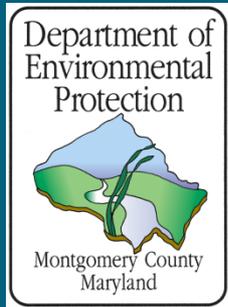


UPDATE: Watershed Outreach

Water Quality Advisory Group

January 14, 2013



Meosotis Curtis

Watershed
Management
Division



Presentation Outline

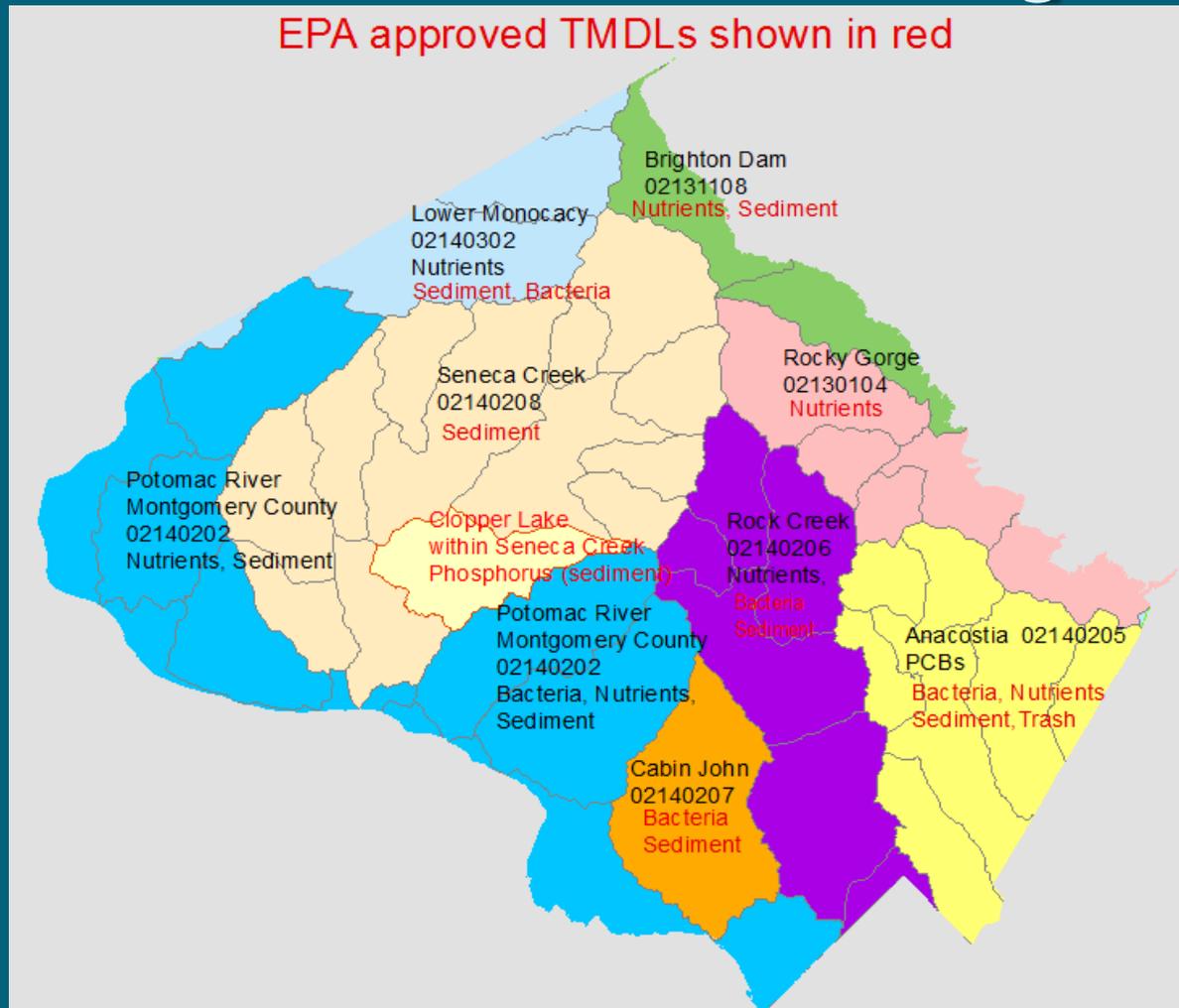
- What is the MS4 Permit?
- How will the Watershed Management Division meet these requirements?
- Where does Watershed Outreach fit in?
 - Public Outreach and Stewardship Work Plan
 - Watershed Outreach Focus
 - Outreach and Community Engagement
 - Community Clean Water Summit
 - Watershed Group Capacity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



8 things you can do to improve and protect our streams.



1. Pickup Pet Waste



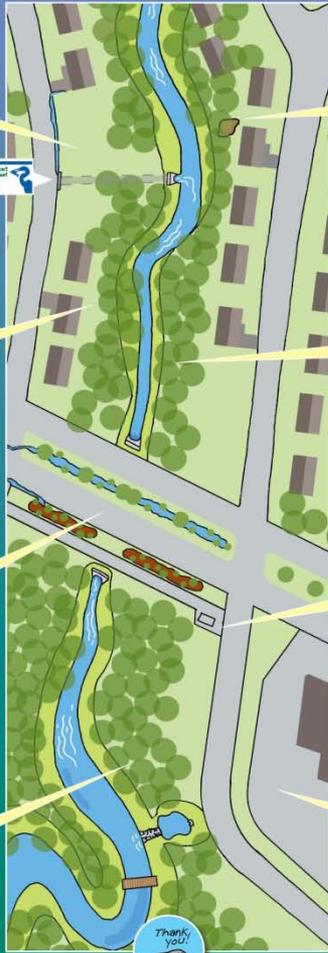
2. Change Lawn Care Habits



3. Encourage Green Streets



4. Plant Trees



5. Create Eco-Friendly Yards



6. Volunteer



7. Reduce Litter & Trash



8. Install Green Driveways & Parking Lots



www.montgomerycountymd.gov/dep

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



274 lbs. per year **Did you know:** According to the Environmental Protection Agency (EPA), a typical dog excretes 274 pounds of waste per year.

Pet Waste is Dangerous to Your Health

- Pet waste is more than just a nuisance – it is also a serious health hazard. It is considered raw sewage and can contain harmful bacteria and parasites that can be tracked into your home and infect you, your family, and even your pets.
- Every time it rains, thousands of pounds of pet waste left on the ground is washed into storm drains that may lead directly into our streams, causing pollution in our waterways.



What Can You Do?

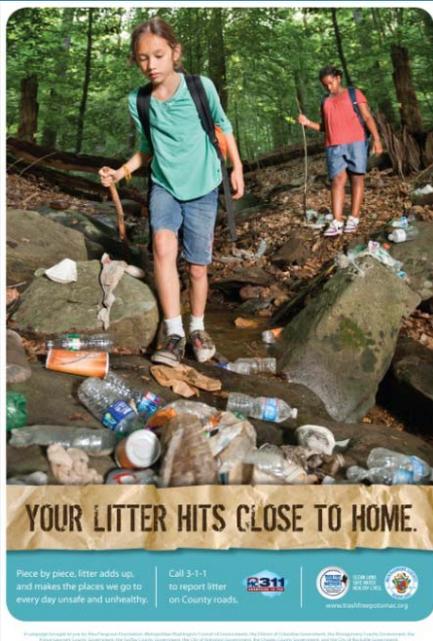
- **Every pet owner plays a part in preventing water pollution in our watersheds. Responsible pet owners pick up after their pets, both at home and on public land.**
- Carry disposable bags and pick up pet waste when out on walks, in your yard, or in a park. Properly dispose of pet waste by bagging and sealing the waste and depositing it in a trash can or pet waste receptacle. Do not place it in a storm drain or leave it on the ground.

What is Our Watershed?

A watershed is the total land area, including your yard, from which water drains into streams, rivers or other bodies of water. Montgomery County has two major watersheds, all of its land area draining to either the Potomac or Patuxent Rivers, both of which eventually flow into the Chesapeake Bay.

IMPORTANT: Pet owners who do not properly dispose of pet waste may be subject to fines for each offense.

For more information please call MC311 or visit: www3.montgomerycountymd.gov/311

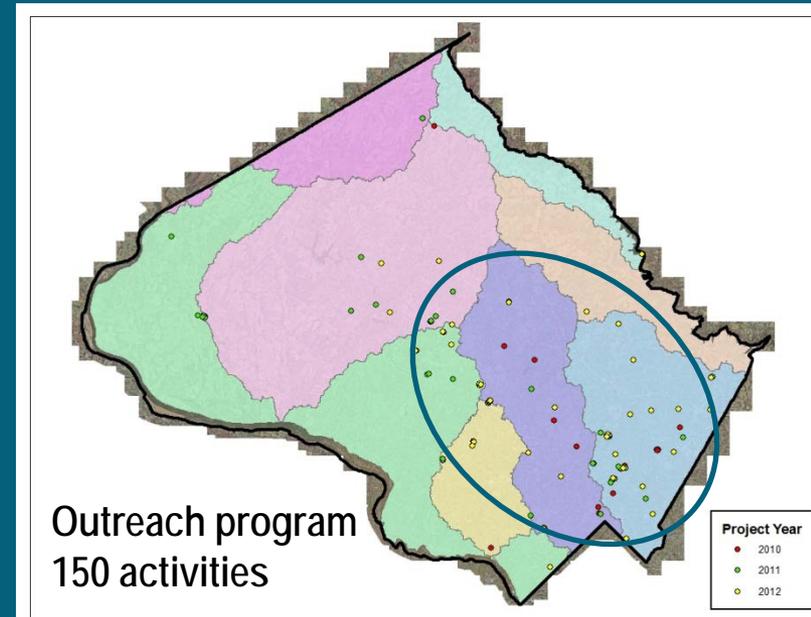
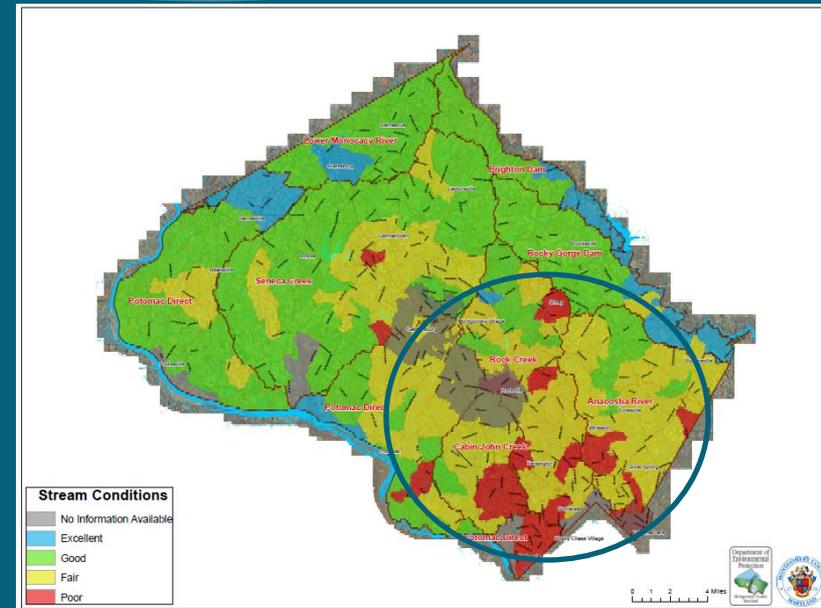


Watershed Outreach Focus

- 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

January 14, 2013



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

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

Table -E20. Watershed Outreach Results For FY12

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

New for FY12: Volunteer Program

Reaching Beyond the Choir

- Mission
- Structure
- Policies and procedures
- Measurable goals
- Tracking system
- Training modules
- Implementing



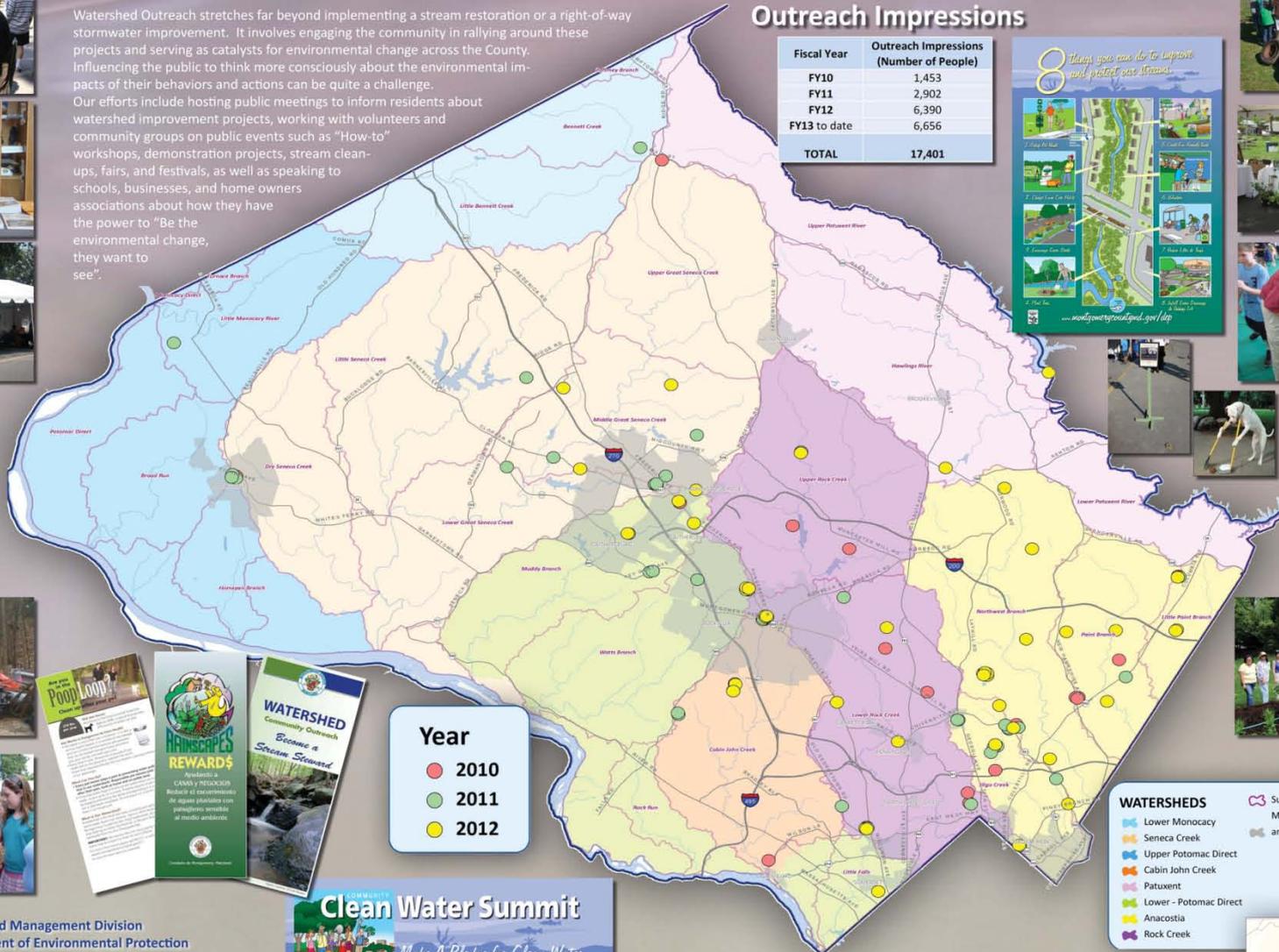
WATERSHED OUTREACH in Montgomery County

Reducing Water Quality Impacts through Community Engagement

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

Fiscal Year	Outreach Impressions (Number of People)
FY10	1,453
FY11	2,902
FY12	6,390
FY13 to date	6,656
TOTAL	17,401



Year
 ● 2010
 ● 2011
 ● 2012

WATERSHEDS

- Lower Monocacy
- Seneca Creek
- Upper Potomac Direct
- Cabin John Creek
- Patuxent
- Lower - Potomac Direct
- Anacostia
- Rock Creek

Subwatersheds Municipalities and Urban Centers

N



References

- Montgomery County Countywide Coordinated Implementation Strategy
 - http://www6.montgomerycountymd.gov/content/dep/downloads/water/CCISFinal_Jan2012v2.pdf
 - Appendix 5: Public Outreach and Stewardship Plan
- Montgomery County Annual Reports for the MS4 Permit
 - <http://www6.montgomerycountymd.gov/dectmpl.asp?url=/content/dep/water/npdes.asp#current>
- meosotis.curtis@montgomerycountymd.gov or 240-777-7711

QUESTIONS?



January 14, 2013