A Quick Guide to Defining and Funding Your Municipal Stormwater Program

Merrimack Valley Stormwater Collaborative

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What will we cover today?

- Introduction
- Finding the Driver for Stormwater Management in your Community
- Defining Your Stormwater Program
- What is the Budget Gap?
- Funding Options
- Stakeholder Involvement
- Resources

Introduction

- Stormwater Management is evolving
  - Drainage – move the water away asap
  - Erosion management
  - Water quality management
  - Increasing technology and data
    - GIS, water quality monitoring, flow monitoring
  - Integrated water management
  - Increasing rainfall, climate change
- More sophisticated, more expensive
- More regulated

Finding the Driver

Common drivers:

- drainage and roadway safety
- aging infrastructure
- regulatory compliance (MS4 Permit)
- flooding
- water quality

Every Community is Unique

Unique ‘drivers’ that might resonate:

- recurring localized flooding,
- beach closures at ponds or coastal beaches,
- shellfish closures,
- drainage problems at public ball fields,
- visible degradation or algae growth in ponds,
- trash and aesthetics issues,
- significant erosion that affects bridges or roadways or other public infrastructure, or
- community development.

What is Your Current Stormwater Program?

- What are you currently doing?
- What do you want to be doing?
- What will be required by permit?
- Services may be provided by other departments

Survey Results – NE Stormwater Collaborative

- 2014, 408 respondents across New England, 56% in MA

- Specific budget items identified for stormwater:

  Yes: 56%

  No: 44%

- Of those with budget items:

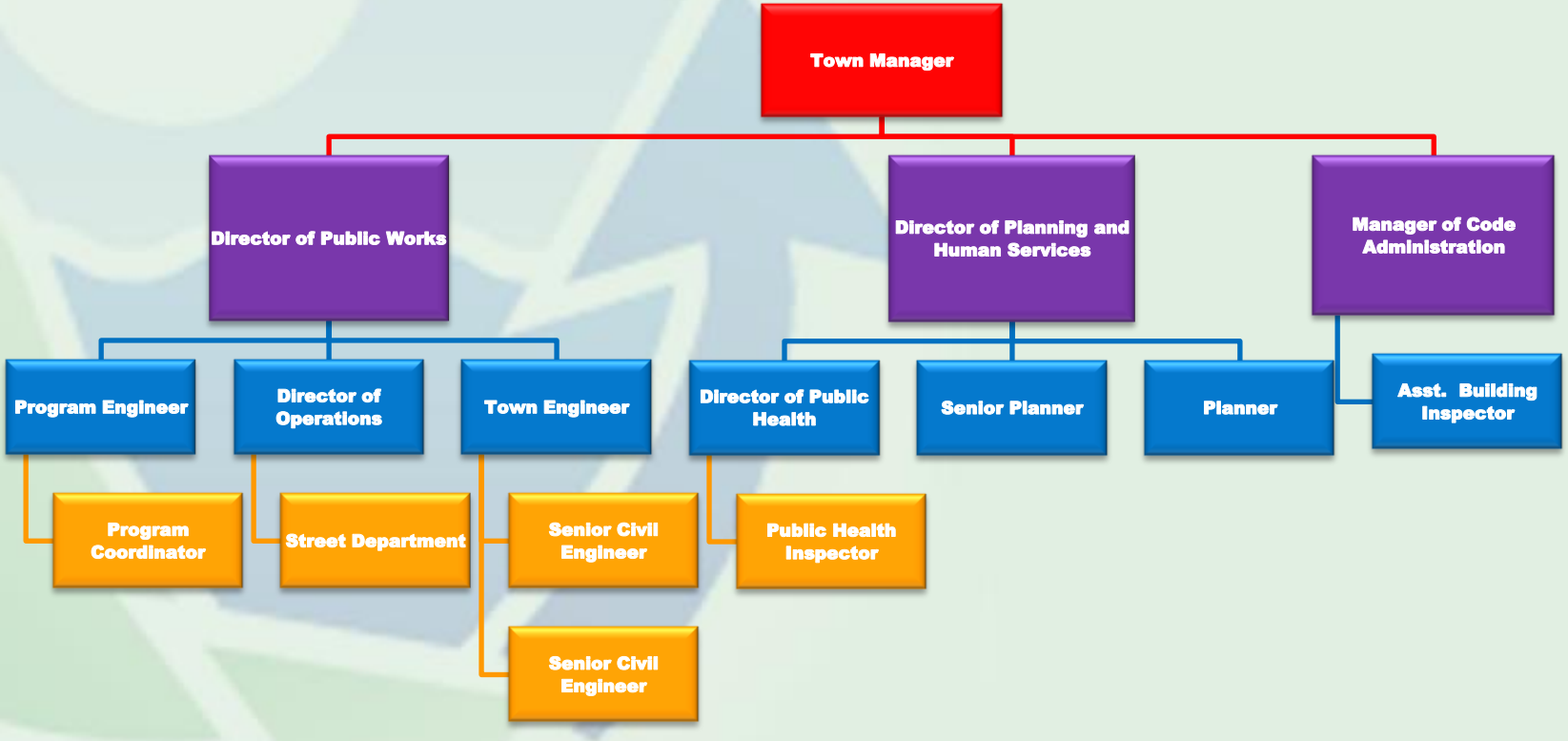
  33%: could not estimate annual spending on compliance, operations, capital renewal and planning

  37%: annual budgets less than $100,000

Services Require a Combination of Depts

Danvers, MA Stormwater Program

(Woodard & Curran, 2012)



Major Stormwater Management Functional Centers

- **Administration**: coordination, SWMP development, annual reporting, public education and training, grants admin
- **Regulation and Enforcement**: MS4 Permit compliance, system inspections, IDDE, ESC inspections
- **Engineering and Master Planning**: plans, SWPPS, CIP design, mapping, code devt and zoning support
- **Operations and Implementation**: O&M, street sweeping, culvert replacement, catch basin cleaning, emergency repairs, vehicle/facility maintenance
- **Monitoring**: Catchment assessment, outfall monitoring

(HWG, 2011; NAFSMA, 2006)

Map out Your Existing Program Budget

(MAPC, 2014)

Service	Description	Existing Budget
Debt Servicing	This is the annual amount paid on any bonds that were sold to finance stormwater improvement projects.	$0.00
Capital Improvements	This is the amount of money required to initiate new physical improvements to town storm sewer systems for either improvement or expansion.	$0.00
Maintenance and Operations	This cost includes the cost of labor, material and equipment for City crews to perform OM&R for the storm sewer system. Storm sewer related tasks completed by City crews generally include cleaning inlets, responding to street and viaduct flooding, and repairing storm sewer inlets and manhole frames.	$0.00
Storm Sewer Cleaning	This work is competitively bid each year and is completed by privately contracted firms. Typically these services include cleaning and televising the piped in the City's Storm Sewer System.	$0.00
Erosion Control, Grading and Permitting	This is a self-supporting activity where the fees charged for the permits equal the City's cost to review and issue the permits. Erosion control, grading, and drainage permits are issued whenever new construction exceeds municipal standards for surface disruption by construction.	$0.00
NPDES Compliance	Cities are required to have a NPDES permit for their storm sewer system. To obtain the 5-year NPDES permit, the City has to list activities it planned to complete each year in the six main areas that are referred to by EPA as minimum control measures.	$0.00
Service Requests	This stormwater expenditure funds City staff time to help property owners find solutions to drainage problems on their property.	$0.00
Hazardous Treatment	The goal of this program is to connect overflow sump pump discharge to the City's storm sewer system. The City typically pays for all right-of-way costs associated with this connection while the property owner pays for all costs on their property. This cost allocation should only reflect the City's expenses for the connection.	$0.00
Sustainability Provisions	These costs should include any money raised or put aside for improvements in sewer systems that increase efficiency or that reduce runoff from properties. Additionally, any incentives in the forms of either credits or deductions for property owners who actively work to reduce runoff should be factored into this figure.	$0.00
TOTAL		$0.00

Define Your Future Program and Budget

New Requirements of the MS4 Permit:

- Update written Stormwater Management Plan
- Increased reporting/record keeping on annual reports
- Targeted public education (2 messages to 4 audiences) and report results
- Illicit discharge priority catchment assessments
- Outfall monitoring dry weather
- Written IDDE program with mapping and prioritization of problem catchments
- Conduct impervious cover/DCIA tracking
- Street sweeping optimization
- Complete stormwater system mapping (all pipes/manholes/inlets/structures)
- Catch basin inspection/cleaning/inspection data
- Identify/rank retrofit opportunities for municipally owned facilities
- Develop a SWPPP for municipally owned facilities;
- Complete a code review and report
- Written O&M procedures for municipal activities for trash, pet wastes, leaf litter control, fertilizer use & yard wastes
- Pet waste & waterfowl management plans

What's the Budget Gap?

A few examples:

- **Danvers** (Woodard & Curran, 2012)
- **Dedham** (MAPC/NepRWA, 2015)
- **Milton** (MAPC/NepRWA, 2015)
- **Bellingham** (Horsley Witten Group, 2011)
- **Franklin** (Horsley Witten Group, 2011)
- **Milford** (Horsley Witten Group, 2011)

Danvers

Description	Estimated Current Annual Expenditures	Estimated Future Annual Expenditures
MCM #1: Public Education & Outreach	$37,000	$40,000
MCM #2: Public Involvement/Participation	$0	$3,000
MCM #3: Illicit Discharge Detection & Elimination	$36,000	$60,000
MCM #4: Construction Site Stormwater Control	$0	$5,000
MCM #5: Post Construction Site Stormwater Management	$0	$12,000
MCM #6: Pollution Prevention & Good Housekeeping	$67,000	$80,000
Drainage Maintenance & Repair (Materials & Supplies Installed by DPW Staff)	$25,000	$30,000
Stormwater Vehicle Maintenance	$10,000	$10,000
GIS Program	$15,000	$70,000
SWMP & MS4 Annual Report	$5,000	$10,000
Administrative (Staff Salaries)	$195,000	$230,000
Debt Service on Capital Projects	$235,000	$760,000
Total:	$625,000	$1,310,000

Dedham

Category/Item	Total (Permit Year 1)
Administration	$83,553
Regulation/Enforcement	$13,500
Engineering and Master Planning	$366,795
Operations and Implementation	$575,113
Monitoring	$17,650
TOTAL:	**$1,056,611***

*Additional Costs to Meet MS4 Year 1 Permit Requirements

Milton

Category/Item	Funding Gap (approximate)	Total (Permit Year 1)
Administration	$35,000	$70,000
SW Management Operations	$375,000	$750,000
Monitoring/Planning	$190,000	$380,000
TOTAL:	**$600,000**	**$1,200,000**

NOTE: Milton chose to exclude capital spending from this budget analysis, which was geared toward estimating a stormwater fee.

Bellingham

Major Cost Centers	Bellingham	
	Existing	Permit Year 1
Administration	$18,421	$69,373
Regulation/Enforcement	$1,800	$3,750
Engineering and Master Planning	$17,000	$311,007
Operations and Implementation	$194,918	$470,028
Monitoring	-	$17,650
Total Cost	$232,139	$877,807
Costs include staff labor and direct costs for equipment, materials, disposal, supplies, etc.		

Franklin

Major Cost Centers	Franklin	
	Existing	Permit Year 1
Administration	$58,670	$136,707
Regulation/Enforcement	$51,396	$77,333
Engineering and Master Planning	$152,671	$367,649
Operations and Implementation	$759,978	$1,043,747
Monitoring	-	$26,398
Total Cost	$1,022,715	$1,651,833
Costs include staff labor and direct costs for equipment, materials, disposal, supplies, etc.		

Milford

Major Cost Centers	Milford	
	Existing	Permit Year 1
Administration	$18,335	$75,178
Regulation/Enforcement	$26,250	$37,050
Engineering and Master Planning	$13,100	$427,481
Operations and Implementation	$487,966	$540,477
Monitoring	-	$17,740
Total Cost	$545,651	$1,097,926
Costs include staff labor and direct costs for equipment, materials, disposal, supplies, etc.		

Summary Annual Cost/Budget Comparison

Town	Pop	Sq Mi	Pop Density	Existing Cost	Future Cost (Yr 1)	Gap
Danvers	27,500	14.2	1,940	$625,000	$1,310,000	$685,000
Dedham	25,300	10.65	2,380	-	+$1,056,611	$1,056,611
Milton	27,270	13.3	2,050	$600,000	$1,200,000	$600,000
Bellingham	16,675	19	880	$232,139	$871,807	$639,668
Franklin	32,580	26.6	1,225	$1,022,715	$1,651,833	$629,118
Milford	28,300	14.9	1,900	$545,651	$1,097,926	$552,275

Funding Options

General Fund:

- tax revenue, competitive pressures, variable

Enterprise Fund/Service Fee/Utility:

- dedicated sustainable funding source, equitable

Grants:

- limited, competitive, opportunistic

Bonds and Loans:

- borrowed money, high admin burden

Permit Fees:

- relatively small, unpredictable, no capital costs

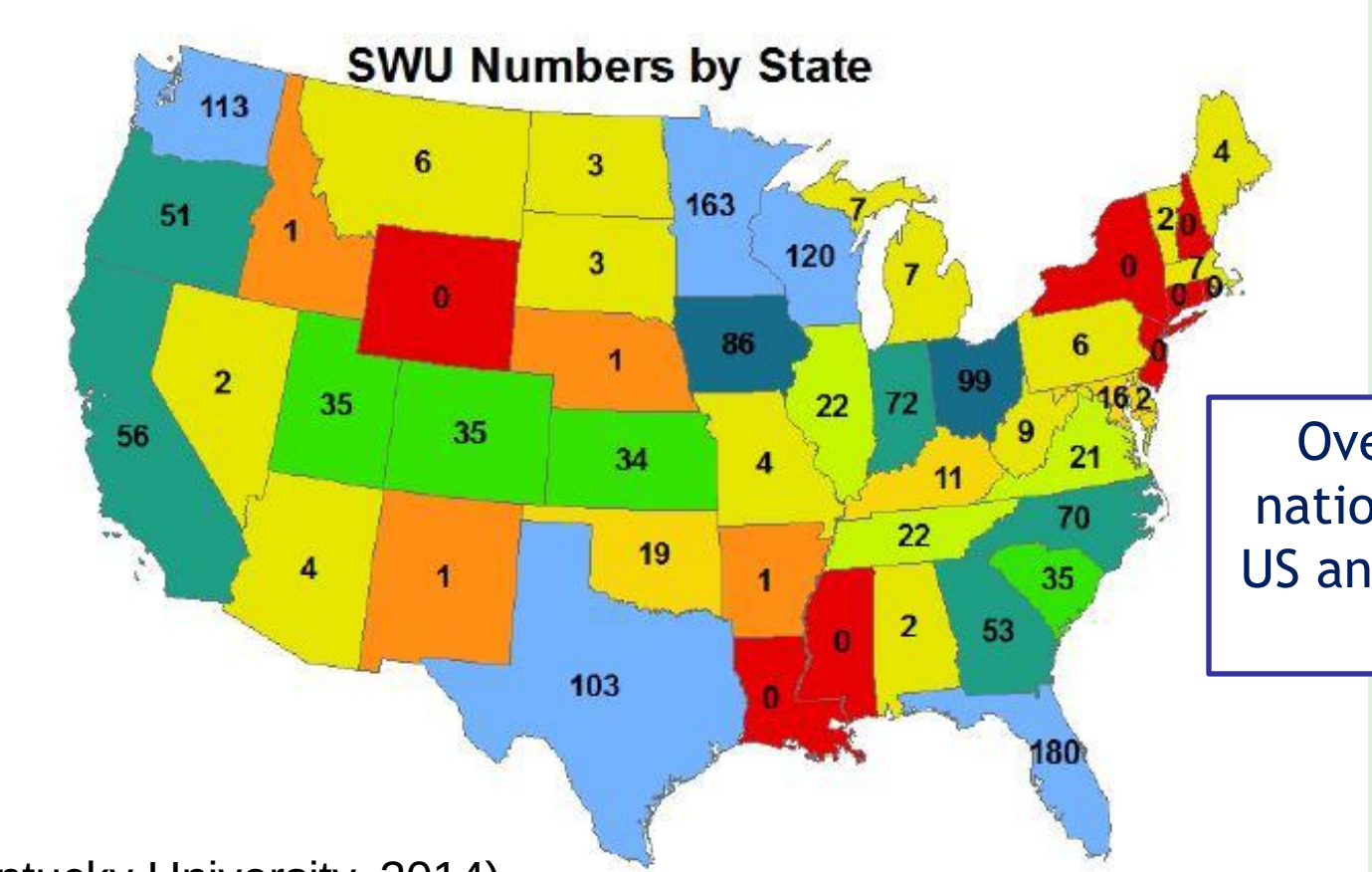
Funding Options

Sources of Funding	Capital Costs	O&M Costs
General Fund	Yes	Yes
Utility/Service Fee	Yes	Yes
Grants	Yes	No
Bonds	Yes	Yes
Loans	Yes	No
Fees for Permit Reviews and Inspections	No	Yes

Clear Winner…among stormwater guidance

Stormwater Utility/Fee/Enterprise Fund

- Often recommended by stormwater resources
- Supported by EPA



Over 1500 nationwide in US and Canada

Western Kentucky University, 2014)

The Massachusetts Experience

7 Stormwater 'Utilities' Created as of 2014:

Town/City	Monthly Fee	Year Created	Pop
Chicopee	$8.33	1998	54,653
Fall River	$11.67	2008	91,938
Gloucester	$4.42	2011	30,273
Newton	$2.08	2006	83,829
Northampton	$5.00	2014	28,592
Reading	$3.33	2006	24,145
Westfield	$0.00	2010	41,094

(Western Kentucky University, 2014)

WHY SO FEW….?

"Public outreach strategies and focused stakeholder engagement are critical…."

"Stakeholder engagement strategy must be tailored…"

– *EPA, 2013. Evaluation of the Role of Public Outreach and Stakeholder Engagement in Stormwater Funding Decisions in New England*

Resources

- **Central Massachusetts Regional Planning Commission. Date?. *Funding Stormwater Management. Strategies to support stormwater management at the municipal level*** http://www.cmrpc.org/sites/default/files/Documents/CDAP/stormwater%20wrap%20up_secured.pdf
- **Environmental Protection Agency. 2013. *Evaluation of the Role of Public Outreach and Stakeholder Engagement in Stormwater Funding Decisions in New England: Lessons from Communities*. EPA-100-K-13-0004. June**. http://www.epa.gov/evaluate/pdf/water/eval-sw-funding-new-england.pdf
- **Horsley Witten Group. 2011. *Sustainable Stormwater Funding Evaluation for the Upper Charles River Communities of Bellingham, Franklin and Milford, MA*. Prepared for US EPA Region 1. September 30.** Full document: http://www.epa.gov/region1/npdes/charlesriver/pdfs/20110930-SWUtilityReport.pdf, Fact Sheet: http://www.epa.gov/region1/npdes/charlesriver/pdfs/20111019-UtilityProjectGPFactSheet.pdf
- **Metropolitan Area Planning Council (MAPC). 2014. *Stormwater Financing/Utility Starter Kit (Draft).* Prepared for: The 101 Cities and Towns of Greater Boston. March 23.** http://www.mapc.org/Stormwater_Financing
- **National Association of Flood and Stormwater Management Agencies (NAFSMA). 2006. *Guidance for Municipal Stormwater Funding*. Prepared under grant by Environmental Protection Agency. January.** http://water.epa.gov/polwaste/nps/upload/Guidance-Manual-Version-2X-2.pdf
- **Water Environment Federation (WEF). 2013*. User-Fee-Funded Stormwater Programs.* WEF Special Publication. Alexandria, VA.** https://www.e-wef.org/Store/ProductDetails.aspx?productId=28818404
- **Western Kentucky University. 2014. *Western Kentucky University Stormwater Utility Survey 2014***http://wku.edu/engineering/civil/fpm/swusurvey/
- **Woodard & Curran. 2012. *Town of Danvers Sustainable Stormwater Funding Study*. December.** http://www.mass.gov/eea/docs/mbp/publications/danvers-sustainble-stormwater-funding-study-r-and-p2012.pdf

Other MA Stormwater Collaboratives

- Central Massachusetts Stormwater Collaborative: http://centralmastormwater.org/pages/crsc_About/approach
- Neponset Stormwater Partnership: http://neponsetstormwater.org/
- Northern Middlesex Stormwater Collaborative: http://www.nmstormwater.org/about-us-stormwater-collaborative
- Southeastern Massachusetts Stormwater Collaborative: http://www.semastormwater.org/about-us
- New England Stormwater Collaborative: http://www.newwa.org/Resources/UtilityResources/NewEnglandStormwaterCollaborative.aspx

Thank You

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