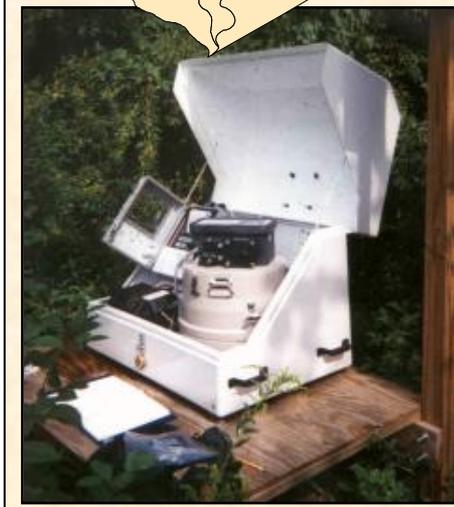
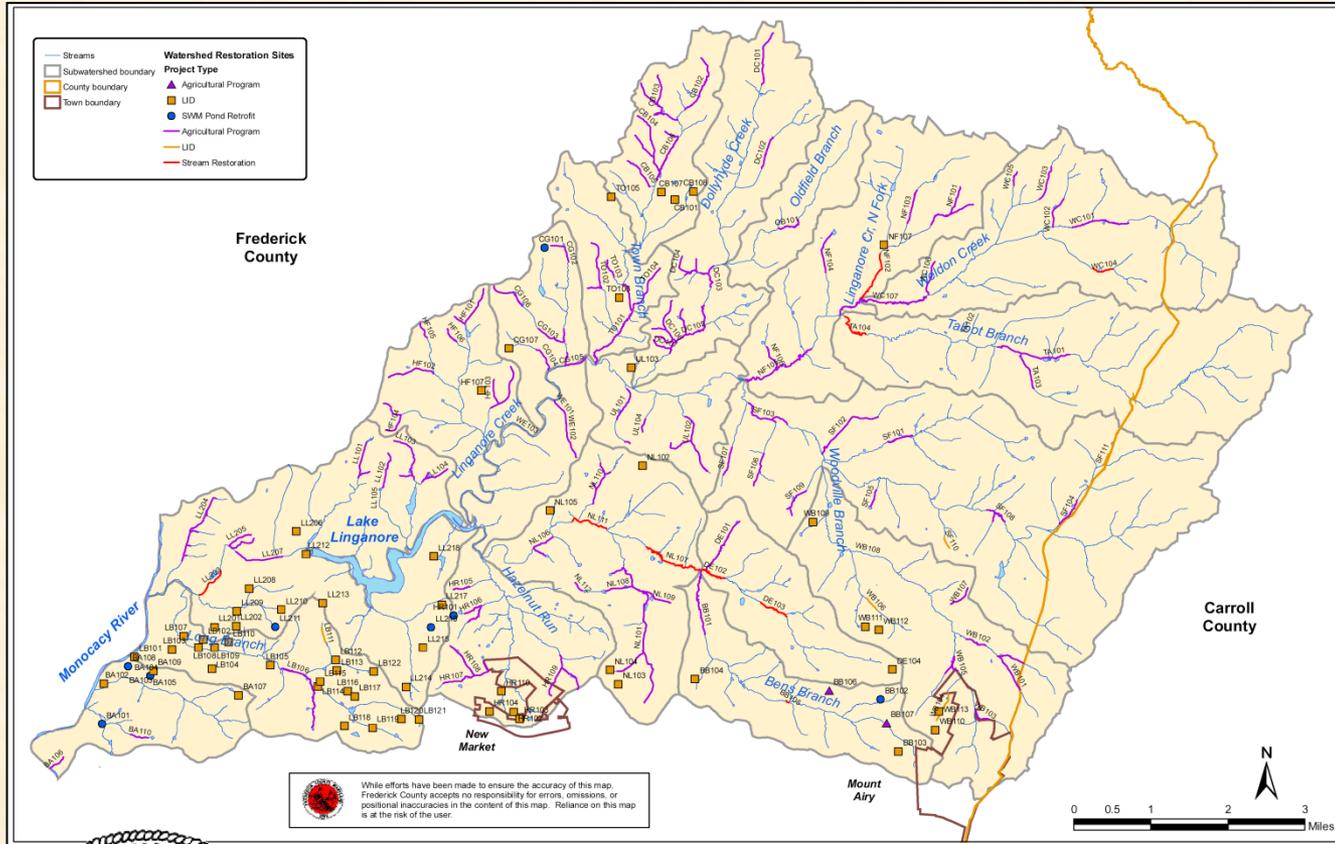


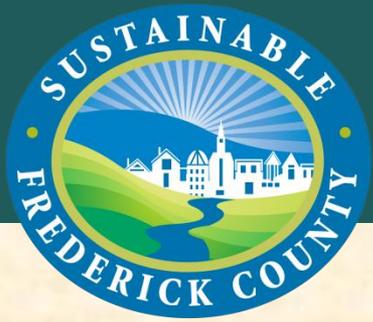
Frederick County Government's NPDES MS4 Permit Compliance



Office of Sustainability and Environmental Resources
Community Development Division

August 28, 2014





Overview

- **About Frederick County**
- **Current Programs: Highlight on budget and restoration efforts**
- **Comments on Tentative Determination**



About Frederick County

- **Approximately 664 sq miles**
- **1,400 miles of streams through 5 state watersheds: Lower and Upper Monocacy Rivers, Catoctin Creek, Double Pipe Creek, Potomac River**
- **Staff have subdivided watersheds into 20 NPDES management units with smaller branches and catchments**
- **County is 35% forest, 58% agriculture, 5% urban**
- **Most urban land is within municipalities, not MS4**



About Frederick County

- Home to urban non-municipal population estimated at 81,889 (Aug. 2014)
- Distinct places ranging from small, rural communities to more developed areas
- No ultra-urban areas



Current Program Requirements

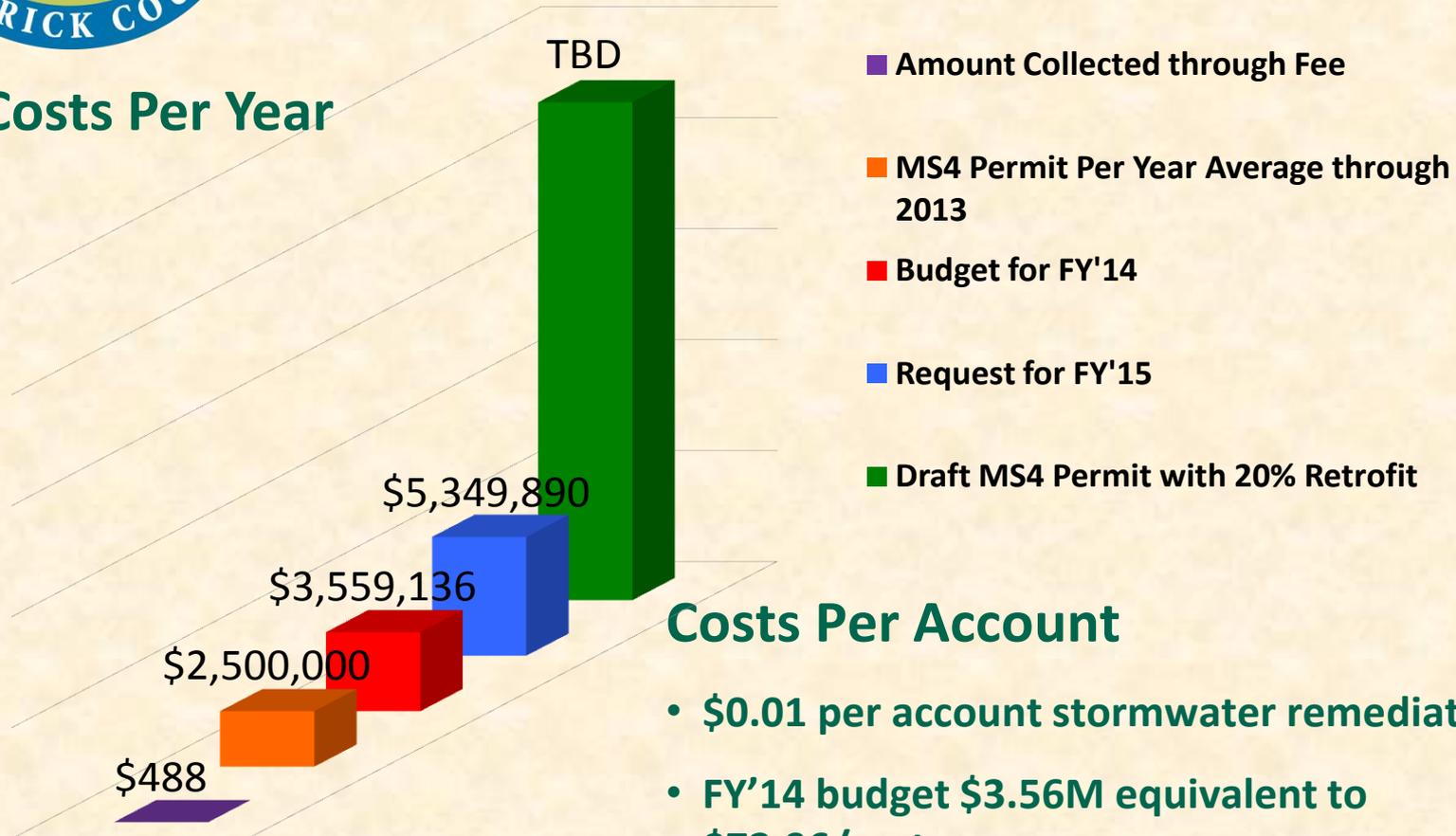
Current NPDES MS4 permit requirements:

- Establish legal authority to control storm drain discharges;
- Monitor and characterize urban runoff;
- Map storm drain infrastructure, hydrology, sewers, etc;
- Develop watershed management plans to identify pollutant sources;
- Correct stormwater impairments, restore watersheds;
- Treat 10% of untreated “impervious” area;
- Identify and correct illicit discharges to the storm sewer system;
- Conduct public education and outreach;
- Comply with sediment and erosion control regulations;
- Provide adequate funding



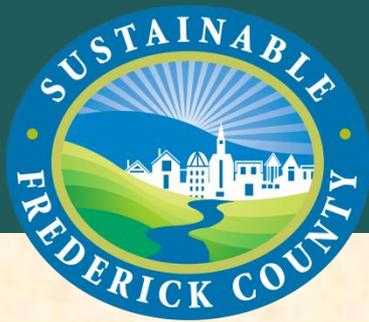
MS4 Permit Financing

Costs Per Year



Costs Per Account

- \$0.01 per account stormwater remediation fee
- FY'14 budget \$3.56M equivalent to \$72.96/acct
- Estimate of cost of draft permit underway



Watershed Planning and Restoration

Watershed Assessments

- **Permit requires Watershed Assessments**
 - Completed for Ballenger, Lower Bush, Lower Linganore, Bennett Creeks, Upper Monocacy and Lower Monocacy River Watersheds (~60% of county).
- **County proposes management options in Stream Restoration/Stormwater Management Facility Retrofit Assessments**
 - Conducted voluntarily for Ballenger, Lower Bush, Linganore, Bennett
 - Not required by permit but useful for project development



Watershed Planning and Restoration

Watershed Assessments

- **2/15/2012: EPA recognizes Frederick County and MDE as having one of the best watershed assessments in the nation**
- **4/25/2012: EPA Region III notes the excellence of County's GIS program, robust illicit discharge sampling program, strong watershed assessment program, and public access to permitting and inspection data**
- **5/09/2013: MDE congratulates County for "continued endeavors and commitment to the implementation of the municipal stormwater program."**
 - **Completion of restoration goal in permit**
 - **Maintenance of adequate budget**



Watershed Planning and Restoration

10% Impervious Area Restoration Requirement

Completed 713 acres of 672-acre goal:

- 125 ac. CIP projects;
- 129 ac. Watershed Alliance partner projects;
- 55 ac. Street Sweeping (Highway Operations);
- 413 ac. Community Restoration Projects



Watershed Planning and Restoration

Ballenger Creek Stream Restoration CIP example

Ballenger Creek Stream Restoration CIP example



- Restored channel at Ballenger Creek Elementary School;
- Multiple benefits provided through coordination with FCPS, DUSWM, Parks;
 - Stabilized banks, reduced sediment, removed debris jams;
 - Protected sewer line from stream;
 - Created area for Ballenger Creek trail on bank and saved Parks \$415K from having to install pedestrian bridge;
 - Improved habitat for fish, birds, other organisms

Watershed Planning and Restoration

Urbana High School SW Retrofit CIP example



Bioretention and pavers in courtyard



UHS bus lot before and after

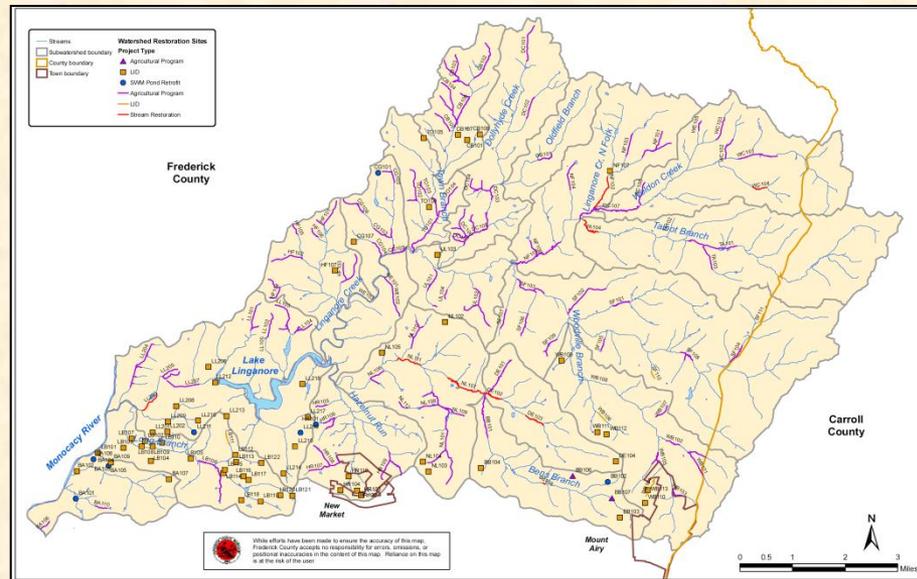
- Partnered with FCPS
- Existing stormwater pond treated volume but not quality;
- Constructed bioretention facilities in courtyard and bus lot to treat quality;
- Facilities look like landscaping feature;
- Provided porous pavers at emergency exits; school extremely pleased with this feature, which adds safety and protects grass

Watershed Planning and Restoration

Linganore Stream Restoration CIP example

Linganore CIP example:

- Selected Pinecliff Park stream restoration
- Degrading stream was source of sediment and nutrient pollution
- Coordinated with Parks
 - Protects park assets, water line, road culvert from erosion



Candidate sites for restoration in the Linganore Watershed based on Restoration/Retrofit Assessment. Map and detail.



Comments on Tentative Determination: MEP

- **Maximum Extent Practicable (MEP) is the legal compliance standard for MS4 permits**
- **Some parts of Draft Permit exceed MEP level of effort**
 - Due to cost, scheduling, other issues
 - Ex., 20% restoration requirement
- **Some are impossible regardless of funding and time**
 - Ex., litter and floatables program “elimination” goal
- **The County is finalizing analysis of its MEP**
 - Can only agree to accept a permit if it is practicable



Comments on Tentative Determination

- **County has met commitments under current MS4 program**
- **County has more than doubled resources in anticipation of next permit**
- **County wants to implement the Draft Permit to Maximum Extent Practicable**



Shannon Moore

301.600.1413

smoore@frederickcountymd.gov