Stormwater Financing 101:
Getting Started on Financing your
Stormwater Management Plan

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University of Maryland
Barboursville, WV
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The Environmental Finance Center: Who are we?

- One of 10 University-based centers across the country
- Provide innovative solutions to managing the costs of environmental protection and improvement by assisting communities:
  - Address internal capacity
  - Develop organizational capacity
  - Assess, recommend, and implement watershed protection financing programs
  - Identify funding and financing opportunities
- Address the issue of “how to pay” by working across sectors
Elements of a Comprehensive Stormwater Program

1. Administration
2. Billing and Finance
3. Public Education and Involvement
4. Technical Support
5. Engineering and Planning
6. Operation and Maintenance
7. Capital Improvements
8. Regulation and Enforcement
Stormwater Today: The Impact on WV Municipalities

- Many new MS4 Phase II
- More attention to Phase II communities than ever before
- Additional responsibility to meet TMDL

All this at a time when too few resources and limited capacity available to properly manage stormwater
Don’t Confuse Funding with Financing

FINANCING
• Provides a revenue
• Often dedicated
• Sustainable
• Can be invested

FUNDING
• Provides a revenue
• Finite
• Volatile
• Unsustainable
You are Not Alone: Stormwater Financing Around the Country

Stormwater Utilities 2012

Source: Western Kentucky University Stormwater Utility Survey 2012; report surveys 1,314 stormwater utilities across 39 states and DC
Where Does It All Begin?

- It starts with a comprehensive strategy
- Estimate annually but plan for the long term
- Make program transparent and cost effective
- Get to know your system – above and below the ground
- Engage public early and often
No Time like the Present to get Started

- Know what you are responsible for
- Get more familiar with your permit
- Develop a strategy – short and long term
- Better organize your stormwater department
- Build a communication strategy
- Write, record, and document EVERYTHING!
- Create your Stormwater Champion(s) locally
Minimum Control Measures

1. **Public Education and Outreach**: Written plan, list of targeted audiences
2. **Public Involvement and Participation**: Promoting, tracking and soliciting feedback
3. **IDD&E**: Tracking inspections/complaints
4. **Construction Site SW Runoff Control**: Track progress
5. **Post Construction SW Management**: Procedures, written O&M schedule
6. **Good Housekeeping/Pollution Prevention**: Cleaning schedule, training
Understanding Local Stormwater Financing

Is there:
- Enough data?
- Measurable goals?
- A tracking system?
- Ways to create efficiencies?

Making the right decision should be:
- Fair
- Transparent
- Adequate revenue
- Equitable
Easy Ways to Improve Program on a Limited Budget

- Get departments to communicate better
- Centralize stormwater responsibility
- Let others do some of the work for you without guilt
- Work together to reduce costs, create efficiencies
Technical Steps to Take Now

- **Step 1**: Conduct assessment of current stormwater program through data gathering
- **Step 2**: Evaluate existing program structure; evaluate current capacity; identify trends in funding
- **Step 3**: Identify gaps in existing program and evaluate future needs
- **Step 4**: Determine where current program fits into LOS; evaluate exact costs
- **Step 5**: Develop and finalize proposed stormwater program budget for year 1; project out budget
# Designing a Level of Service

## OPERATIONS AND MAINTENANCE
- Maintain, inspect, and evaluate the effectiveness of BMPs owned or maintained by the City, as well as those which are privately owned. (General Permit)

<table>
<thead>
<tr>
<th>Level of Service Options</th>
<th>Program Gap</th>
<th>Additional Staff</th>
<th>Additional Operating Costs</th>
<th>Yearly/One Time Expense</th>
<th>Capital Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal</td>
<td>Continue to perform maintenance on BMPs as resources become available.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>Systematically address backlog of City’s BMP’s maintenance by adding additional crew.</td>
<td>1 FTE to inspect a minimum of 1/3 of all facilities annually</td>
<td>$30,000 - $35,000 salary with and additional $4,500 - $5,250 in benefits; $5,000 annually for vehicle maintenance</td>
<td>yearly</td>
<td>Cell phone, camera, laptop; $40,000 for truck</td>
</tr>
<tr>
<td>High</td>
<td>Address all backlogs and add new BMPs around city.</td>
<td></td>
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</tbody>
</table>
## Getting at True Costs is Important

- **Current Operating Expenditures**
  $376,600

- **Current Capital Expenditures**
  $186,250

- **True Costs for what is needed in 1 year is:**
  $1,638,945

### Table of Expenditures

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Total</td>
<td>$186,250</td>
<td>$736,250</td>
<td>$302,250</td>
<td>$352,250</td>
<td>$579,750</td>
<td>$202,250</td>
</tr>
<tr>
<td>Capital Expen</td>
<td>$186,250</td>
<td>$766,250</td>
<td>$317,250</td>
<td>$352,250</td>
<td>$579,750</td>
<td>$202,250</td>
</tr>
<tr>
<td>Total Expend</td>
<td>$562,850</td>
<td>$1,638,945</td>
<td>$1,211,762</td>
<td>$1,269,125</td>
<td>$1,519,547</td>
<td>$1,165,542</td>
</tr>
</tbody>
</table>
Document, Track, and Record!
Have a Staffing Plan

### Permit Activity Projection

<table>
<thead>
<tr>
<th>Permit Application Growth Rates</th>
<th>Year 1 - 5</th>
<th>Year 6 - 7</th>
<th>Year 8 - 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of New Permits in Year One</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>less than 1 acre</td>
<td>20</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>1 - 5 acre</td>
<td>10</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>5 - 10 acre</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>10 - 50 acre</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>50 - 100 acre</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>greater than 100 acre</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### Local Revenue From Permits

| State Share of Permit Fees | 28% |

### Budget

| % of Current Year Permit Fees held in Reserve for future Monitoring | 10% |

### Average # of Weeks Requiring Staff Activities for an Open Permit (Weeks)

<table>
<thead>
<tr>
<th>less than 1 acre</th>
<th>10</th>
<th>15</th>
<th>30</th>
<th>40</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 5 acre</td>
<td></td>
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<tr>
<td>5 - 10 acre</td>
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<tr>
<td>10 - 50 acre</td>
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<tr>
<td>50 - 100 acre</td>
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<td></td>
</tr>
<tr>
<td>greater than 100 acre</td>
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</tr>
</tbody>
</table>

### Staff Time Requirements Assumptions

<table>
<thead>
<tr>
<th>Review Time per Permit</th>
<th>30 minutes</th>
<th>Time per Pre-Construction Meeting</th>
<th>60 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWP Professional Time Per Week Per Permit with no issues</td>
<td>30 minutes</td>
<td>E&amp;S and Staff time per week per permit with no issues</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Support and Clerical Time per week per permit with no issues</td>
<td>15 minutes</td>
<td>Program Administration Time per week per permit (Reporting, Accepting Fees and Bonds, Enforcement, inspections, BMP Agreement Maintenance)</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Increase in time per week due to a permit with issues</td>
<td>250%</td>
<td>Increase in time per week due to a permit with issues</td>
<td>33%</td>
</tr>
<tr>
<td>Percentage of Permits that will have issues</td>
<td>250%</td>
<td>Percentage of Permits that will have issues</td>
<td>33%</td>
</tr>
<tr>
<td>Percentage of permits with no issues</td>
<td>67%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| SWP Labor Costs Year One (Includes Taxes, Benefits, etc) | $35 |
| E&S Hourly Labor Costs Year One (Includes Overhead) | $35 |
| Clerical Hourly Labor Costs Year One (Includes Overhead) | $25 |
| Administrative Hourly Labor Costs Year One (Includes Overhead) | $35 |
| Monitoring Hourly Labor Cost Year One (Includes Overhead) | $35 |
| Monitoring Support Hourly Labor Cost Year One Includes Overhead | $25 |

| Professional Time per permits per Year for monitoring activites (Hrs) | 1 Hours |
| Support/Clerical Time per permit per year for monitoring (Hrs) | 0.5 Hours |
### Staffing Budget - Comparison of Estimated Revenue Fees to Estimated Labor Costs

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jurisdictional Share of Permit Fee Revenue Collected</td>
<td>58,824</td>
<td>61,177</td>
<td>63,624</td>
<td>66,169</td>
<td>68,816</td>
<td>71,568</td>
<td>71,568</td>
<td>71,568</td>
<td>73,715</td>
</tr>
<tr>
<td>Permit Fees attributable to future year monitoring transferred to reserve</td>
<td>(5,882)</td>
<td>(6,118)</td>
<td>(6,362)</td>
<td>(6,617)</td>
<td>(6,882)</td>
<td>(7,157)</td>
<td>(7,157)</td>
<td>(7,157)</td>
<td>(7,372)</td>
</tr>
<tr>
<td><strong>Net Fee Collection Current Year</strong></td>
<td><strong>52,942</strong></td>
<td><strong>55,059</strong></td>
<td><strong>57,262</strong></td>
<td><strong>59,552</strong></td>
<td><strong>61,934</strong></td>
<td><strong>64,412</strong></td>
<td><strong>64,412</strong></td>
<td><strong>64,412</strong></td>
<td><strong>66,344</strong></td>
</tr>
<tr>
<td>Fee Collected in Prior Years transferred to current year for monitoring activities</td>
<td>588</td>
<td>1,200</td>
<td>1,836</td>
<td>2,498</td>
<td>3,186</td>
<td>3,902</td>
<td>4,617</td>
<td>5,333</td>
<td>6</td>
</tr>
<tr>
<td><strong>Net Current Year Revenue from Permit Fees</strong></td>
<td><strong>52,942</strong></td>
<td><strong>55,648</strong></td>
<td><strong>58,462</strong></td>
<td><strong>61,388</strong></td>
<td><strong>64,432</strong></td>
<td><strong>67,598</strong></td>
<td><strong>68,313</strong></td>
<td><strong>69,029</strong></td>
<td><strong>71,677</strong></td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated SWP</td>
<td>21,722</td>
<td>22,591</td>
<td>23,494</td>
<td>24,434</td>
<td>25,412</td>
<td>26,428</td>
<td>26,428</td>
<td>26,428</td>
<td>27,221</td>
</tr>
<tr>
<td>Estimated E&amp;S</td>
<td>9,811</td>
<td>10,203</td>
<td>10,612</td>
<td>11,036</td>
<td>11,477</td>
<td>11,937</td>
<td>11,937</td>
<td>11,937</td>
<td>12,295</td>
</tr>
<tr>
<td>Estimated Admin</td>
<td>7,008</td>
<td>7,288</td>
<td>7,580</td>
<td>7,883</td>
<td>8,198</td>
<td>8,526</td>
<td>8,526</td>
<td>8,526</td>
<td>8,782</td>
</tr>
<tr>
<td>Estimated Clerical</td>
<td>6,563</td>
<td>6,825</td>
<td>7,098</td>
<td>7,382</td>
<td>7,677</td>
<td>7,984</td>
<td>7,984</td>
<td>7,984</td>
<td>8,224</td>
</tr>
<tr>
<td>Estimated SWP Monitoring</td>
<td>1,400</td>
<td>2,856</td>
<td>4,370</td>
<td>5,945</td>
<td>7,583</td>
<td>9,286</td>
<td>10,989</td>
<td>12,693</td>
<td>14,447</td>
</tr>
<tr>
<td>Estimated Clerical Monitoring</td>
<td>500</td>
<td>1,020</td>
<td>1,561</td>
<td>2,123</td>
<td>2,708</td>
<td>3,316</td>
<td>3,925</td>
<td>4,533</td>
<td>5,160</td>
</tr>
<tr>
<td><strong>Total Estimated Personnel Expense</strong></td>
<td><strong>47,003</strong></td>
<td><strong>50,783</strong></td>
<td><strong>54,715</strong></td>
<td><strong>58,803</strong></td>
<td><strong>63,055</strong></td>
<td><strong>67,478</strong></td>
<td><strong>69,789</strong></td>
<td><strong>72,101</strong></td>
<td><strong>76,128</strong></td>
</tr>
<tr>
<td>Net (Permit Revenue Less Labor Costs Only) [Before Other Costs such as Equipment, Engineering, Education, Etc. Etc.]</td>
<td>5,938</td>
<td>4,864</td>
<td>3,747</td>
<td>2,585</td>
<td>1,377</td>
<td>120</td>
<td>(1,476)</td>
<td>(3,072)</td>
<td>(4,451)</td>
</tr>
</tbody>
</table>

### Equipment and Support Expense

- Equipment
- Computer and Software
- Office Equipment and Supplies
- Vehicles and Gas
- Training/Travel/Per Diem
- Camera and GIS
- Meetings and Outreach Education

| Assumptions | Dashboard 1 | Labor Dashboard | Budget Dashboard | Staffing Budget | Est Rev vs. Est Labor |
Project Approach: Technical Process

- Conduct an assessment of current stormwater management program through data gathering
- Evaluate existing stormwater management program
- Identify gaps in program and evaluate future needs
- Develop proposed stormwater program budget
- Estimate revenue needs for short and long term
- Recommendations on supporting a sustainable stormwater program – find ways to pay for it!
Project Approach: Outreach Process

One of the most important ways to achieve a high degree of accuracy in our recommendations is to engage local businesses and residents throughout the process.

- Leveraged community partnerships
- Created an outreach and marketing plan
- Conducted outreach activities
- Collect and share information about stormwater with the community as a whole
Examples of Effective Outreach

• Special activities
  • Economic Development Council
  • Chamber of Commerce activities
  • Homeowner Association picnics
  • Home and Garden Show
  • Local festivals
  • School or church events

• Stormwater written material
• City Meetings
• Stormwater Advisory Groups
Local Examples of Outreach for Stormwater
Storm Drain Graffiti
Mascots, Marketing Campaigns, and Commercials

**TAKE A DIP!**

STORMWATER POLLUTANTS FIND THEIR WAY INTO WHERE WE FISH, WHAT WE DRINK AND WHERE WE SWIM. Everything that goes into our storm drains—grass clippings, soap, pesticides, pet waste, whatever—makes its way straight to our streams. Stormwater pollution is our biggest source of water pollution. It all adds up. It all comes back. And you're the solution, now that you know where it goes. Find out more today visit KnowWhereItGoes.org.

**THINK PICKING UP SPIKE’S POOP IS GROSS? TRY SWIMMING IN IT.**

When you leave dog poop on the ground—or throw it down a storm drain—the rain carries Spike’s mess into storm drains and straight to our rivers, lakes, and ponds making them unsafe for swimming. Help keep our waters blue, pick up after your dog and throw the waste in the trash.

[www.ThinkBlueMA.org/ConnecticutRiver](http://www.ThinkBlueMA.org/ConnecticutRiver)
Highlighting Stormwater at Local Events
Stormwater Education Made Fun
Engaging the Public Gives Them a Voice
Public Engagement is Essential
Not Everything Has to Cost A Lot
Collaboration and Regionalization May be Key to Success

- Create efficiencies through partnerships
- Think beyond municipal boundaries
- Explore innovative technologies together
- Share resources and combine local priorities
Example of what Dedicated Funding can Do for you
Stormwater Alternatives through Green Enhancement
**WHAT IS SAGE?**

SAGE is a donation-funded, municipality-managed program.

- Beautifies the local streetscape
- Helps to meet TMDL requirements through Green Infrastructure
- Alignment with local (municipality/city) stormwater management requirements
Cost Example

- 2 donors contribute $12,500 each
- Garden construction $5,000
- One year of maintenance is $2,000
- $25,000 renewal after 5 years
Lynchburg, Virginia

- 55 sponsored gardens (10 acres total)
- $1,200,000 5-year garden sponsorship value
- 92 donors
- 40 acres of meadow
- 1,300 street trees planted outside of gardens
- $1.6MM in donations to date
- $225,000 surplus currently in program account
DONOR RECOGNITION SIGNS
Thank you!
Questions and Comments?

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