



GHD CLIENTS|PEOPLE|PERFORMANCE




City of Dover, NH Municipal Stormwater Feasibility Study

*Stakeholder Workshop #3
October 11, 2010*




1

Agenda




- ▶ Welcome and Introductions
- ▶ Citizens' Forum
- ▶ Approval of Minutes
- ▶ Comments on Draft Report
- ▶ Rate Structure Alternatives
- ▶ Discussion: Rate Structure Alternatives and Willingness to Pay
- ▶ Next Steps & Action Items

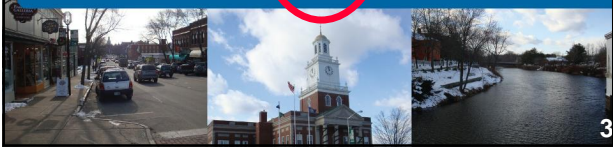


2

Stormwater Utility Feasibility Study Process



Meeting 1: Goals and Objectives	Meeting 2: Program Plan, Compelling Case	Meeting 3: Rate Structure Alternatives	Meeting 4: Recomm's and Draft Report	Meeting 5: Final Report
<ul style="list-style-type: none"> •Stormwater impacts •Current approach •Future needs •Program goals & objectives 	<ul style="list-style-type: none"> •Current program alternatives (including utility) •Advantages and disadvantages 	<ul style="list-style-type: none"> •Benefits and drawbacks of alternative rate structures •Preliminary cost/revenue analysis 	<ul style="list-style-type: none"> •Preliminary recommendations 	



3

Future Funding Needs



Funding Level	2011	2012	2013	2014	2015	2016
Current Level of Service (LOS)	\$900,116	\$900,116	\$900,116	\$900,116	\$900,116	\$900,116
Current LOS + Required Actions	\$1,036,116	\$1,102,116	\$1,101,116	\$1,141,116	\$1,191,116	\$1,191,116
Current LOS + Required Actions + Rec'd Actions	\$2,218,204	\$2,170,854	\$2,169,854	\$1,523,454	\$2,071,854	\$1,573,454
Current LOS + Required Actions + Rec'd Actions + CIP Items	\$2,548,204	\$3,195,854	\$2,957,354	\$2,152,204	\$3,234,354	\$1,875,954

Average Annual Funding Needs Range from \$1.1M to Nearly \$3M, Depending on LOS

7

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



8

Advantages and Disadvantages of Potential Funding Approaches



	Stormwater Utility	General Fund (with Funding Recommendation)
Advantages	<ul style="list-style-type: none"> ▶ Stable ▶ Reliable ▶ Politically Independent ▶ More equitable (fee related to use) ▶ Visibility for stormwater ▶ Eliminates competition with other programs ▶ Not tied to property assessment 	<ul style="list-style-type: none"> ▶ Establishes the program a community issue instead of an individual issue
Disadvantages	<ul style="list-style-type: none"> ▶ Potentially high administration costs ▶ Credit scheme could be complicated ▶ Perceived inequity in user rates ▶ Disparities in individual costs 	<ul style="list-style-type: none"> ▶ Restricted ability to fund improvements needed for regulatory compliance and infrastructure relief ▶ Subject to political environment ▶ Not reliable ▶ Perceived inequity ▶ Tax exempt properties not charged ▶ Maintains the status quo funding level ▶ Goes on property assessment

General Fund is not stable or sufficient (or equitable)

9

Rate Structure Alternatives



What is a Rate Structure?

- Framework for assessing responsibility for the stormwater system
- Reasonable nexus between cost and the demand placed on the system (runoff and water quality)
- Two major concepts: (1) basic rate structure and (2) rate modifiers



Pricing Objectives



- ▶ Revenue Sufficiency
- ▶ Revenue Stability
- ▶ Defensibility
- ▶ Simplicity
- ▶ Ease of Administration
- ▶ Equity Among Customer Classes



Common Methods of Assessment



Impervious Area

- Charge based on impervious area only

Impervious Area + Gross Area

- Charge based on impervious area and a lesser charge for gross area

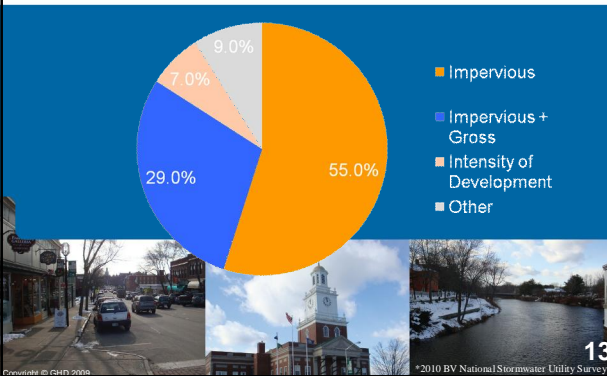
Intensity of Development

- Charge based on intensity of development (recognize green space)

Most defensible rate structures utilize impervious area



Common Methods of Assessment*



13

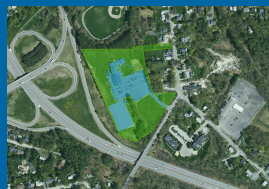
Impervious Area – Strengths & Weaknesses



14

Impervious Area - Example

- 10 acres with 33% impervious
- 1 Equivalent Residential Unit = 3,800 sq.ft.
- 158,158 sq.ft. / 3,800 = 41.62 (round 42 ERUs)
- Monthly charge per ERU = \$6.00
- \$6.00 x 42 = **\$252 per month**



15

Impervious Area + Gross Area – Strengths & Weaknesses



16

Impervious + Gross Area - Example

- Same parcel
- Impervious area charge of \$252 per month
- 482,364 sq.ft. (gross area) / 3,800 = 126.9 (round 127 ERUs)
- Assume charge for gross area 1/20 of impervious area charge or \$0.30 per ERU = \$38.10
- Total charge = \$252 + \$38.10 = **\$290.10 per month**



17

Intensity of Development – Strengths & Weaknesses



18

Intensity of Development - Example

- Assume that 60 – 70% range is normal for a residential parcel
- Example property is 33% impervious
- Charge would be \$3.43 per ERU x 42 = **\$144.06 per month**

Percent Impervious		
Low +	High	Rate per ERU
1	10	\$ 0.86
10	20	\$ 1.71
20	30	\$ 2.57
30	40	\$ 3.43
40	50	\$ 4.29
50	60	\$ 5.14
60	70	\$ 6.00
70	80	\$ 6.86
80	90	\$ 7.72
90	100	\$ 8.57

19

Rate Modifiers



- What are Rate Modifiers?
 - Adjustments or factors that can be applied to various components of the rate structure to enhance equity, improve transparency, or reduce costs
- Examples: Fixed Costs (e.g. customer service, billing/collections) Assessed Per Account; Tiered Rates for Residential Customers
- Credits



20

Credits



- Actions that Reduce Demand on the System or Lower Program Costs
- Typical credits
 - Retention or detention
 - Water quality best management practices
 - Maintenance of on-site infrastructure
 - Non-structural best management practices (e.g. education)
 - Other rate discount programs for qualifying customers



21

Credits



- ▶ How do you calculate a credit?
 - Determine a reasonable relationship to program costs
 - Estimate percent reduction in runoff
 - Usually establish a cap since some program costs are fixed (possible exceptions)
- ▶ Who gets a credit?
 - Typically non-residential
 - Including residential more of a policy decision

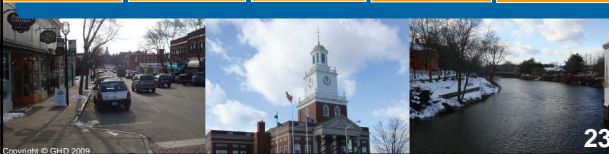


22

Simplifying the Credit System



Step 1	Step 2	Step 3	Step 4	Step 5
Credits & measurement approach are defined and adopted along with utility	Credits already in billing system are applied automatically	Customers apply for additional, specific credits	Dover Utilities Commission Reviews applications on a case-by-case basis	Approved credits are incorporated into billing system



23

Example: Burlington, VT Credit Program



- ▶ Only non-residential properties eligible for credits
 - Multiple credits can be granted to a single property
 - Total credit shall not exceed 50% of the fee
 - Minimum fee equal to the flat fee for a residential property
- ▶ Responsibility of the customer to apply for credits and provide necessary information
- ▶ Applications received within one year of the initial bill are applied retroactively (otherwise applies prospectively)



24

Example: Burlington, VT Credit Program, cont'd



Available Credits:

- Water Quantity Reduction: credit for controlling the rate of runoff release with respect to the predevelopment peak flow
- Water Quality Treatment: up to 25% credit for 80% TSS removal
- Non-Structural Treatment: credit granted for non-structural water quantity reductions & water quality improvements
- MS4 Permitted Facilities: 10% reduction for MS4 entities
- Water Education Curricula: 10% credit for schools where approved stormwater-related curriculum is taught



Example: Newton, MA Credit Program



- ▶ Credits granted to residential and non-residential customers
- ▶ Credits cannot exceed 75% of the stormwater fee
- ▶ Responsibility of the customer to apply for credits

Category	Res. Credit	Non-Res. Credit
Roof runoff captured and infiltrated:	25 to 50%	25 to 50%
Driveway / parking lot captured and infiltrated	15 to 25%	25 to 50%
Stormwater Quality (pre-treatment prior to entering public drainage system)	10 to 20%	10 to 20%



Billing for Stormwater



Water and Sewer Bill



Stormwater Only Bill

Property Tax Bill



Program Funding Needs



- ▶ Existing Level of Service (approx. \$900k annually)
 - Currently, funding provided through streets and drains budget center (general fund)
- ▶ Required Future Activities (\$200-300k annually)
 - Increased NPDES compliance and on-going spoils management



Program Funding Needs



- ▶ Recommended Future Activities (approx. \$1.1MM in 2011)
 - Stormwater needs assessment, increased infrastructure reinvestment, watershed capital improvements
- ▶ CIP Items (average \$850k / year)
 - Catch basin spoils facility, street reconstruction, system expansion & improvements



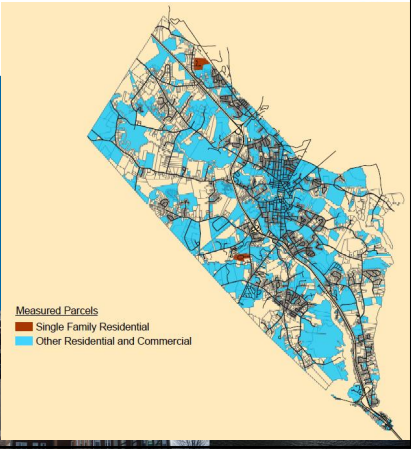
Other Considerations



- ▶ Initial level of accounts receivable delinquency tends to be higher than other utility services
 - Depends on billing methodology, available recourse, etc.
 - Up to 10% not uncommon initially
- ▶ Credits, while beneficial, need to be considered when forecasting revenue
 - Moderate program might equate to 2.0-3.0% of total revenue

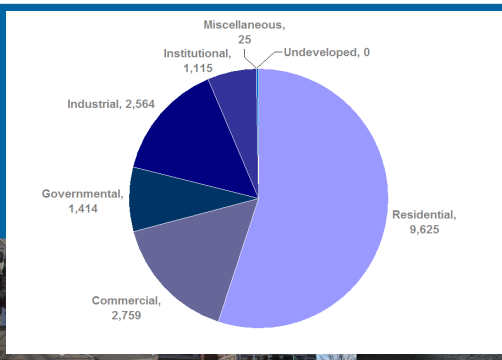


Impervious Area
Has Been Mapped
for >1,000 of the
City's 8,000
Parcels



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Approximate Breakdown of Equivalent Residential Units



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35

Preliminary Calculations



	Range of Charge (per ERU)	Estimated Revenue
Current Level of Service	\$3.00 - \$5.00	\$900k
Current Level of Service + Required Actions	\$5.00 - \$7.00	\$1.2MM
Current Level of Service + Required Actions + Recommended Actions	\$9.00 - \$11.00	\$2.0MM
Current Level of Service + Required Actions + Recommended Actions + CIP Items	\$11.00 - \$13.00	\$2.5MM



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36

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