

The Path to Sustainable Funding for Stormwater Infrastructure Longmeadow, MA

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Outline

- **Background on Longmeadow, MA and Stormwater Utilities**
- **Stormwater Infrastructure**
- **Stormwater Regulations**
- **Stormwater Costs**
- **Evaluation of Stormwater Funding Alternatives**
- **Next Steps**

Longmeadow, MA



Why Consider a Stormwater Utility?

**Hurricane Irene deluges Western Massachusetts;
flood waters won't crest for days**

Flood Warning for Connecticut River

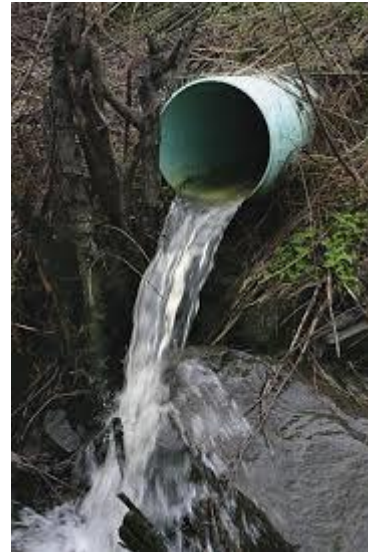
**Storm results in some flooded streets, downed
tree branches in Longmeadow**

Flood Warning in effect for the Connecticut River



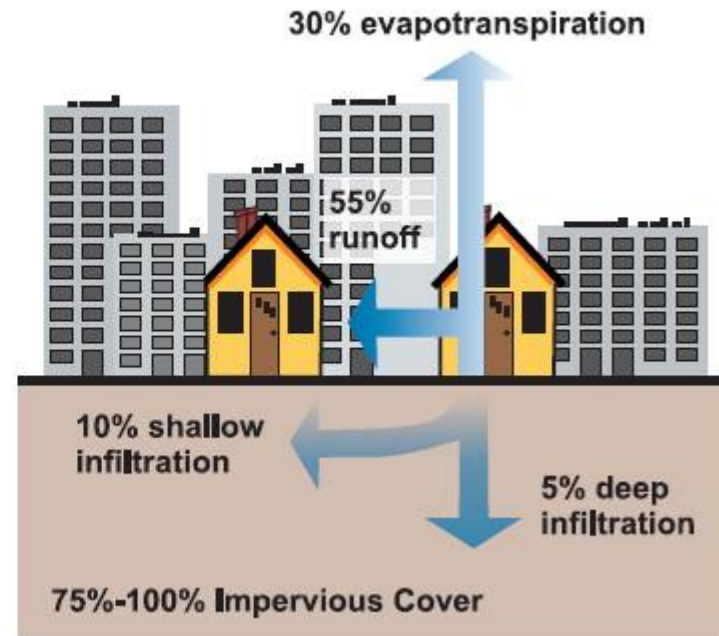
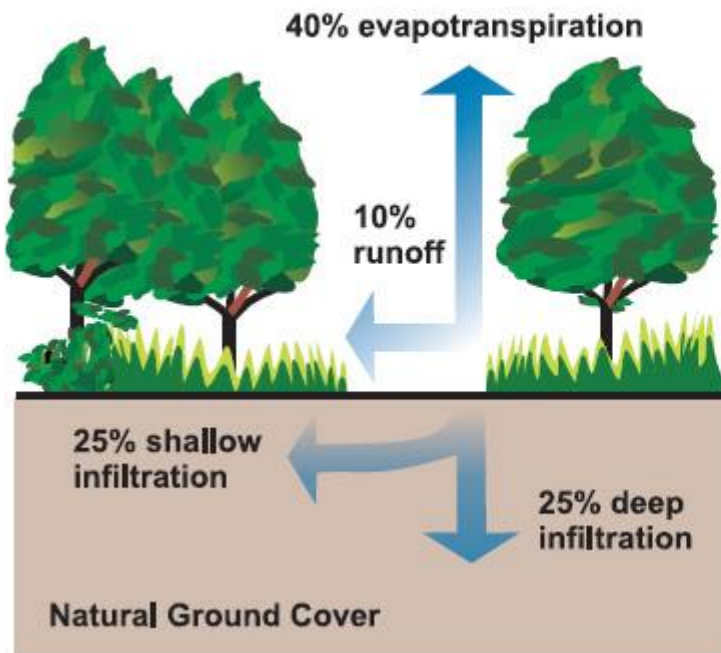
What is a Stormwater Utility?

- Funding mechanism for stormwater infrastructure similar to water or wastewater utility
 - “Stormwater Enterprise Fund”



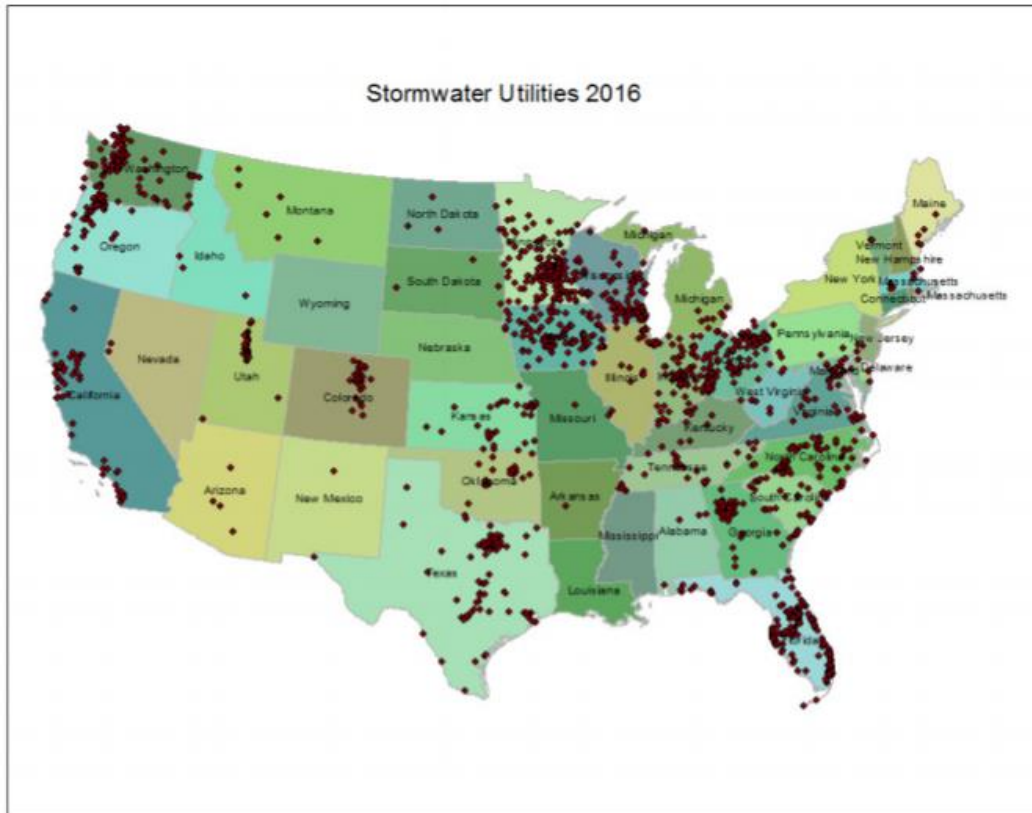
Funding a Stormwater Fee

■ User fee based on Impervious Surface



Stormwater Utilities Around the Country

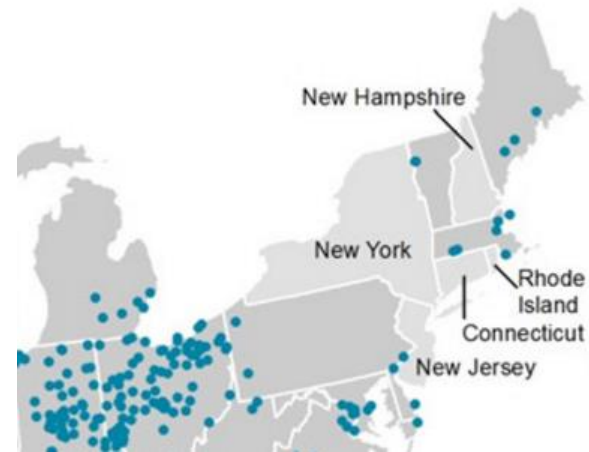
- 2000-2500 throughout the U.S. (as of 2016)



Source: Western Kentucky University, Stormwater Utility Survey 2016

Stormwater Utilities in the Northeast

- **Chicopee, MA**
- **South Burlington, VT**
- **Newton, MA**
- **Reading, MA**
- **Lewiston, ME**
- **Augusta, ME**
- **Fall River, MA**
- **Burlington, VT**
- **Westfield, MA**
- **Long Creek Watershed Management District, ME**
- **Gloucester, MA**
- **Bangor, ME**
- **Northampton, MA**
- **Milton, MA**



Demographics of SWU Communities

Comparison of Demographics for New England Towns with Stormwater Utilities

Town	Population	Median Household Income	Average Household Size
Fall River, MA	88,857	\$35,123	2.27
Bangor, ME	33,039	\$35,107	2.10
Lewiston, ME	36,592	\$36,035	2.26
Augusta, ME	19,136	\$37,027	2.08
Burlington, VT	42,417	\$42,677	2.19
Chicopee, MA	55,298	\$46,708	2.28
Northampton, MA	28,495	\$57,991	2.14
Westfield, MA	41,094	\$59,581	2.49
Ayer, MA	7,427	\$60,345	2.30
Gloucester, MA	28,789	\$61,449	2.27
South Burlington, VT	17,904	\$64,756	2.19
Reading, MA	24,747	\$105,459	2.64
Longmeadow, MA	15,784	\$108,835	2.66
Milton, MA	27,003	\$111,071	2.79
Newton, MA	85,146	\$119,148	2.50

Stormwater Infrastructure in Longmeadow

- > 100 miles of drain pipe
- 5,836 structures
 - 335 outfalls



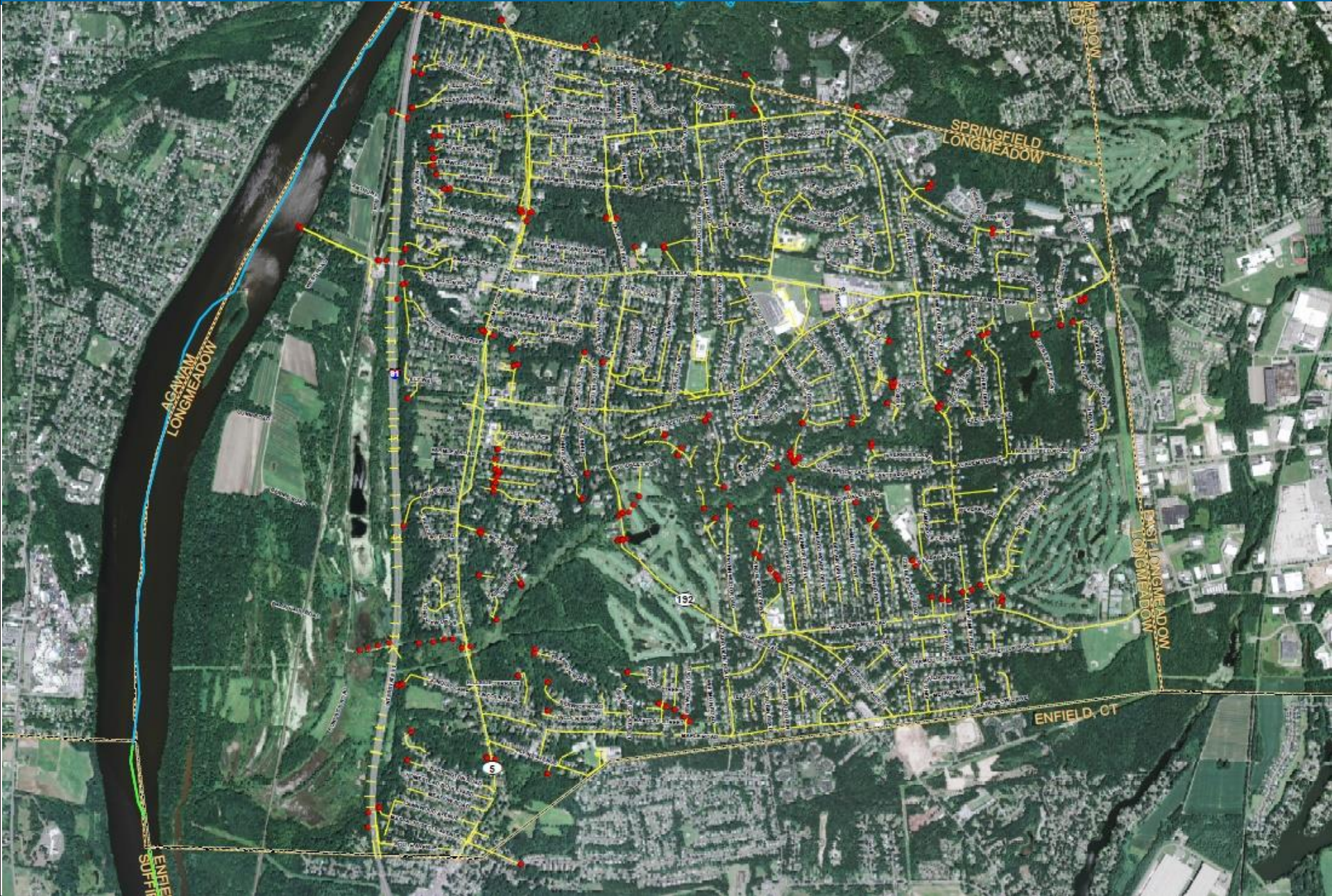
Elmwood Avenue outfall



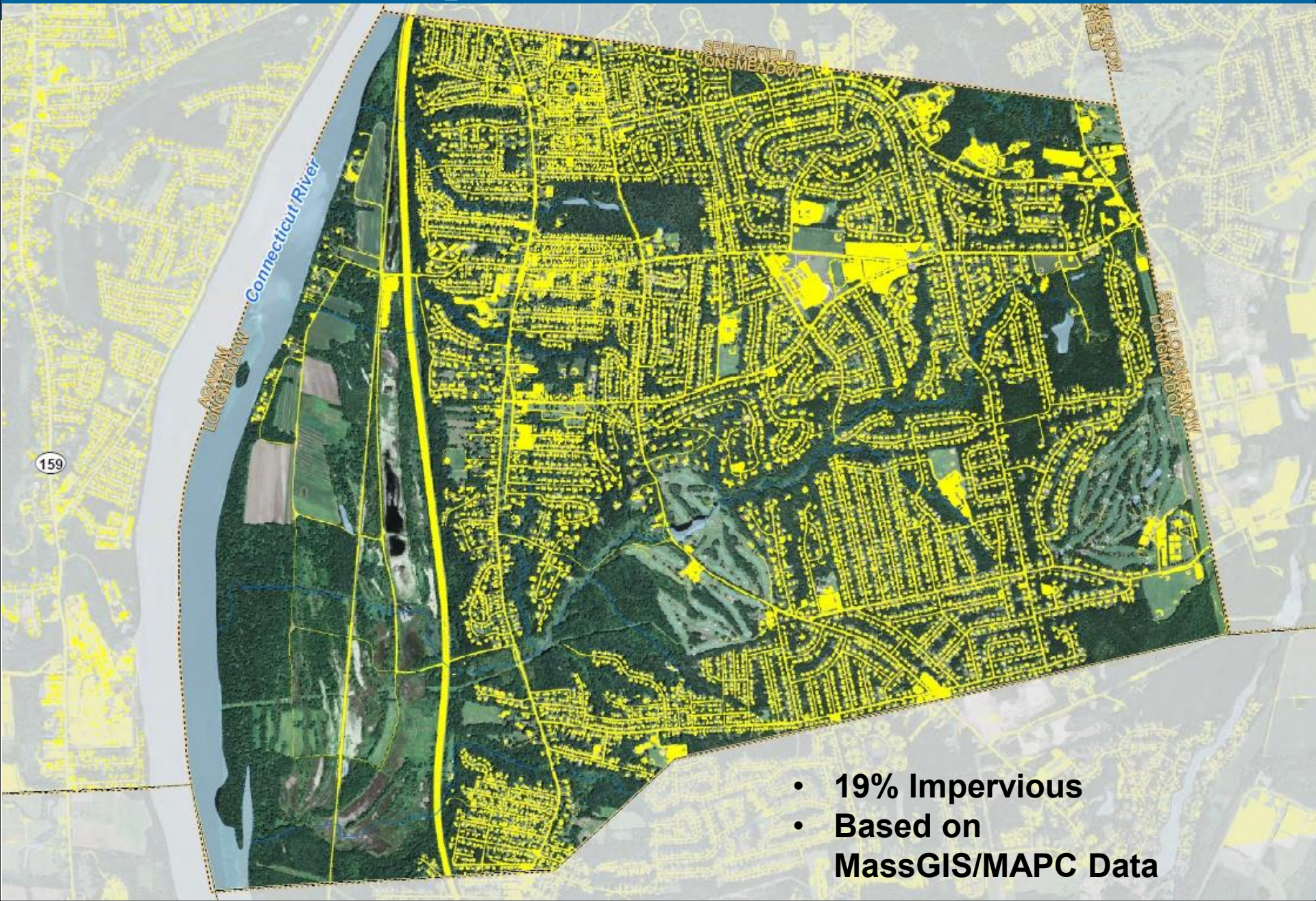
Mill Brook Culvert at Mill Road



Stormwater Infrastructure



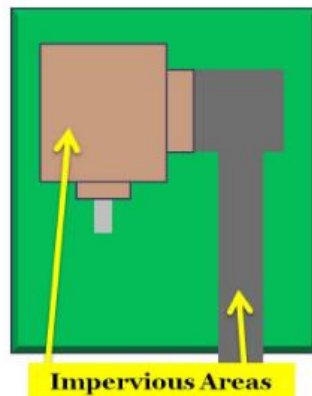
Impervious Surface



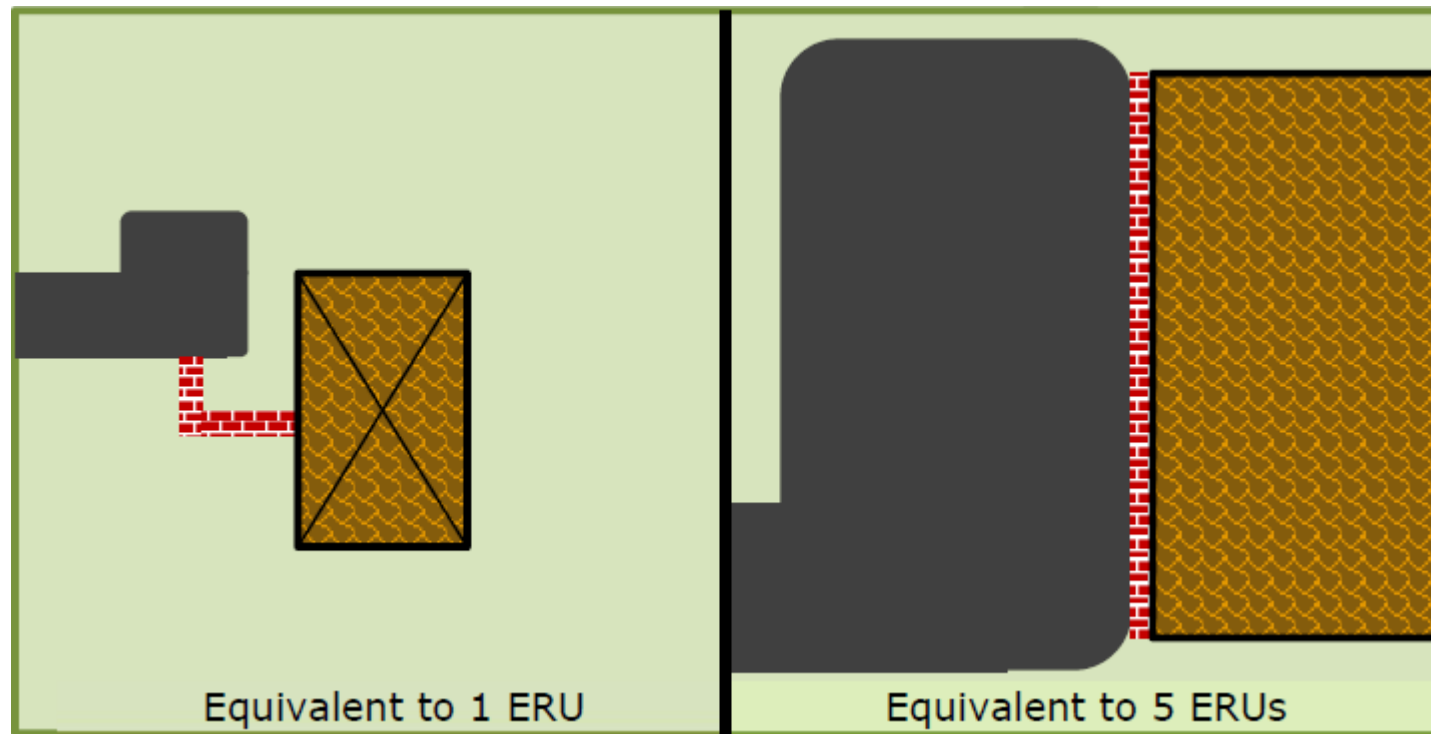
- 19% Impervious
- Based on MassGIS/MAPC Data

Impervious Area Calculations

- Longmeadow parcel data linked to MassGIS imagery data
- Statewide parcel-based impervious data generated by Metropolitan Area Planning Council (MAPC)
- Impervious area directly linked to quantity and quality of stormwater runoff



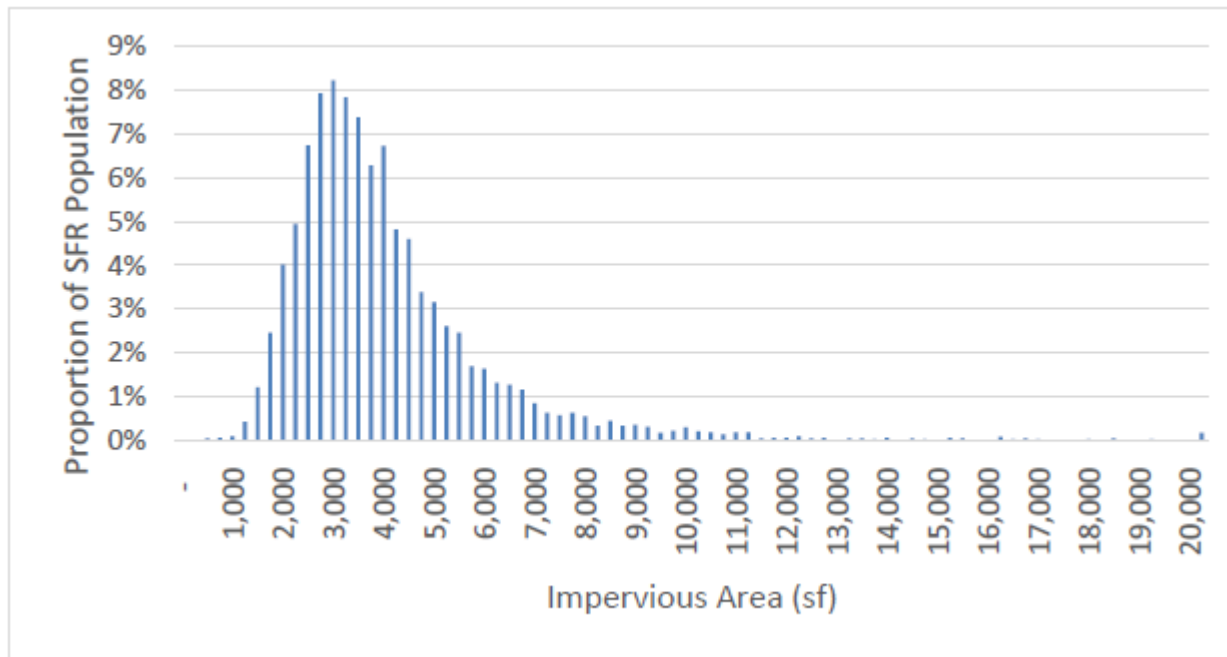
Equivalent Residential Unit (ERU)



Impervious Area Calculations

■ Impervious Area

- Driveways, patios, roofs, hard surfaces
- Measured in Equivalent Residential Unit (ERU)
 - » ERU in Longmeadow: 3,400 sf



Source: Raftelis Financial Consultants, Inc.

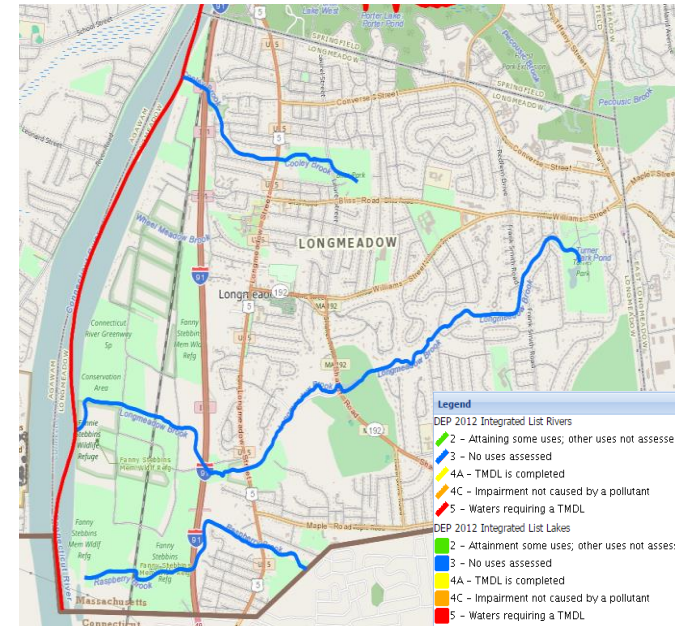
Impervious Surface in Longmeadow

Property Type	Impervious Surface, sq. ft	Impervious Surface, % of total
Residential	23,000,000	45%
Commercial	2,000,000	4%
Industrial	145,000	0.3%
Tax exempt	4,600,000	9%
Rights of Way (roads)	21,000,000	41%

Stormwater Costs

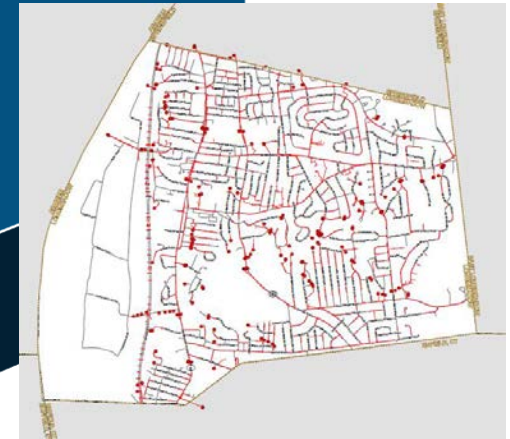
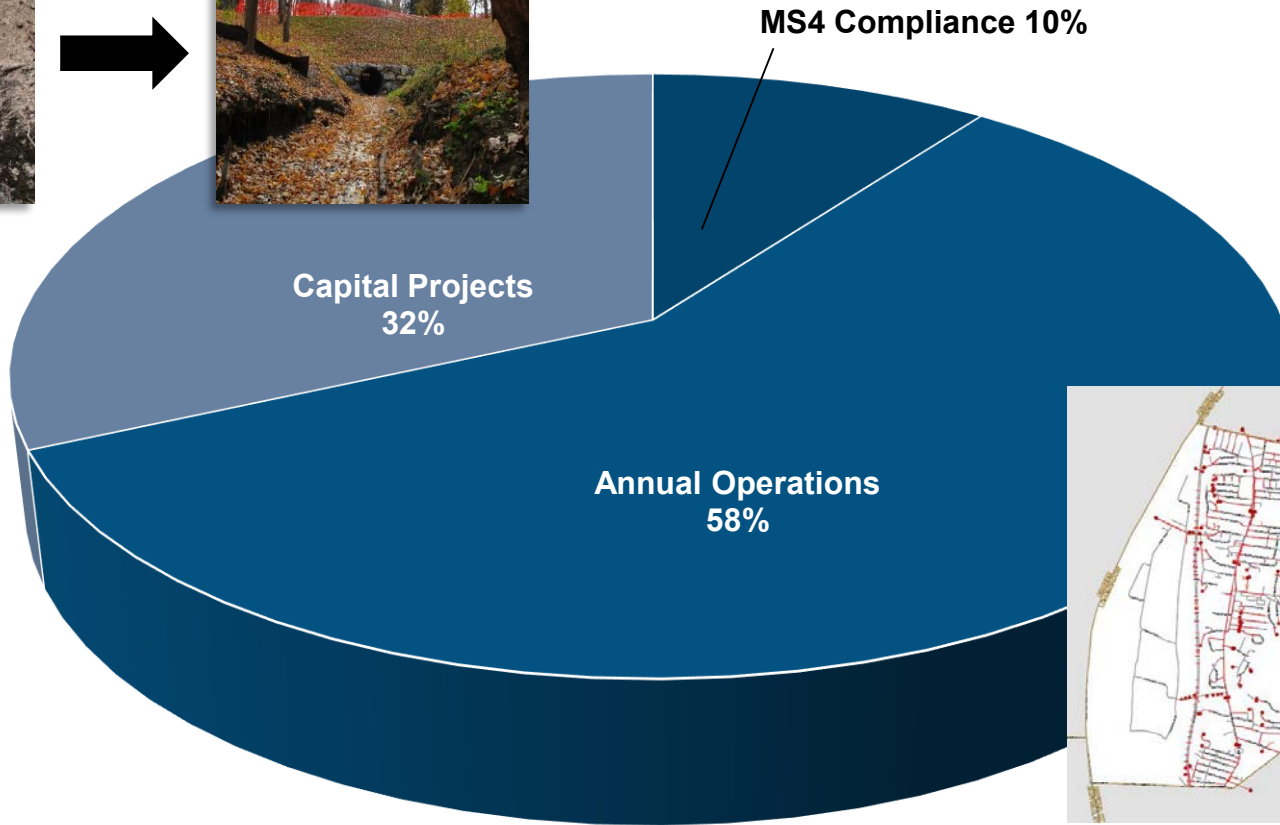
■ MS4 Permit Requirements

- New permit - effective **DELAYED**
- Outfall sampling and monitoring
- Additional stormwater system mapping
- Increased system maintenance (street sweeping/catch basin cleaning)
- Increased documentation and reporting requirements
- Expected additional costs
 - » **\$605,000** over 5 year permit term



■ Ongoing Operations & Maintenance

Longmeadow Anticipated Stormwater Costs



Approximately \$1.5M to \$1.8M

Capital Projects in Longmeadow



Route 5 sidewalk overtopping



Sand leaking through pipe joints on Willow Brook Rd.



Pondside Road culvert inlet south of Birnie Road

Capital Projects in Longmeadow

■ Crestview Circle Before/After - \$219,000



Capital Projects in Longmeadow

- **Morningside Drive - ~\$220,000**

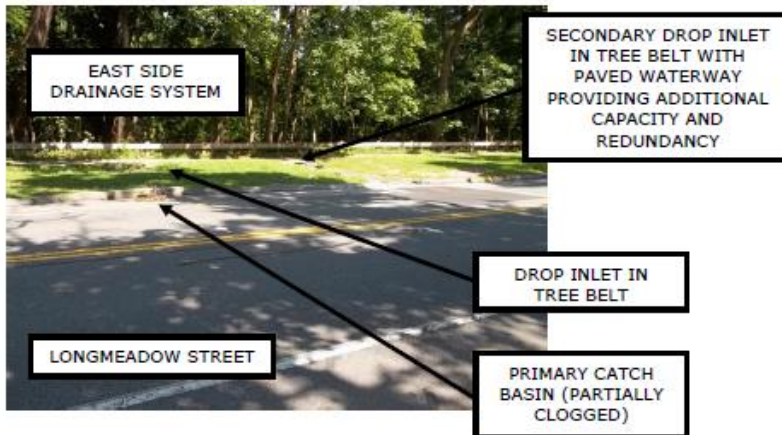


- **Many other projects needed at culverts and outfalls around Longmeadow**

Grant Funding

■ Raspberry Brook

- Hazard Mitigation Grant
 - » \$133,600 total cost
 - » 25% match required (\$33,400)



Evaluation of Funding Alternatives



■ General Fund

- Increases in taxes limited by Proposition 2 ½

■ Stormwater Enterprise Fund

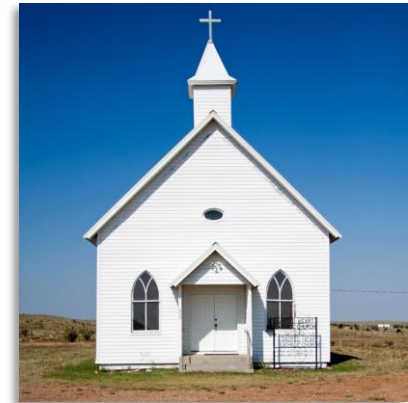
- Dedicated funding source, similar to water or sewer

■ Limited grant funding opportunities

- Town match almost always required
- SWEF provides funding source for Town match

Stormwater Enterprise Fund

- **Utility charge billed similar to a water or wastewater utility, based on area not consumption**
- **Equitable approach based on area of impervious surface**
- **Tax exempt properties contribute**
 - 1391 ERUs (12% of total ERUs) attributable to tax exempt parcels
 - 476 ERUs (4% of total ERUs) attributable to tax exempt/non-municipal parcels



Fee Structure Alternatives

■ Longmeadow

- Majority single family homes
- Some large commercial properties (e.g., The Shops)
- Some large exempt properties (e.g., Bay Path University, JGS)
- **97%** of parcels are residential, only **45%** of impervious surface is on residential parcels

■ ERU – 3,400 sf impervious surface

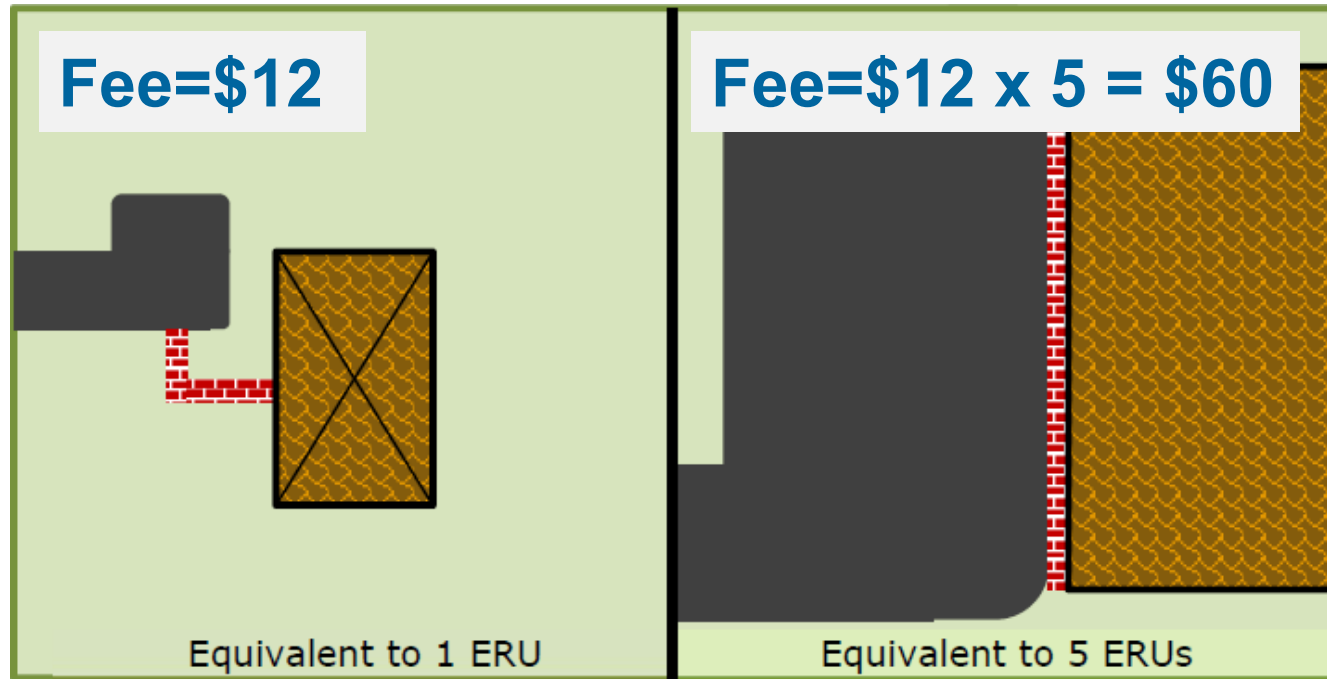
■ Many Options for Fee Structure



Fee Options

■ ERU Based Rate Structure

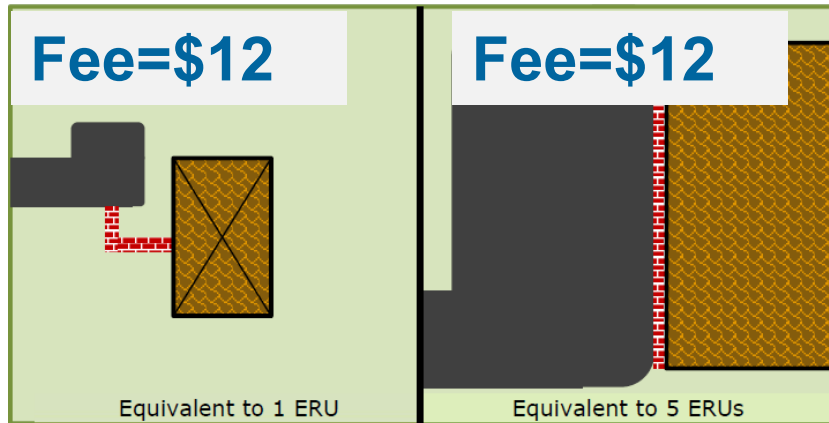
All parcels



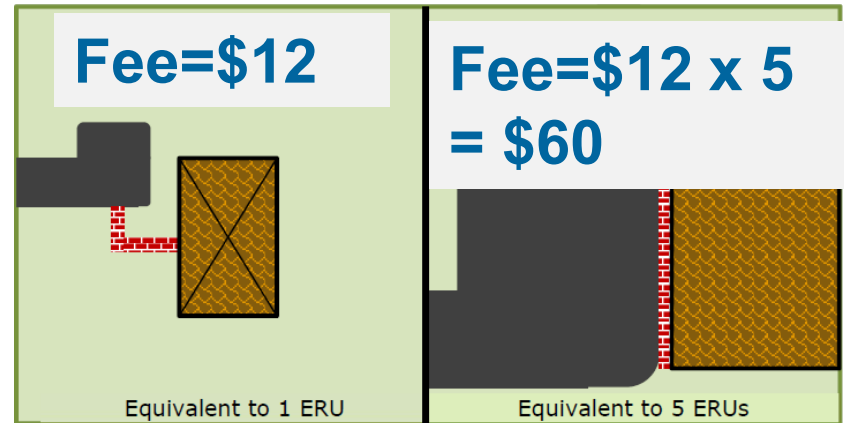
Option B

- Flat Rate for Single Family Residential (SFR), ERU Basis for Non-Single Family Residential (NSFR)

SFR



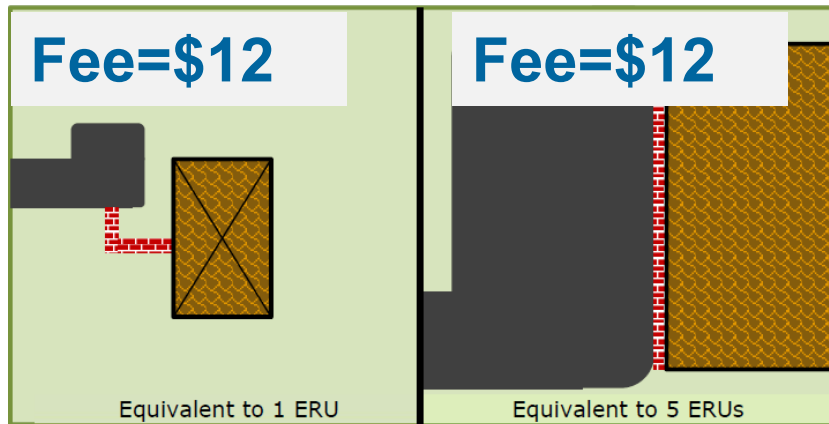
NSFR



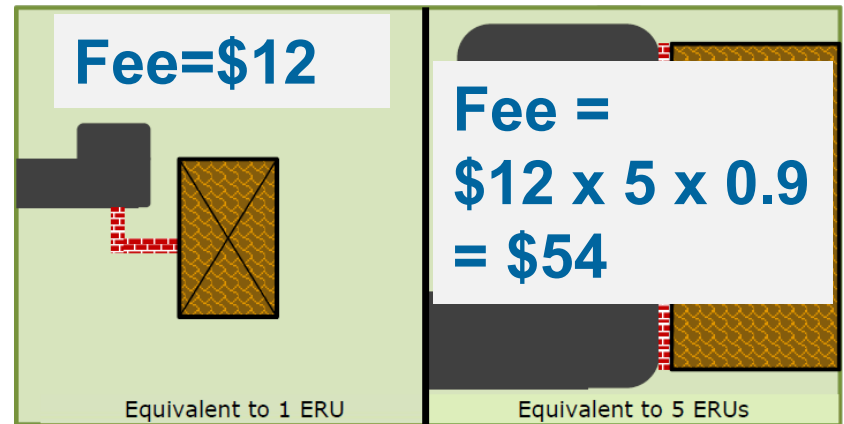
Option C

- Flat Rate for SFR, Declining Block Rate for NSFR

SFR



NSFR



Comparison of Options A, B, C

	Option A	Option B	Option C
Expected Annual Revenue, \$12 rate	\$1.566M	\$1.101M	\$1.068M
Expected Annual Revenue, \$15 rate	\$1.957M	\$1.377M	\$1.335M

\$1.82M - Expected Annual Program Costs for Stormwater FY18-22

Option D

- Fund up to \$200,000 annually
- \$2.25/month per Equivalent Residential Unit
- Single Family Residential (flat fee): \$27/year
- Others: \$297/month for top ratepayer



Next Steps for Longmeadow

- **Select Board Consideration**
 - Put bylaw on Warrant
 - Determine rate structure
- **Public Outreach and Education**
- **Longmeadow Town Meeting**
 - Passed bylaw (May 9, 2017)
- **Fee Finalized**
 - January 16, 2018
- **Draft Regulations**
 - Determine credit policy
 - Begin collecting revenue

Advice for Other Municipalities

- Identify the key drivers
- Determine funding requirements
- Perform financial analyses
- Craft legislation
- Define stakeholders and make the case

