Reducing Costs for Meeting Stormwater Regulations for Small to Mid-Size Communities in Massachusetts

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Sponsored by: MassDEP
Stormwater
“Stormwater causes up to \( \frac{2}{3} \) of water quality violations in Massachusetts”

Neponset River Watershed Association, 2016
Municipal Stormwater Separate Sewer Systems (MS4)

Six Minimum Control Measures:
- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Site Runoff Control
- Good Housekeeping/Pollution Prevention
## Costs of New Regulations

<table>
<thead>
<tr>
<th>Suburban Community</th>
<th>2003</th>
<th></th>
<th>2014</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost</td>
<td>Hours</td>
<td>Cost</td>
<td>Hours</td>
</tr>
<tr>
<td>Minimum Control Measure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Public Education</td>
<td>$3,000</td>
<td>$40,500</td>
<td>30</td>
<td>400</td>
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<tr>
<td>Public Participation</td>
<td>$7,000</td>
<td>$14,000</td>
<td>60</td>
<td>120</td>
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<tr>
<td>IDDE</td>
<td>$37,500</td>
<td>$65,100</td>
<td>370</td>
<td>619</td>
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<tr>
<td>Construction Site Control</td>
<td>$4,200</td>
<td>$21,600</td>
<td>32</td>
<td>96</td>
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<tr>
<td>Post Construction Site Control</td>
<td>$6,000</td>
<td>$12,000</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>Good Housekeeping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rented Trucks</td>
<td>$26,000</td>
<td>$383,000</td>
<td>72</td>
<td>84</td>
</tr>
<tr>
<td>Purchased Trucks</td>
<td>$307,000</td>
<td>$678,000</td>
<td>72</td>
<td>84</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rented Trucks</td>
<td>$124,000</td>
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<td>2140</td>
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<tr>
<td>Purchased Trucks</td>
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<td>$897,000</td>
<td>996</td>
<td>2140</td>
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</tbody>
</table>

EPA 2016
Project Goal

Assist small to mid-size communities in Massachusetts with fulfilling new MS4 requirements

Provide a set of recommendations that towns can use as guidelines to reduce costs of implementation
Case Studies of Grafton and Wellesley

Wellesley is in Norfolk County in Massachusetts, with a population of just under 28,000 as of 2010.

Grafton is in Worcester County in Massachusetts, with a population of approximately 18,000 as of 2010.
Massachusetts Municipal Stormwater Coalitions

1. Central Massachusetts Regional Stormwater Coalition (CMRSWC)
   Annual Meeting
2. Connecticut River Stormwater Committee
3. Northern Middlesex Coalition
4. Neponset River Watershed Association
   Ian Cooke, Neponset River Watershed Association
   Steven McCurdy, MassDEP
5. Merrimack Valley Stormwater Coalition
6. Southeast Regional Stormwater Coalition
Development of Recommendations

Grafton

Wellesley

Coalitions

Small MS4 Communities

MassDEP and EPA
Labor and Time Requirements are an Issue for Many MS4 Communities

We recommend that communities assess internal staffing needs for the new permit requirements.
Good Housekeeping Has the Highest Expected Cost in the New Permit

EPA's Cost Estimates for the New MS4 Permit

- Good Housekeeping: 57%
- Other: 43%

- IDDE: 27%
- Construction: 2%
- Post-Construction: 4%
- Public Education: 8%
- Public Involvement: 2%
Good Housekeeping Has the Highest Expected Cost in the New Permit

Wellesley's Cost Estimates for the New MS4 Permit

- Good Housekeeping: 58%
- Other: 42%
- Public Involvement: 4%
- Public Education: 9%
- IDDE: 11%
- Construction: 3%
- Post-Construction: 15%
Stormwater Coalitions are Beneficial for Providing Assistance

Communities requiring additional assistance with stormwater management should join a coalition or collaborative if not involved in one.
Consider Alternative Methods of Funding

Stormwater Coalitions

Stormwater Utilities

Grants from MassDEP/ EPA
Many Town and Coalition Public Education and Outreach Materials Overlap in Content

The Public Education and Outreach control measure target the following audiences:

- 4 Target Audiences
  - Residents
  - Businesses
  - Institutions (Churches, Hospitals)
  - Commercial Facilities

The Public Education and Outreach control measure:

- Has been estimated to cost up to $73,800 for Suburban Communities and take up to 730 hours
- Needs to measure “effectiveness” of outreach methods
Recommendations to Towns

1. Assess internal staffing needs for the new permit requirements
2. Ensure to allocate enough funding for Good Housekeeping, which can cost over half of the budget for stormwater management
3. Communities requiring additional assistance with stormwater management should join a coalition or collaborative if not involved in one.
4. Consider alternative methods of funding, such as stormwater utilities
Thank you!
Questions?
Acknowledgements

Paul Mathisen, PhD - Advisor
Seth Tuler, PhD - Advisor
Melissa Belz, PhD - Advisor
Frederick Civian - Stormwater Coordinator at the MassDEP
Steven McCurdy - Division Director of Municipal Services at the MassDEP
George Saraceno - Senior Civil Engineer for Wellesley
Joseph Laydon - Town Planner for Grafton
Brian Szczurko - Assistant Town Engineer for Grafton
David Crouse - Highway Superintendent
Maria Mast - Conservation Agent for Grafton
Ian Cooke - Executive Director for the Neponset River Watershed Association
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