UPDATE: Watershed Outreach
Water Quality Advisory Group
January 14, 2013

Meosotis Curtis
Watershed Management Division
Presentation Outline

• What is the MS4 Permit?
• How will the Watershed Management Division meet these requirements?
• Where does Watershed Outreach fit in?
  • Public Outreach and Stewardship Work Plan
  • Watershed Outreach Focus
• Outreach and Community Engagement
  • Community Clean Water Summit
  • Watershed Group Capacity Building
  • Outreach Events and Materials
What is the MS4 permit?

- Municipal Separate Storm Sewer System (MS4)
  - Control what gets into our streams and other water ways
- Requires additional stormwater management for 20 percent of impervious surfaces (4,300 acres = 6.7 square miles). That’s about three times the size of Takoma Park.
  That’s equivalent to 32,912 football fields!
Total Maximum Daily Loads

- Must develop implementation plans to achieve pollutant reductions to meet water quality standards
- Local TMDLs vs Bay Restoration Target Reductions
Stormwater is the only source of pollution that is increasing to the Chesapeake Bay

We need to:

• Reduce stormwater volume
• Manage pollution from urban sources
  • **Bacteria** - (pet waste, wildlife, and sewer leaks)
  • **Nutrients** – (fertilizers: nitrogen and phosphorus)
  • **Sediment** – erosion
  • **Trash**
• Engage the Community
• Create Behavior Change

*85% of trash found in the Anacostia in DC before Bag Bill consisted of plastic bags and soda bottles*
How will we do this?

Watershed Management Division

- Watershed Restoration and Capital Improvements Projects (CIP)
  - Stormwater Retrofits and Stream Restoration
  - ESD/LID=Environmental Site Design/Low Impact Development
    - Stormwater treatment close to the source-rain gardens
- Stormwater Facility Maintenance
  - Best Management Practices (BMPs)
- Stormwater Permit Coordination
  - Monitoring
  - Outreach
    - Public Outreach and Stewardship Work Plan (began in FY09)
      - FY12 - Watershed Outreach budget
      - FY10 - Watershed Outreach Planner
      - FY12 - Volunteer Coordinator
      - FY13 - Litter Reduction Planner
Restoration includes ESD/LID: Green Streets and RainScapes

- Small-Scale practices, close to the runoff source
- Public Rights-of-way (Green Streets)
  - Bioretention, bioswales, pervious pavement
- Private Property (RainScapes)
  - Rain Gardens, Conservation Landscapes, Urban Tree Canopy
Restoration requires Maintenance of Stormwater BMPs

- Over 5,000 structures currently
- Significant increase in small practices expected to meet ESD/LID requirements
- Inspect all stormwater structures once every three years
  - Evaluating alternatives for ESD/LID
- Perform maintenance on County-owned facilities through contractors
  - Includes ESD/LID practices in rights-of-way
- **Significant outreach challenge**
  - Increase property-owner awareness
  - Increase property-owner stewardship
Public Outreach and Stewardship Workplan

- Eight priorities to increase awareness and engagement
- Continue RainScapes Program and increase voluntary implementation
- Develop and implement Anti-Littering Campaign
- Establish the Stream Stewards program
8 Priorities for Behavior Change
*Vital roles for watershed and community groups

Prevention is the most cost-effective reduction approach:

- Trash and litter
- Advertising campaign*, increased enforcement, and public and private property staff training

- Bacteria from urban sources
- Picking up pet waste outreach*, installing pet waste stations, and creating incentive program for installations

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Watershed Outreach Focus

- Local watersheds with most impacts
  - Poor and Fair Stream Resource Conditions
  - EPA-approved TMDLs with MS4 wasteload allocations (pollutant reductions)
- Link events to CIP projects and RainScapes Neighborhoods
- Locate events on GIS maps for Annual Reports

Challenge – Linking Outreach to Behavior Change and Water Quality Improvement

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Outreach and Community Engagement

- County Clean Water Summit
  - *First year (2011) partially funded through CBT grant*

- Community Clean Water Summit Partners
  - Maryland Sea Grant (Year One)
  - Cities of Gaithersburg and Rockville
  - Montgomery County Parks
  - Interstate Commission on the Potomac River Basin

- Pre- and Post-Summit Surveys
- Eventbrite Registration Process
- Advertising
- Donations – Food and Prizes

- Three year evolution
  - Year One: Watershed Groups
  - Year Two: Add Volunteer Involvement
  - Year Three: Washington Suburban Sanitary Commission
  - Saturday, March 16: Activity Center at Bohrer Park, Gaithersburg
Outreach and Community Engagement

• Watershed Group Capacity Building
  • Response to request from FOCJCW and other watershed groups
  • Identify watershed group sustainability needs
  • DEP Contract with Interstate Commission on the Potomac River Basin

• Watershed Group Support and Trainings
  • 2011/2012 Chesapeake Watershed Forum
  • Needs Survey
  • River Network Assessment Tool
  • Currently following up on results from that needs survey
  • Needs differ among watershed groups

• Hands-on projects
  • Conservation Landscaping Demonstration Projects
  • Storm drain Marking
  • Pet Waste Management Pilot
    • Rock Creek Conservancy as subcontractor to ICPRB
<table>
<thead>
<tr>
<th>Outreach Events</th>
<th>Attendance</th>
<th>By the numbers (increases in knowledge)</th>
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</thead>
<tbody>
<tr>
<td><strong>Community Events</strong></td>
<td>150 events over the course of FY10-FY13</td>
<td>&gt; 300% increase in Community Presence since FY10 (one outreach planner)</td>
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<td>About 5 events per month</td>
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<td></td>
<td>Direct contact with &gt;14,000 residents - face to face interaction</td>
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<td>FY11: 54% increase in knowledge of watershed groups</td>
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<td>41% increase in knowledge of county programs</td>
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<td>Clean Water Summit</td>
<td>360 residents attended from FY11 and 12</td>
<td>FY12: 24% changed their actions or behaviors</td>
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<td>76% encouraged others to get involved.</td>
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<tr>
<td>Watershed Group Capacity Building Contract</td>
<td>43 – Residents and watershed group members attended two Conservation Landscaping training</td>
<td>Increased Activity in all Watershed groups</td>
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<td></td>
<td>40 – Seneca Creek Stakeholder mtg</td>
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<td></td>
<td>7 – Groups participated in River Network Assessment</td>
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<td>World of Montgomery Festival</td>
<td>2500 residents at event, &gt;600 at DEP tent</td>
<td>Large discrepancies in knowledge:</td>
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<td>62% knew storm drains flow untreated to streams</td>
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<td>Good Neighbors Speaker Series</td>
<td>120 HOA Representatives at Commission on Common Ownership of Communities (CCOC) mtg</td>
<td>8 interested in County presentation to HOA</td>
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<td>4 presentations conducted in 2011</td>
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<td>Realtors Professional Credit Workshops</td>
<td>56 local real estate professionals attended two workshops</td>
<td>89% increase in knowledge of stormwater issues</td>
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<td>75% comfortable pointing out SWM facility to clients</td>
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<td></td>
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<td>90% comfortable relaying RainScapes info to clients</td>
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### Table -E20. Watershed Outreach Results For FY12

<table>
<thead>
<tr>
<th>Project Participants</th>
<th>#</th>
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<tbody>
<tr>
<td>Volunteers employed through Stream Stewards</td>
<td>21</td>
</tr>
<tr>
<td>Volunteer hours through Stream Stewards</td>
<td>82</td>
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<tr>
<td># of attendees at Clean Water Summit</td>
<td>185</td>
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<tr>
<td># of watershed groups working towards incorporation</td>
<td>3</td>
</tr>
<tr>
<td># of watershed groups assisted</td>
<td>8</td>
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<tr>
<td># of people directly reached</td>
<td>6,400</td>
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<tr>
<th>Materials and Events</th>
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<tr>
<td># of publications (print, web, other) produced:</td>
<td>10</td>
</tr>
<tr>
<td># of publications printed</td>
<td>15,000</td>
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<td># web hits on online publications expected</td>
<td>69,000</td>
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<tr>
<td># media hits (e.g., newspaper articles, TV and radio stories, etc.) facebook, listservs, twitter, blogs</td>
<td>400,000</td>
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<tr>
<td># of Events hosted or attended</td>
<td>71</td>
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New for FY12: Volunteer Program

Reaching Beyond the Choir

- Mission
- Structure
- Policies and procedures
- Measurable goals

- Tracking system
- Training modules
- Implementing program

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Watershed Outreach stretches far beyond implementing a stream restoration or a right-of-way stormwater improvement. It involves engaging the community in rallying around these projects and serving as catalysts for environmental change across the County. Influencing the public to think more consciously about the environmental impacts of their behaviors and actions can be quite a challenge. Our efforts include hosting public meetings to inform residents about watershed improvement projects, working with volunteers and community groups on public events such as “How-to” workshops, demonstration projects, stream clean-ups, fairs, and festivals, as well as speaking to schools, businesses, and home owners associations about how they have the power to "be the environmental change, they want to see".

Outreach Impressions

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<tr>
<th>Fiscal Year</th>
<th>Outreach Impressions (Number of People)</th>
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<tr>
<td>FY10</td>
<td>1,453</td>
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<tr>
<td>FY11</td>
<td>2,902</td>
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<td>FY12</td>
<td>6,390</td>
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<td>FY13 to date</td>
<td>6,656</td>
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<td>TOTAL</td>
<td>17,401</td>
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Watershed Management Division
Department of Environmental Protection
Montgomery County, Maryland
www.montgomerycountymd.gov/dep

Clean Water Summit
Make A Pledge for Clean Water

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References

- Montgomery County Countywide Coordinated Implementation Strategy
  - Appendix 5: Public Outreach and Stewardship Plan

- Montgomery County Annual Reports for the MS4 Permit

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