

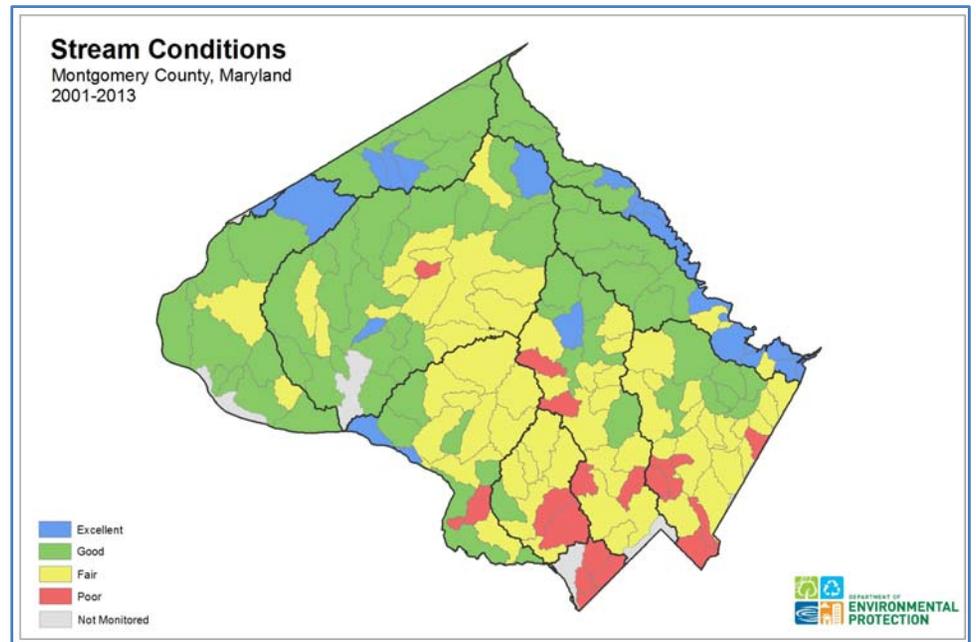
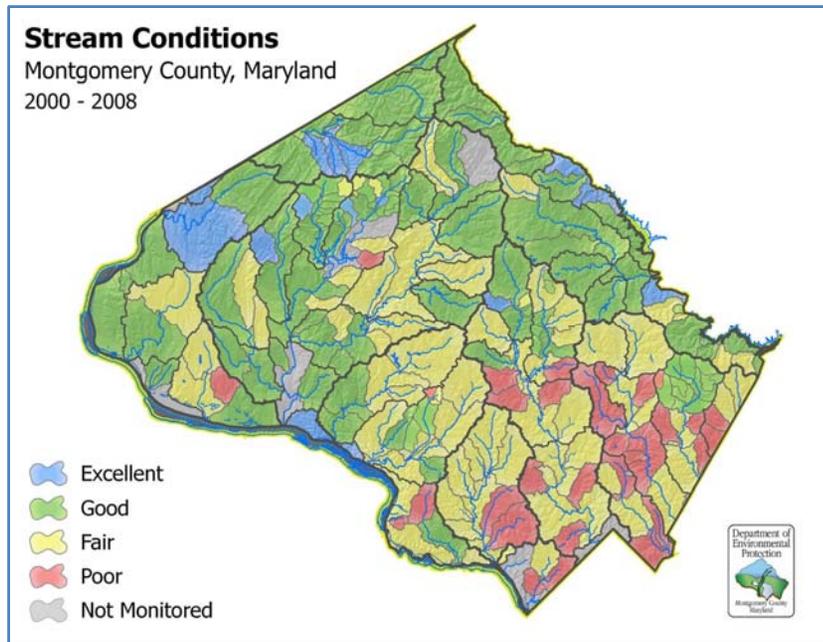
# MS4 Permit – Challenges and Opportunities

MD Nutrient Trading Workgroup

February 22, 2016



# Progress in Restoring Our Watersheds



# Montgomery County – Leadership Role

- Montgomery County continues to play a leading role in helping Maryland improve its water quality and stormwater management practices
- Our 3<sup>rd</sup> Generation Permit was the first in setting a **30 percent** total impervious area restoration goal  
(10 percent – 2001 Permit; additional 20 percent – 2010 Permit)
- Funding for stormwater restoration projects has continued to keep pace with the increasing level of effort in the restoration program:

Total Stormwater Restoration Project Expenditures : FY01 - 14	\$78.6 million
Stormwater Restoration Program (CIP): FY15 - 20	\$363.7 million

# Accomplishments to Date

- DEP's overall commitment: Ensure that Water Quality Protection Funds are targeted to make the greatest impact in meeting the MS4 permit requirements
- DEP has made substantial progress in meeting the 2010 Permit requirements, as reflected in our draft annual report for 2014:

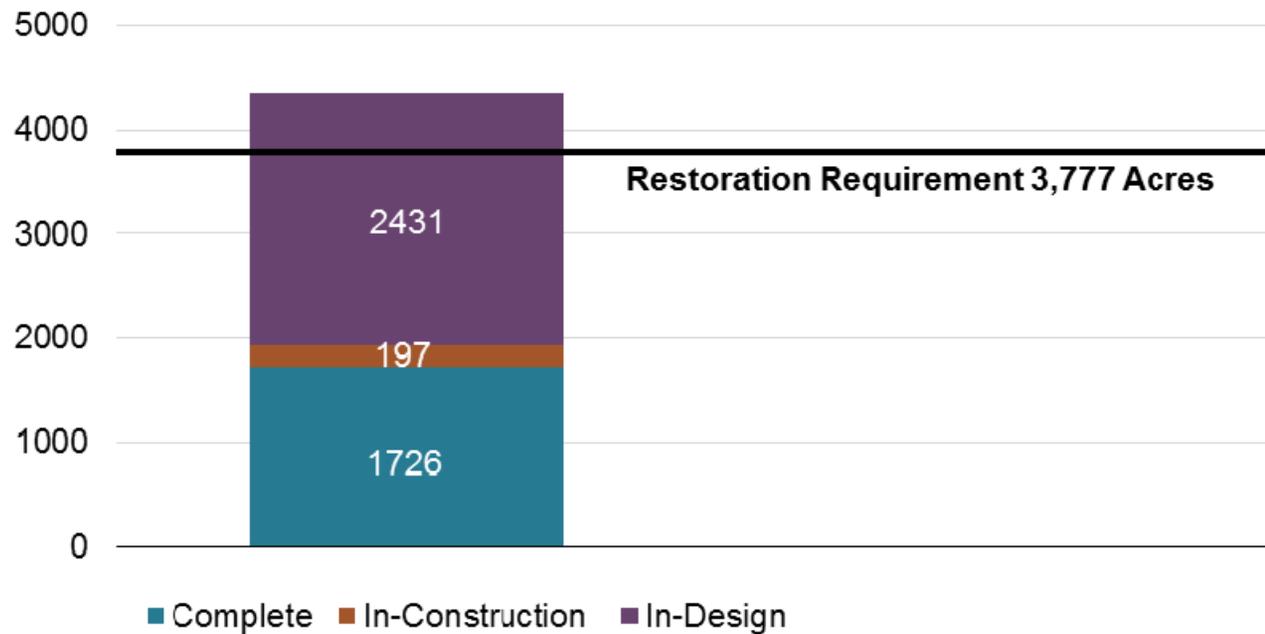
Permit Requirement	Compliance	Permit Requirement	Compliance
Legal Authority		Watershed Restoration	
Source Identification		Assessment of Controls	
Discharge Characterization		Program Funding	
Management Programs		Total Maximum Daily Loads	
Watershed Assessment		ESD Inspection	

 = Currently meets 2010 Permit

 = In process of meeting 2010 Permit

# Update on progress on 2010 MS4 Permit

Progress Towards Restoration Requirement (Acres)



# Update on progress on 2010 MS4 Permit

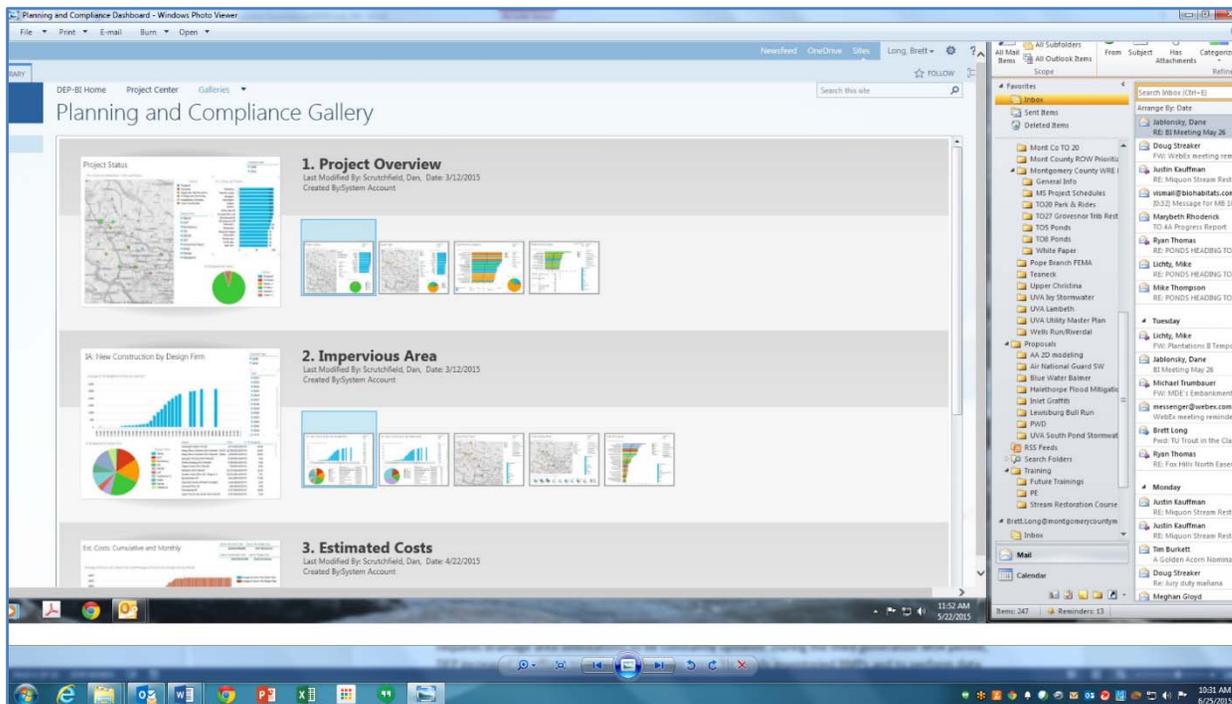
## Data Collection to Capture Impervious Area Credit

- ▶ Crediting existing roadside swales
- ▶ Crediting impervious disconnection on large lots
- ▶ Maximum extent practicable verification of existing stormwater facilities
- ▶ Drainage area delineations for credited practices



# Project Management Tools

Tool	Description	Status	Operational Date
Project Server	Critical Path Scheduler	Operational	
BI Tool	Reporting tool	Operational	
Portfolio Tool	Project Selection Tool	Beta Testing	April 1, 2016

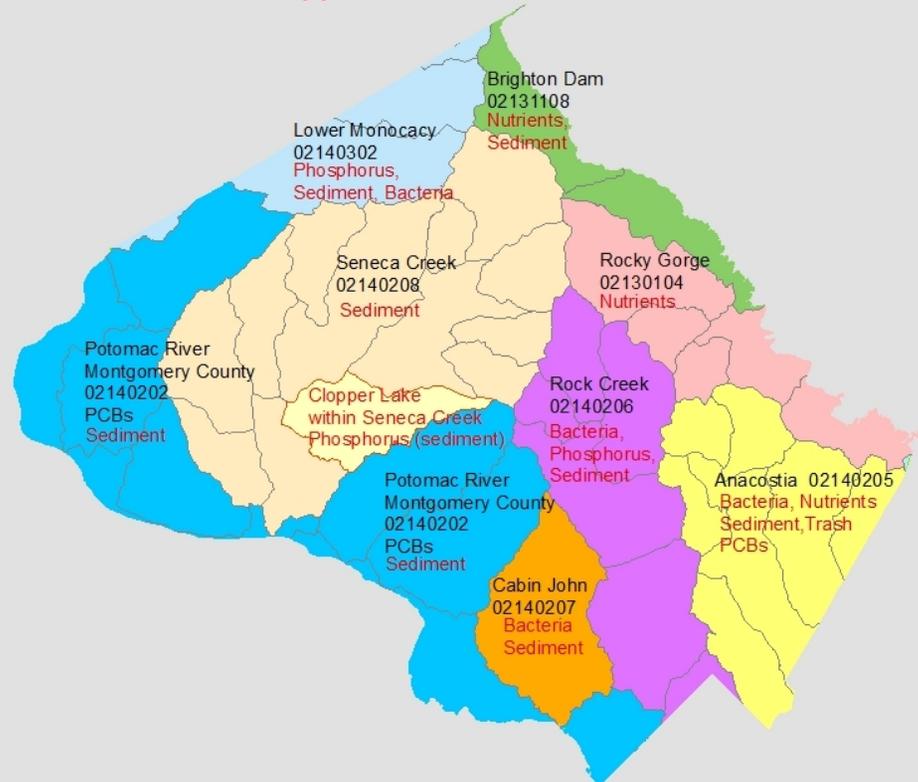


## Unit Costs to Date (through FY14)

- ESD cost per acre: \$200,000 to \$280,000
- Stream restoration cost per acre: \$ 47,000
- Stormwater pond cost per acre: \$ 75,000
- Cost per pound of Nitrogen reduced: \$ 6,219
- Cost per pound of Phosphorus reduced: \$ 17,606

# County Watersheds on Maryland's Impaired List January 2014

EPA approved TMDLs shown in red



Numbers represent 8-digit State Codes  
Boundaries are for 12-digit watersheds  
All County 8-digit watersheds show biological impairment



# Total Maximum Daily Loads (TMDLs)

TMDL Summary by Impairment					
Impairment	Watershed	Pollutant	WLASw Percent Reduction	Percent Reduction Since Baseline Date*	WLASw Achievement Date (Strategy)
Sediments	Anacostia River	TSS	87.5%	25.30%	2020
	Lower Monocacy River	TSS	60.8%	2.80%	2035
	Seneca Creek	TSS	44.6%	21.80%	2025
	Rock Creek	TSS	38.3%	10.91%	2017
	Cabin John Creek	TSS	22.7%	4.00%	2020
	Potomac River Direct	TSS	36.20%	6.52%	2025
Nutrients	Clopper Lake	Phosphorus	45.4%	0.00%	2025
	Anacostia River	Nitrogen	81.8%	10.50%	2025
	Anacostia River	Phosphorus	81.2%	30.40%	2025
	Triadelphia Reservoir	Phosphorus	15.0%	0.30%	2020
	Rocky Gorge Reservoir	Phosphorus	15.0%	8.45%	2025
	Lower Monocacy River	Phosphorus	30.0%	0.26%	2035
	Rock Creek	Phosphorus	35.0%	4.89%	2020
Trash	Anacostia River	Trash	100.0%	6.60%	2025

# Continued Commitment to Green Infrastructure

- Green infrastructure refers to environmental site design and other best management practices that typically use plants and soil media.
- On a larger scale, green Infrastructure is a patchwork of natural areas that provide habitat, flood protection, cleaner air and cleaner water.
- DEP will be installing more ESD practices in future years:
  - ▶ In the total CIP Cycle for the approved FY13-FY18 CIP budget, \$80,950,000, was budgeted for ESD projects.
  - ▶ In the total CIP Cycle for the approved FY15-FY20 CIP budget, \$141,082,000, was budgeted for ESD projects.
- DEP continues to work with partners:
  - ▶ Consistent definition
  - ▶ Green Infrastructure Policy
  - ▶ Specific Pilot Projects

# Challenges

- Creating the infrastructure and implementing a 20% restoration requirement in a five year cycle is very challenging.
- Permitting is one of the primary delay in the implementation of restoration. Solutions need to be developed at the highest level.
- Providing adequate resources for data and data management is critical to establishing a robust restoration program
- Early engagement of the community is critical to success