

Frederick County, MD Green Infrastructure Case Study

December 19, 2013

***Frederick County Office of Sustainability and
Environmental Resources***



A Modest Proposal

**Regulatory requirements for
stormwater can be used to protect
and restore green infrastructure at
the landscape scale**

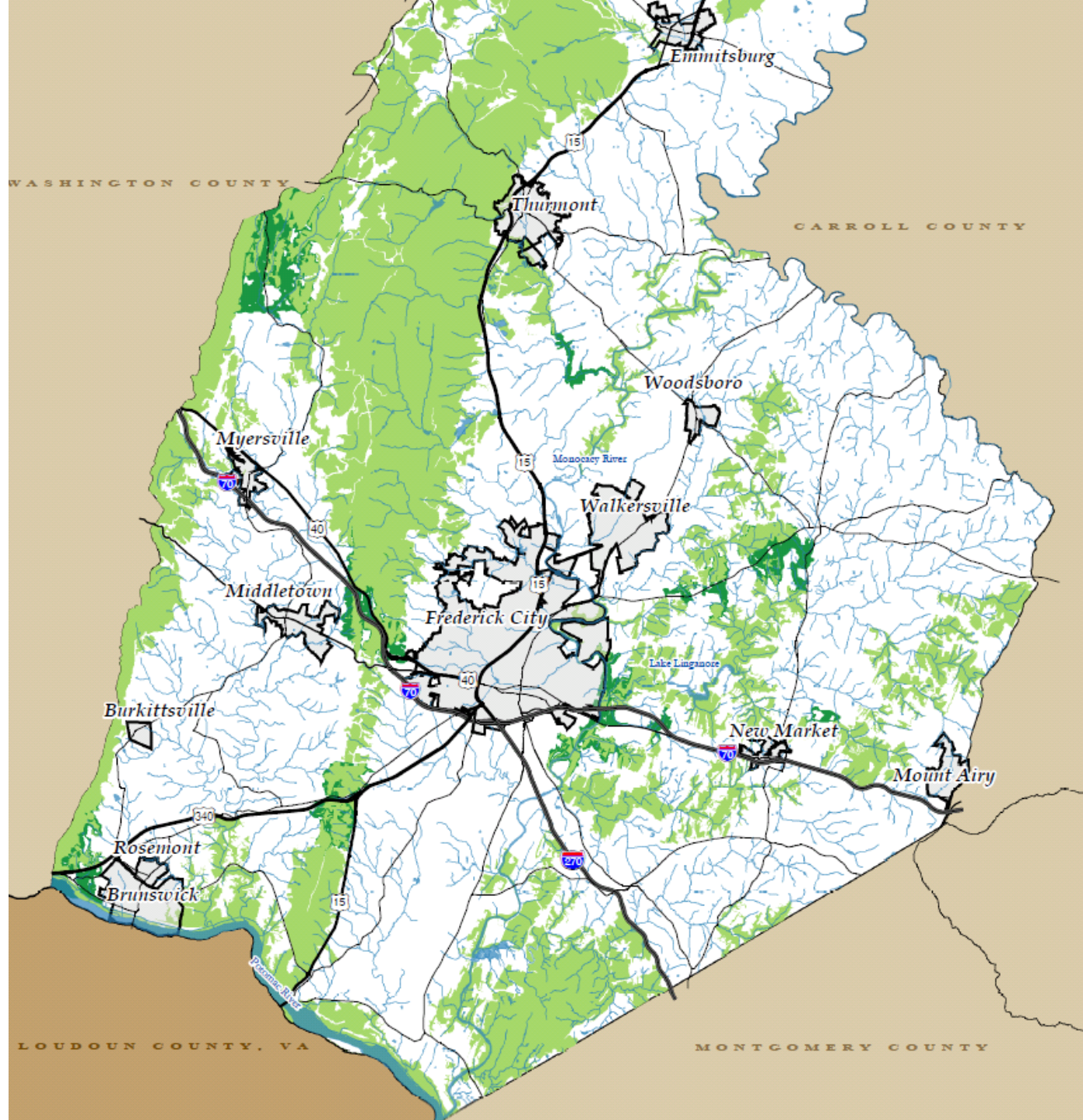
- and -

Reduce the cost of Bay restoration



Background: Frederick GI

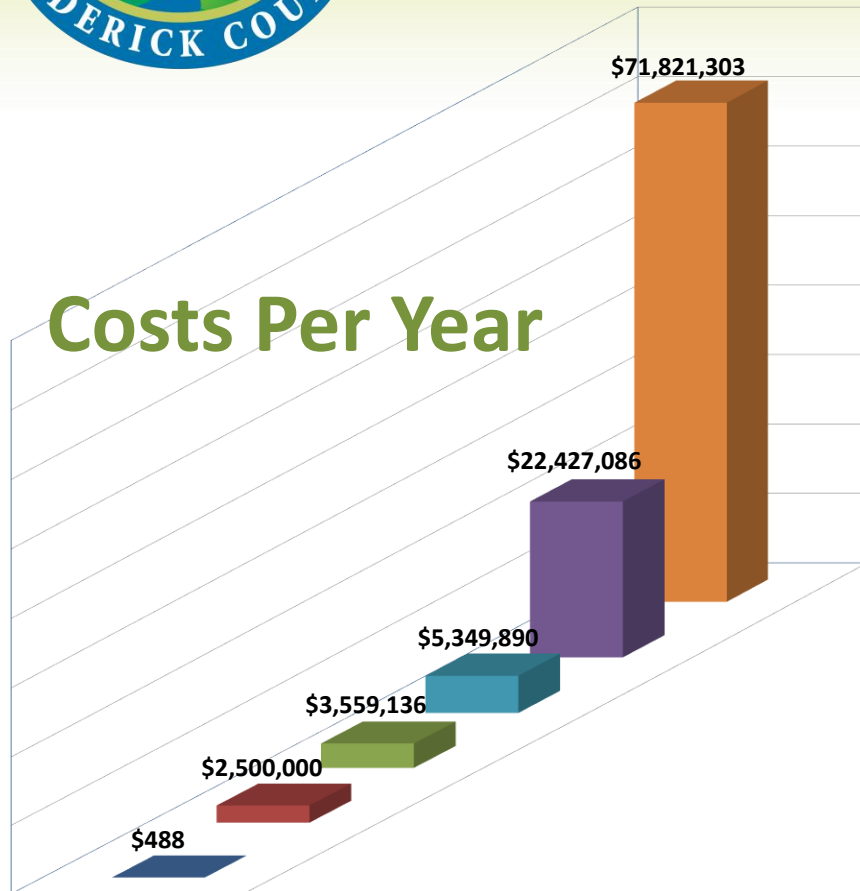
- **Frederick County Government, EPA Region III, and DNR Forest Service**
- **Multi-year project**
- **Builds on state's GI assessment**
 - **Adds areas based on local data, smaller thresholds supported by literature**
 - **Focuses on functions of wetlands (EPA), streams (FredCo), and forests (DNR)**
 - **Larger tolerance for fragmentation (hydrologic and aerial connection versus pure landscape ecology)**
 - **Adds GI in eastern Frederick County, urban and ag area**





Frederick Stormwater Cost Breakdown

Costs Per Year



- Amount Collected through Fee
- MS4 Permit Per Year Average through 2013
- Budget for FY'14
- Request for FY'15
- Draft MS4 Permit with 20% Retrofit
- Draft MS4 Permit with 2017 WIP

- “No jurisdiction has established a fee under Chapter 151 that is capable of fully supporting local stormwater program costs without other revenue sources through fiscal 2018”

—MD Dept of Legislative Services

- Stormwater permit costs pale in comparison to WIP costs
- Little funding for NPS, conservation



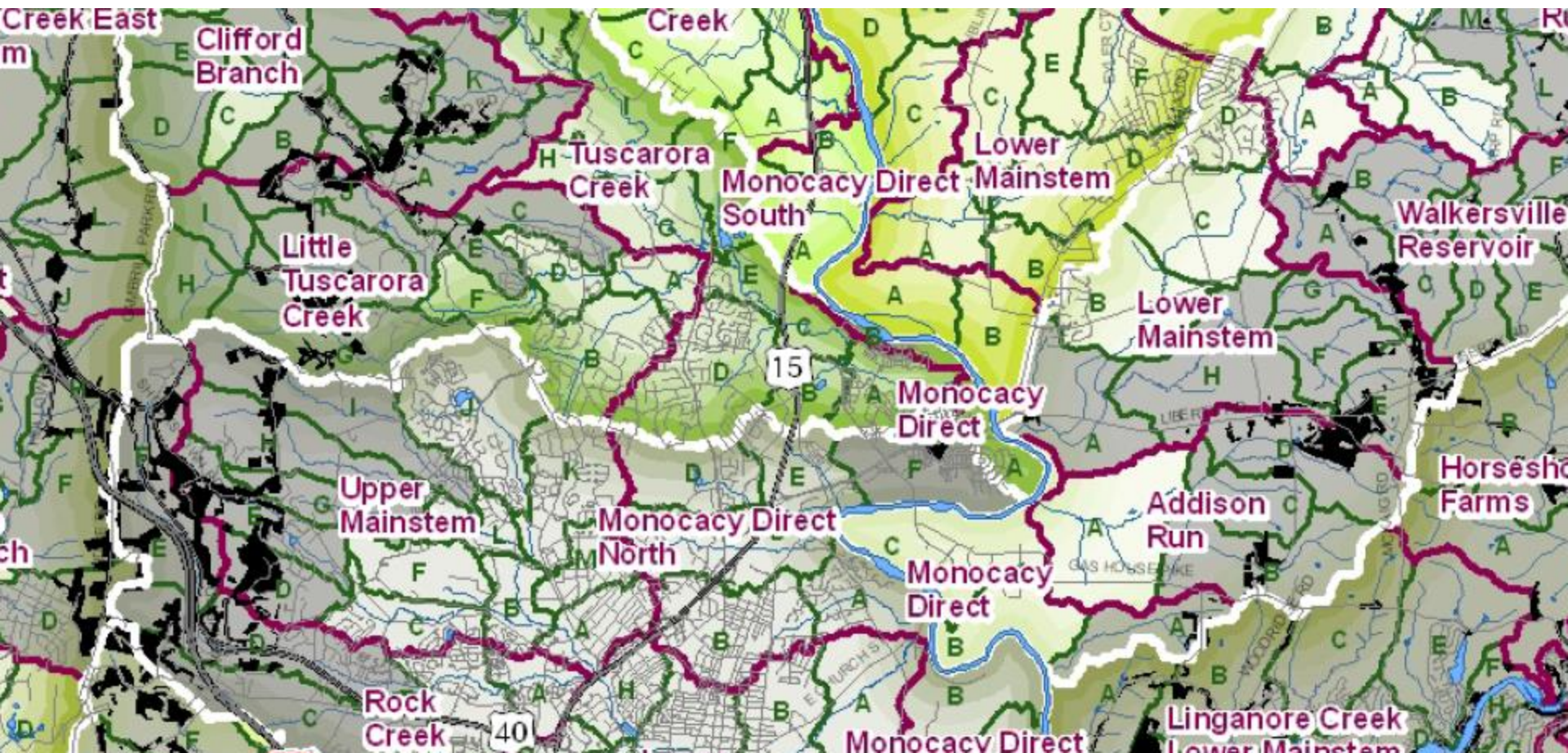
MS4, GI and TMDL goals

- MDE has expressed willingness to consider an alternate proposal to traditional stormwater retrofits to reduce costs
 - Expressed interest giving restoration credit for work in other sectors (ag)
 - More cost effective BMPs: natural resources
- Interest in GI approach. Options:
 - GI directly treating impervious area
 - GI within drainage area of MS4 infrastructure
 - GI restoration in catchment containing MS4



Where the MS4 and GI meet

- Grey catchments contain both MS4 and GI
- Black areas are where MS4 and GI actually intersect





Benefits of combined approach

- Provides additional habitat, resource functions, reduction of fragmentation, protection of GI in developed lands
- Regulatory requirements demand funding sources- stormwater retrofit budgets in tens and hundreds of millions
- Reduces costs of regulatory compliance
- MS4 requires long-term commitments
 - 20-year BMPs or greater
 - Land acquisition or easements- ties in to conservation easements in GI

Thank You!

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