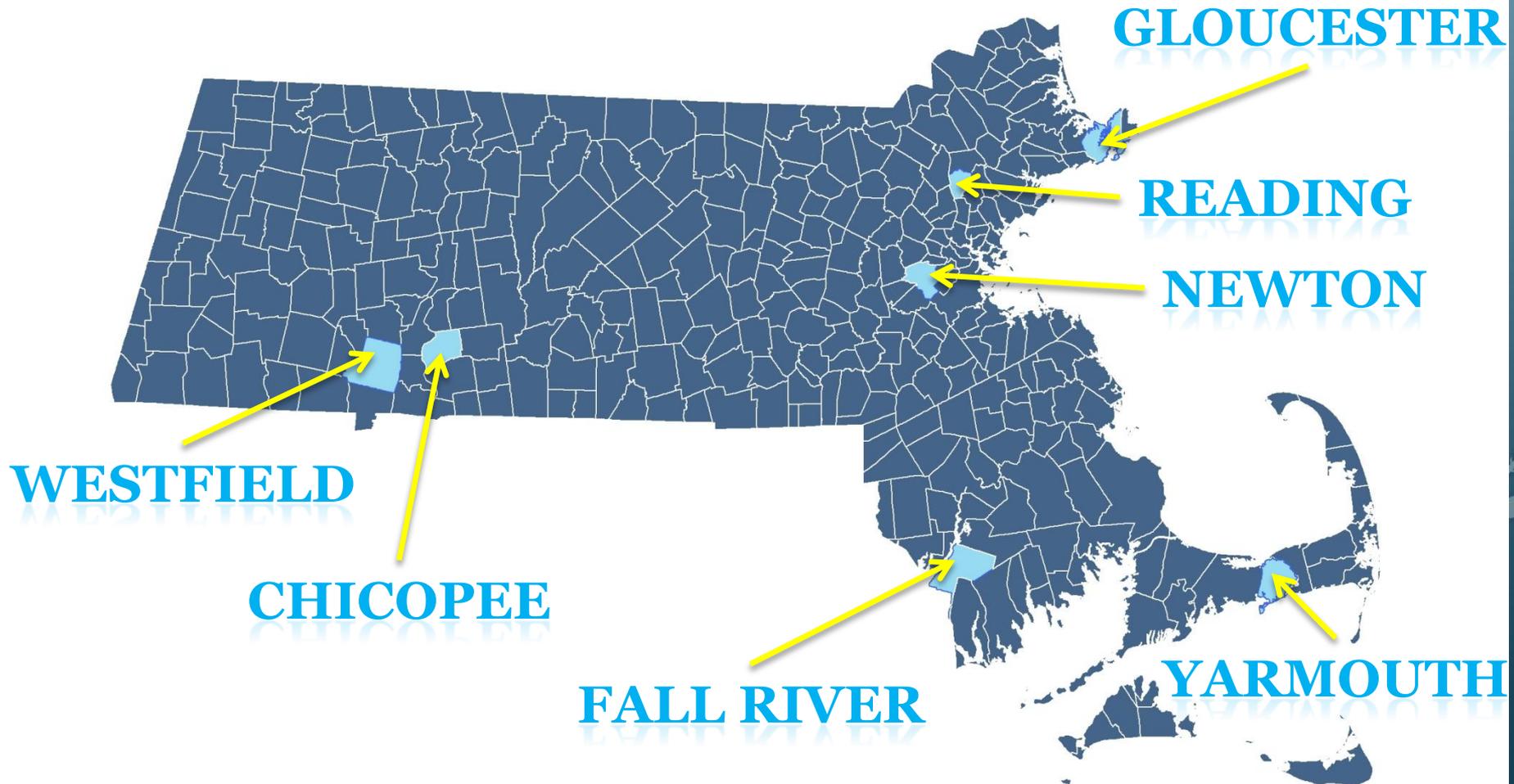
# Stormwater Utility Profiles



# Massachusetts

## Stormwater Utility Profiles

*Locations that have advanced or are considering use of stormwater utilities*



# Primary Impetus for Stormwater Utility

➤ Chicopee

*CSO\* elimination*

➤ Newton

*Locally identified needs /MS4 regulations*

➤ Fall River

*CSO\* elimination*

➤ Westfield

*MS4 regulations*

➤ Gloucester

*CSO\* elimination*

➤ Yarmouth

*MS4 regulations*

*\* Combined Sewer Overflows (CSOs)*

# Reading Municipal Stormwater Utility

- Developed between August 2003 and January 2006.
  - Several financing options were considered (e.g., service fees, property taxes, etc.).
  - A Stormwater Utility was chosen since it would provide a stable funding source and an equitable method for assessing impacts.
  - Approved by Town Meeting in April 2006.
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# Reading Municipal Stormwater Utility

- Single and two-family properties are assessed a flat fee (calculated average of impervious surface).
- Other properties including condominiums are charged fees based on the total amount of impervious surface on their lot.
- Undeveloped property is not assessed a storm water fee.
- Includes abatement program for addressing/treating stormwater – Up to 50% reduction in fee.

# Reading Municipal Stormwater Utility

<b>Single and Two-Family Properties</b>	<b>\$10 per quarter (\$40 annually)</b>
<b>Multi-Family/ Commercial/ Industrial Properties</b>	<b>\$40.00/ 3,210 sq. ft. (annually)</b>
<b>Annual Budget</b>	<b>\$350,000 - \$400,000</b>

# Reading Municipal Stormwater Utility

- Utility supports a variety of activities including:
    - Street Sweeping and Catch Basin Cleaning
    - Ditch and Detention Basin Maintenance
    - General Drainage Improvements (e.g., infiltration systems, repair of deteriorated or collapsed pipes, etc.)
    - Mapping of Drainage System and Outfalls
    - Illicit Discharge Detection Program
    - Equipment purchases
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# National Stormwater Utility Profiles

*Locations in the United States that have implemented stormwater utilities*



# Brevard County Regional Stormwater Utility

- The Brevard County Stormwater Program (BCSP) was created in 1990; Accompanied by a stormwater utility fee to fund program activities.
- In 1999, joined by the City of West Melbourne and the Town of Malabar.
- Administered by the County.
- Uses an ERU approach based on the typical impervious square footage of a single family home.
- Features a credit program that provides a reduction in assessments for stormwater BMPs and maintenance.



# Funding Stormwater Management