

Bristol Stormwater Management Steering Committee



“Municipal Stormwater Management Enterprise Fund Feasibility Study”

Meeting #1

November 3, 2015

TOWN OF BRISTOL

R.I. Dept. of Environmental Management
Horsley Witten Group
AMEC Foster Wheeler
Blue Sky Engineering



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Agenda



7⁰⁰ - 7¹⁵pm: Introduction & Meeting Objectives

7¹⁵ - 7⁵⁵pm: Stormwater Management and
Water Infrastructure Funding Issues

--What challenges do you face?

--Ranking of stormwater issues

7⁵⁵ - 8⁰⁵pm: **BREAK**

8⁰⁵ - 8²⁵pm: Current Efforts and Costs

8²⁵ - 8⁴⁰pm: Future Costs/Funding Options

8⁴⁰ - 8⁴⁵pm: Project Schedule/Next Meeting

8⁴⁵pm: Adjourn



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Introduction



- Welcome
- Project Overview
- What is a Stormwater Management Enterprise Fund (SMEF)?
- Steering Committee Membership
- Purpose of Steering Committee



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Who are we?



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Project Management Team

Town
Administrator

Antonio
Teixeira

Town Council
Chairman

Nathan
Calouro

RI
Department
of Environ.
Management

Elizabeth
Scott

Director of
Community
Development

Diane
Williamson

Principal
Planner

Ed Tanner

Treasurer

Julie Goucher

Public Works
Director

Kevin
McBride

Superintendent
Bristol WPF

Jose DaSilva

Technical Team



- **Horsley Witten Group**

- Russ Chateauneuf
- Robert Roseen



- **Amec Foster Wheeler**

- Richard Niles
- Elizabeth Flanary



- **Blue Sky Engineering**

- Jean Lambert



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Steering Committee Formation



- Community representatives
- Stakeholders help identify relevant issues
- Commercial uses
- Homeowners
- Neighborhoods
- Non-profits
- Business
- Recreational interests



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Who are you?



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Our Hopes & Expectations



- Attend 2 more meetings & provide input
 - Review meeting materials and work products
 - Discuss topics and issues with those you know
 - Inform us on issues/concerns (yours & others)
 - Advise us on a recommended path forward
-
- Engage during meetings*
 - Speak up*
 - Allow others to speak*
 - OK to send an alternate*
 - We want all opinions*
 - Mtgs. begin & end on time*
 - Others?*



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Project Overview



- 2012 Stormwater Utility District (now SMEF) Feasibility Study
- Identify tools and help to further shape this management option
- Assess and discuss the concept of a SMEF in relation to existing funding sources
- Further actions dependent on your input/opinions and Town Council direction



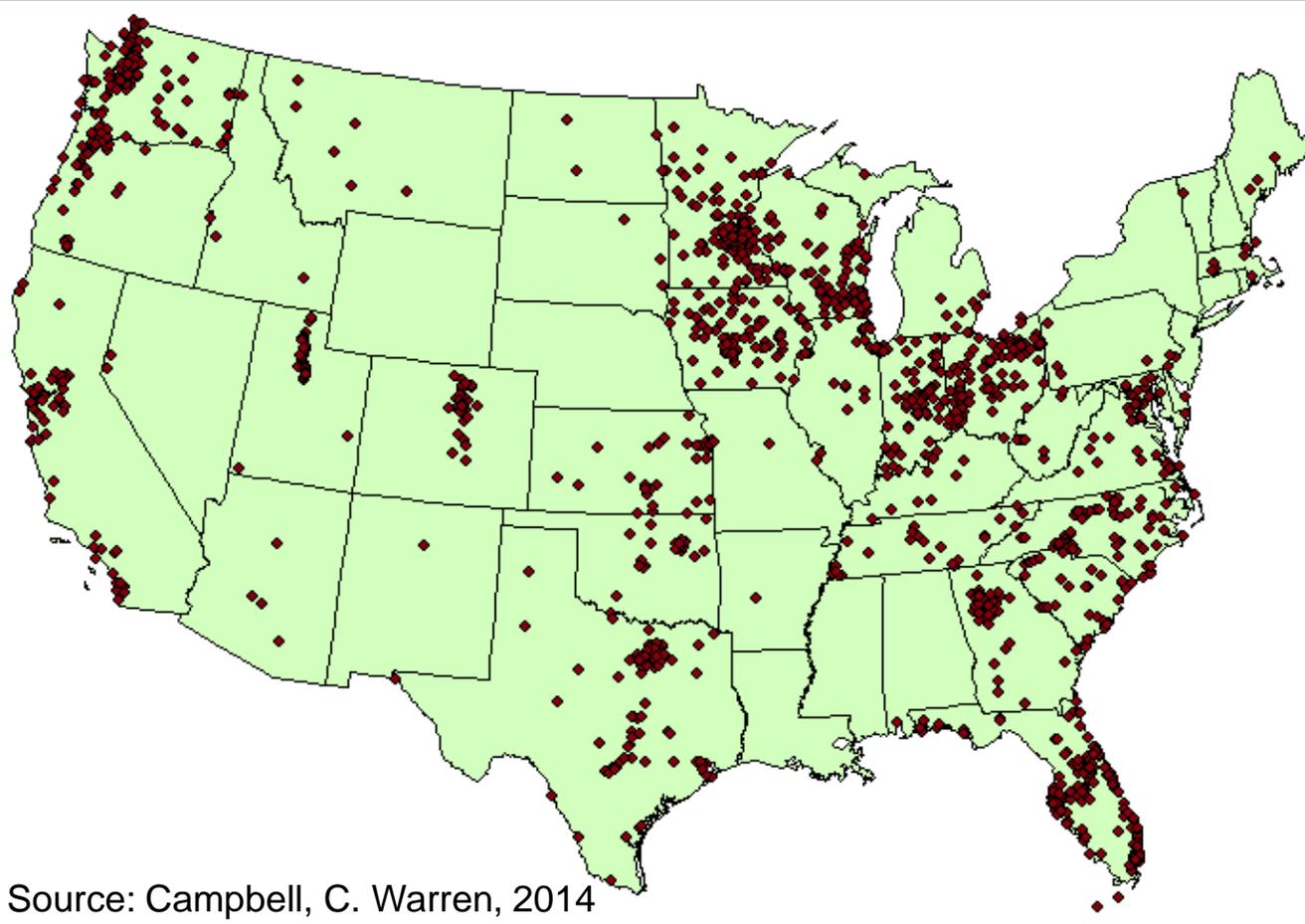
What is a Stormwater Enterprise Fund?



- A stormwater enterprise fund, also known as a Stormwater Utility or Stormwater Management District (SMD) in Rhode Island is a "stand-alone" funding mechanism that derives revenue through fees for stormwater services.
- Pays for the operation, construction and maintenance of catch basins, drainage pipes, street cleaning and treatment systems, and administration and management stormwater controls and discharges.
- Derives its revenue from user fees and the funds generated go into a separate account for stormwater management only.



Existing Stormwater Utilities



- ~1,500 utilities
- 13 in New England
- Programs vary
- Funding varies

Source: Campbell, C. Warren, 2014

Key Advantages of a Stormwater Enterprise Fund



- **It is Stable** because it is not as dependent on the vagaries of the annual budgetary process as taxes are.
- **It is Adequate** because a typical stormwater fee is based on a well thought out stormwater program to meet the needs and demands of the community, as well as other program drivers (e.g., water quality, regulations).
- **It is Flexible** because fees can be structured in multiple ways, and the program can be managed to fund activities based on changing priorities and needs.
- **It is Equitable** because the cost is borne by the user on the basis of demand placed on the drainage system.

Stormwater Management and Water Infrastructure Funding Issues in Bristol



Let's have a pulse check . . .

What is the biggest stormwater related issue, problem, or need that you see?



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Stormwater Related Issues and Concerns



- ✓ Water quality problems
- ✓ Beach closures
- ✓ Wastewater issues
- ✓ Chronic flooding problems
- ✓ Aging infrastructure
- ✓ Infrastructure maintenance
- ✓ Compliance/legal issues
- ✓ Development pressures
- ✓ Ecological concerns
- ✓ Quality of life & aesthetics
- ✓ Preservation of property value
- ✓ Channel & stream erosion
- ✓ Preserve recreation or fisheries
- ✓ Others . . .



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Examples



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Chronic Flooding Problems



- Streets & private property (safety)
- Silver Creek
- Tanyard Brook



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Chronic Flooding Problems

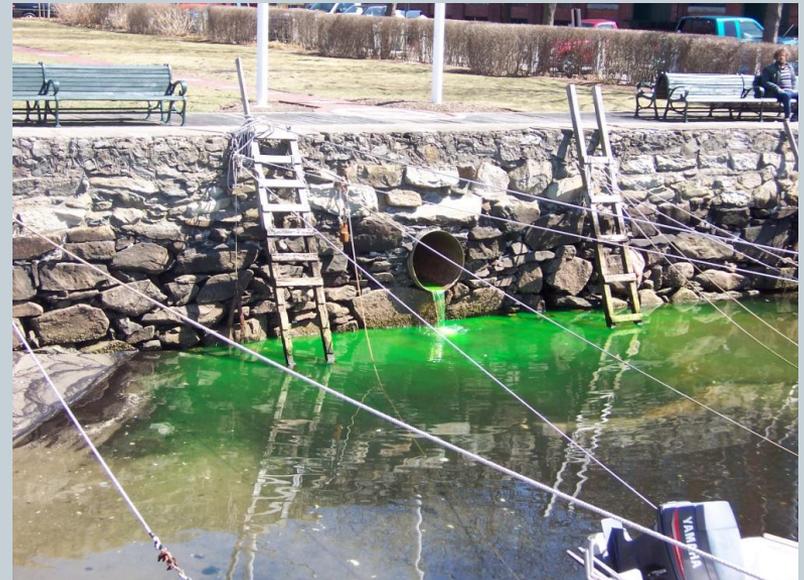


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Sewage and Water Quality Violations



- Stormwater induced WWTF Bypasses & Sewer Overflows
 - Overland flooding of WWTF
 - Wet weather causes high flows:
 - ✦ Sewage system overflows (SSO)
 - ✦ WWTF to be overwhelmed
- Sewage Inflow
 - Infiltration and Inflow
 - ✦ Sump pumps
 - ✦ Downspouts
 - ✦ Cracked pipes and leaky joints
- Water Quality Violations
 - Shellfish closures
 - Outfall discharges
 - Overflows in homes



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Other Water Quality Problems

- Beach closures (historically)
- Shellfish closures
- Wet weather bacteria-related discharges:
 - Bristol Harbor
 - Walker Cove
 - Silver Creek
 - Kickemuit River
 - Mt. Hope Bay
- Localized impacts of individual stormwater discharges

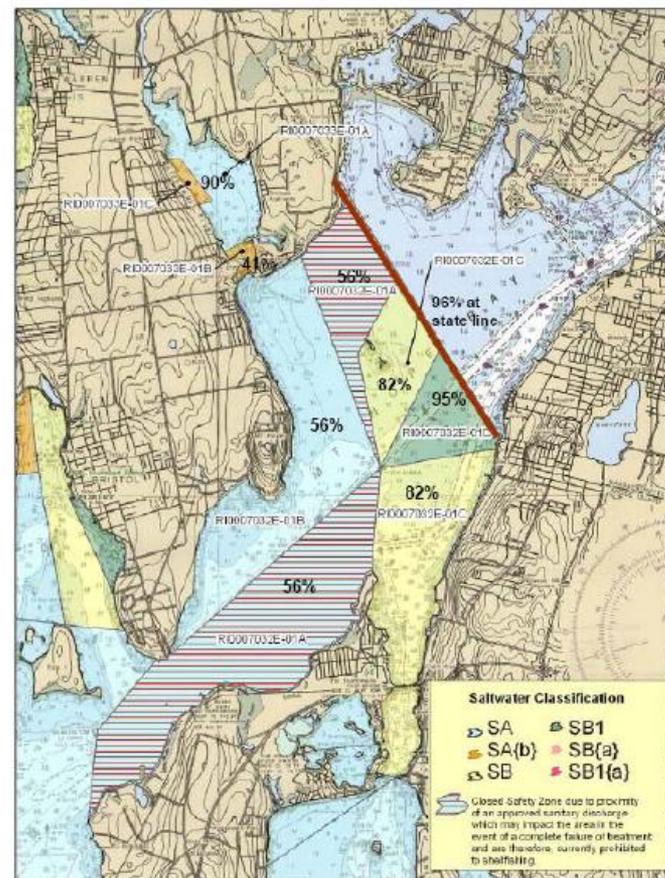


Figure 5.2 Graphical display of required waterbody segment reductions the study area.



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Aging & Failing Infrastructure



- Camera Work
- 100 yr. old pipes



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Other Problems



- Road Safety
 - Road Collapses due to failing pipes
- Equipment Shortages
 - Now being addressed through grants
- Increasing DPW manpower demands
 - CB cleaning and street sweeping falling behind
 - Maintenance is reactionary rather than planned



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Initial Ranking of Issues and Concerns



Everyone gets 3 votes

- ✓ Water quality problems
- ✓ Beach closures
- ✓ Wastewater issues
- ✓ Chronic flooding problems
- ✓ Aging infrastructure
- ✓ Infrastructure maintenance
- ✓ Compliance/legal issues
- ✓ Development pressures
- ✓ Ecological concerns
- ✓ Quality of life & aesthetics
- ✓ Preservation of property value
- ✓ Channel & stream erosion
- ✓ Preserve recreation or fisheries
- ✓ Others . . .



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10-Minute Break



Current Stormwater Management Program



- **Capital projects**
 - Major rehabilitation of aged systems
 - Water quality improvements (BMPs)
- **Operation and maintenance**
 - Sweeping & catch basin cleaning
 - Inspection & repairs
- **Compliance and planning**
 - MS4 and TMDL compliance program
 - ✦ Six Minimum Measures
 - ✦ MS4 permit renewal (pending)
 - Illicit discharge investigation
 - Project planning and engineering
 - Town ordinances and permitting
 - GIS mapping



Current Program Costs*



• Public involvement & outreach:	\$ 1,500
• Illicit discharge detection & elimination	\$11,000
• Pre- and Post Construction Site Stormwater Mgmt.	\$16,000
• Pollution Prevention – sweeping and catch basin cleaning	\$221,500
• GIS mapping of stormwater structures	\$23,000
• Administration	\$30,000
• MS4 annual report & TMDL program	\$ 6,500
• DPW stormwater operations and materials	\$65,500
• Contracted services (including engineering support)	\$145,000
• Major drainage projects	<u>1,000,000</u>
Total	1,520,000

From 2012 Study,
to be updated . . .

*Annual Cost



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Typical Funding Options



TABLE I

Funding Options for Stormwater Programs

SOURCES OF FUNDING	CAPITAL COSTS	O&M COSTS
Bonds	Yes	Yes
Fees for Permit Reviews and Inspections	No	Yes
General Property Taxes and Special District Assessments	Yes	Yes
Grants	Yes	No
Loans	Yes	No
Utility Fee	Yes	Yes

From: Environmental Finance Center, Univ. of Maryland



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Bristol Funding Sources



- General Revenue (Taxes)
- Drainage Fund (Bond)
- Sewer Enterprise Funds
- Grants
- Loans: nearly all sewer related capital projects utilize SRF loan funds

What has been done



- Phase I Tanyard Brook flood abatement
- Pump Station rehabilitation and piping changes to reduce overflows
- Disconnection of some down spouts
- GIS mapping of all catch basins, manholes and outfalls
- Inspection and sampling of outfalls
- Beach drainage improvements
- Sand filter at industrial park w/Town support



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Rehabilitation of Failing Infrastructure



- Tanyard Brook
2012
- \$\$\$



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BMPs by Private Land Owners



- Sand filter at Bristol Industrial Park



BMPs on Town Property



- Inspection of buildings Town wide for sump pump connections
- Sump pump disconnection
- Stormwater BMPs on Town owned properties
 - Town Beach
 - Guiteras Elementary



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Future Stormwater Management Program*



• Public involvement & outreach:	\$ 6,000
• Illicit discharge detection & elimination	\$20,000
• Pre- and Post Construction Site Stormwater Mgmt.	\$35,000
• Pollution Prevention – sweeping and catch basin cleaning	\$300,000
• GIS mapping of stormwater structures	\$38,000
• Administration	\$35,000
• MS4 annual report & TMDL program	\$21,500
• DPW stormwater operations and materials	\$90,000
• Contracted services (including engineering support)	\$175,000
• Major drainage projects	<u>1,500,000</u>
Total	2,220,500

From 2012 Study,
to be updated . . .

*Annual Cost



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Planned Stormwater Work (next 2-3 yrs)



- More BMPs on Town property
 - Town Golf Course
 - Mt. Hope High School site
 - Police Station site
- New Equipment
 - Vacuum Assisted Sweeper
 - Catch Basin Clam Shell



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Additional Unfunded Stormwater Needs



- Backlog of drainage rehabilitation needs
- MS4 permit and TMDL requirements
 - Planning and engineering needs
 - Water quality improvement projects
 - Outfall inspection, maintenance & repair
- Adequate, routine maintenance activities (street sweeping, catch basin cleaning)



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Planned Sanitary Sewer Work (next 2-3 yrs)



- Slip-lining deteriorated sewer lines
 - Hope Street north of downtown
 - Ferry Road
 - Near Tanyard Brook, South of DPW
- Pump station rehabilitation
 - Silver Creek PS
 - Constitution PS
- WPF flood protection drainage project
- Replacement of deteriorated pipes
 - Fernwood Dr. and Sowams Rd.



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Re-Cap and Discussion



- Based on what you've heard so far . . .
 - Do you feel the Town has critical unmet stormwater management needs?
 - Should the Town explore additional/alternative funding sources for stormwater management?
 - Please explain.



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Key Project Tasks



1

- Steering Committee & Town Council Meetings
- Stormwater Management Webpage

2

- Data Evaluation & Implementation Steps
- Needs and Options for Funding

3

- Draft Report
- Final Report



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Next Steps



- Future stormwater program analysis
- Contact by e-mail: etanner@bristolri.us
- Stormwater Management Steering Committee Meeting #2:
 - Stormwater program priorities and desired level of service
 - Taxes, sewer program, stormwater program or some from all??
 - Range of typical costs per home and business
 - Can a case be made for creating an SMD?



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Project Schedule



- Stormwater Management Steering Committee
 - 2 meetings: early February and Mar/April 2016
- Town Council
 - 2 meetings: early February and May 2016
- Project Deliverables
 - Draft Action Plan: January 2016
 - Draft Final Report: April 2016



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