



City of Dover, NH Municipal Stormwater Feasibility Study

Stakeholder Workshop #2
September 13, 2010



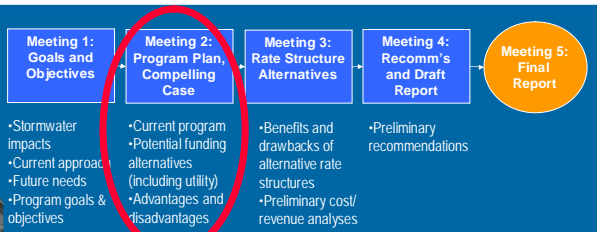
Agenda



- ▶ Welcome and Introductions
- ▶ Citizens' Forum
- ▶ Approval of Minutes
- ▶ Overview of Stormwater Impacts
- ▶ *Brainstorming: What are Dover's priorities for stormwater management?*
- ▶ Current and Future Program Needs
- ▶ *Brainstorming: Advantages / Disadvantages of a Stormwater Utility and Alternate Funding Mechanisms*
- ▶ Next Steps and Action Items



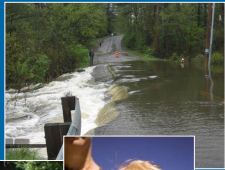
Stormwater Utility Feasibility Study Process



Stormwater Impacts

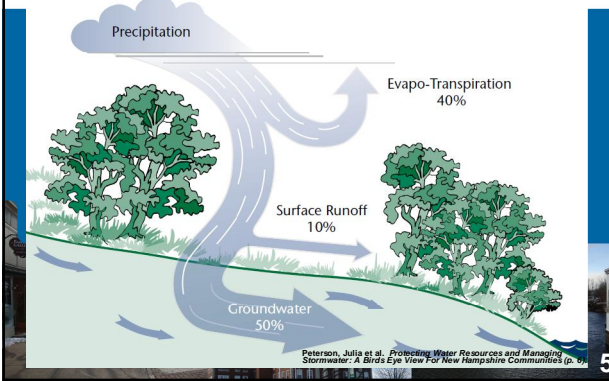


- ▶ Water Quality Degradation
- ▶ Flooding
- ▶ Habitat and Biodiversity
- ▶ Recreation
- ▶ Quality of Life



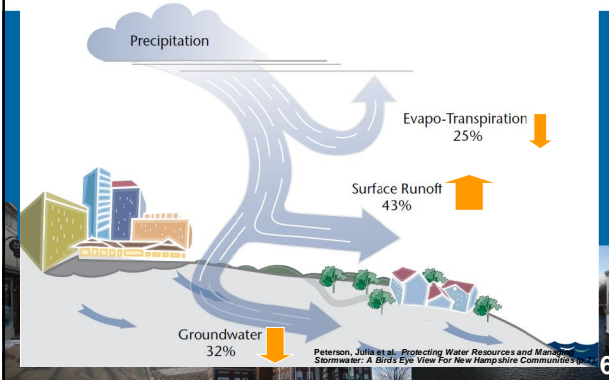
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Natural Watersheds Have a Small Percentage of Surface Runoff



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Developed Watersheds Have a Greater Percentage of Surface Runoff



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The Stormwater Infrastructure is Aging and in Need of Rehabilitation and Replacement



The Stormwater Infrastructure is Aging and in Need of Rehabilitation and Replacement, cont'd



The Stormwater Infrastructure is Aging and in Need of Rehabilitation and Replacement, cont'd



The Stormwater Infrastructure is Aging and in Need of Rehabilitation and Replacement, cont'd



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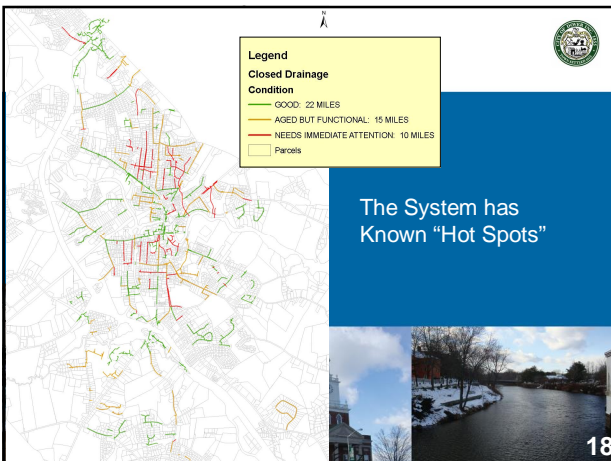


Stormwater Inspection Footage



Legend	
Closed Drainage	
Condition	
GOOD: 22 MILES	
AGED BUT FUNCTIONAL: 15 MILES	
NEEDS IMMEDIATE ATTENTION: 10 MILES	
Parcels	

The System has Known "Hot Spots"



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Current Program Elements



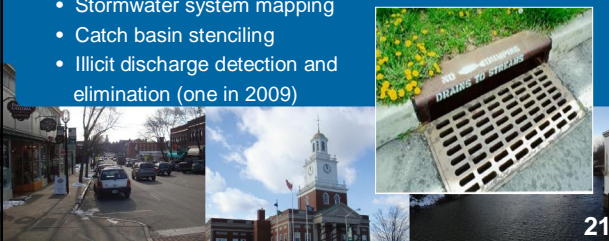
- ▶ Infrastructure Maintenance
- ▶ Planning Board Activities
- ▶ Regulatory Compliance
- ▶ Pollutant Diversion
- ▶ Regional Programs
- ▶ Watershed Management



Current Stormwater Program Elements – Infrastructure Maintenance



- ▶ Catch Basin Cleaning
 - Cleaning approx. 50% of catch basins annually (1373 cleaned in 2009)
- ▶ Illicit Discharge Detection and Elimination
 - Stormwater system mapping
 - Catch basin stenciling
 - Illicit discharge detection and elimination (one in 2009)



Current Stormwater Program Elements –
Planning Board Activities



- ▶ City Engineers review all subdivision and site plan applications
- ▶ Projects required to submit stormwater O&M plans
- ▶ Inspections of temporary and permanent erosion control and stabilization measures
- ▶ Implemented an electronic tracking system



Current Stormwater Program Elements –
Planning Board Activities, cont'd



- ▶ 2009 amendments to subdivision and site review regulations strengthen stormwater requirements
 - Encourage use of low impact development techniques
 - Require that all projects >1 acre submit plans to Planning Board for review and approval
 - Provide authority to regulate projects <1 acre when in proximity to sensitive ecological areas
 - Subcommittee formed to evaluate porous pavement



Current Stormwater Program Elements –
Planning Board Activities, cont'd



- ▶ Zoning Ordinance 170-28.3: Groundwater Protection
 - Limits land uses within Primary and Secondary Groundwater Protection Zones surrounding supply wells
 - Limits impervious surface in poorly drained areas
 - Requires Conservation Commission review for developments requiring Planning Board approval
 - Establishes nitrogen and infiltration limits



Current Stormwater Program Elements – Planning Board Activities, cont'd



- ▶ Zoning Ordinance 170-27: Conservation District
 - Encompasses:
 - Areas within 100 feet of mean high water of any water body subject to tidal action
 - Areas within 50 feet of a stream, brook or other freshwater body
 - Certain parcels owned by the City of Dover
 - All areas with slopes in excess of 20%
 - A Conditional Use Permit granted by the Planning Board is required for development within the Conservation District
 - Planning Board requires Conservation Commission review



Current Stormwater Program Elements – Regulatory Compliance



- ▶ MS4 NPDES Permit Compliance
 - Public Education and Outreach
 - Public Involvement and Participation
 - Illicit Discharge Detection and Elimination
 - Pre- and Post-Construction Site Stormwater Runoff Control
 - Pollution Prevention and Good Housekeeping in Municipal Operations
 - Staff education



Current Stormwater Program Elements – Pollutant Diversion



- ▶ Household Hazardous Waste Pickup
 - One collection day per year
- ▶ Curbside Recycling
 - 52% of waste stream recycled
 - Accepts waste oil, tires, metal, yard waste, electronics, used antifreeze- and mercury-containing items, etc
- ▶ Onsite Recycling Facility
- ▶ Pet Waste Program
 - Scoop the Poop pledge



Current Stormwater Program Elements – Regional Programs



- ▶ Participation in NH Seacoast Stormwater Coalition
 - Public awareness, training of staff, bulk pricing, etc
- ▶ Participation in the Southeast Watershed Alliance
- ▶ Natural Resources Outreach Coalition (NROC) Consultation
 - Stakeholder meetings identified two key target areas:
 - Encourage low impact development techniques in development and redevelopment
 - Explore feasibility of a stormwater utility



Current Stormwater Program Elements – Watershed Management



- ▶ Berry Brook Watershed Assessment and Management Plan Implementation
 - Two grants sought for implementation funding
 - Encourage LID techniques
 - Stream restoration
 - Water quality BMPS at Horne Street School



Current Stormwater Program Elements – Watershed Management, cont'd



- ▶ Willand Pond Cyanobacteria Evaluation
 - Rise in phosphorus levels attributed to periodic flooding of pond and adjacent forest floor
 - Excess precipitation
 - Obstructions blocking pond's natural outlet
 - Stormwater runoff from commercial parking lots constructed in the watershed within the past few years



Current Stormwater Program Elements –
Watershed Management, cont'd



- ▶ Willard Pond Cyanobacteria Evaluation, cont'd
 - Joint study completed by Dover, Somersworth, and NHDES
 - Preferred alternative to address water level issue
 - Stormwater quality treatment improvements for existing and future development sites identified
 - NHDES grant negotiated to design and implement stormwater retrofits
 - Reactivation of abandoned water supply well



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Current Program Funding Needs –
Major Stormwater Line Items



Major Stormwater Budget Component	2011 Budget
Groundwater Sampling	\$2,500
Catch Basin Cleaning	\$60,000
General Drainage Improvements	\$150,000
TOTAL	\$212,500



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Current Program Funding Needs
(Includes Shared Costs)



Budget Component	FY 2011 Budget
Personal Services	\$501,792
Purchased Services	\$83,815
Supplies	\$163,610
Capital Outlay	\$150,000
Other Expenses	\$900
TOTAL	\$900,116

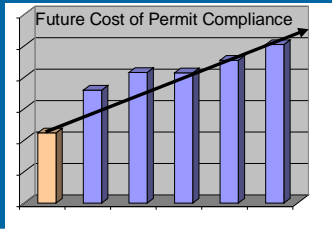


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Future Program Costs will Escalate Significantly



- ▶ Costs to:
 - Maintain infrastructure
 - Address new issues
 - Maintain permit compliance



Sustainable funding is critical to maintaining regulatory compliance and quality of life for residents.



Future Funding Needs



Budget Component	2011	2012	2013	2014	2015	2016
Current Service	\$900,116	\$900,116	\$900,116	\$900,116	\$900,116	\$900,116
Catch Basin Spoils Facil.	\$150,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Phase 2 NPDES Permit	\$136,000	\$192,000	\$191,000	\$231,000	\$281,000	\$281,000
Utility Impl. & Admin	\$80,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Needs Assess & Impl	\$100,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
CIP Items	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Rehab/replace 1% / yr	\$686,400	\$686,400	\$686,400	\$686,400	\$686,400	\$686,400
System Improvements	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Watershed Plan Impl.	\$315,687	\$327,337	\$327,337	\$327,337	\$327,337	\$327,337
TOTAL	\$2,448,204	\$2,245,854	\$2,244,854	\$2,284,854	\$2,245,854	\$2,245,854

Funding Mechanism Should Be:



- ▶ Sufficient to cover costs
- ▶ Stable / dependable from year-to-year
- ▶ Legal and defensible
- ▶ Easy to understand and implement
- ▶ Fair and Equitable for Dover's residents



Funding Options Need to Address One-Time Costs as well as Ongoing Costs




	Funding Source	Pay for Capital?	Pay for O&M?
One-Time Costs Capital Improvements	Grants	Yes	No
	State Loan Programs	Yes	No
	Developer Contributions	Yes	No
	Collaboration with other Agencies	Yes	Yes
	Selling Bonds	Yes	Yes (not advisable)
On-Going Costs Maintenance Operations Debt Repayment	General Fund	Yes	Yes
	Streets / Road Fund	Yes (if \$\$)	Maybe
	Local Improvement District	Yes	No
	System Development Charges	Yes	No
	Utility Rates	Yes	Yes
	Permit Review Fees	No	Yes
	Inspection Fees	No	Yes



What is a stormwater utility?



- ▶ Similar to a water or wastewater utility
- ▶ Funds collected are dedicated to addressing stormwater issues
- ▶ Rates based on use of the stormwater system

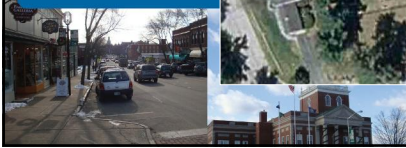
Similar to Pay-As-You-Throw Program 



Defensible Rate Structures are Based on Area of Impervious Surface



- ▶ Private streets
- ▶ Rooftops
- ▶ Parking Areas
- ▶ Driveways
- ▶ Sidewalks
- ▶ Other hard surfaces



Next Steps



- ▶ Action Items
- ▶ Suggestions
- ▶ Schedule Meeting with City Planning
- ▶ October Meeting Date (Columbus Day)
- ▶ Other?

