

Sweating the (BMP) Details

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Chesapeake Water
Environment Association
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- **Clean Water Partnership**
 - Description
 - Goals
- **Design through Construction**
 - Collaboration, Design Review and Feedback
 - Outreach
 - Inspections
 - Maintenance Transfer
- **Maintenance Lessons Learned**
 - Proactive vs Reactive
 - Building Workforce
 - Cost Drivers
 - Data and Looking ahead

Collaborative Infrastructure



Stormwater Management can be an impactful solution to infrastructure programs that achieve broader County policy goals and objectives:

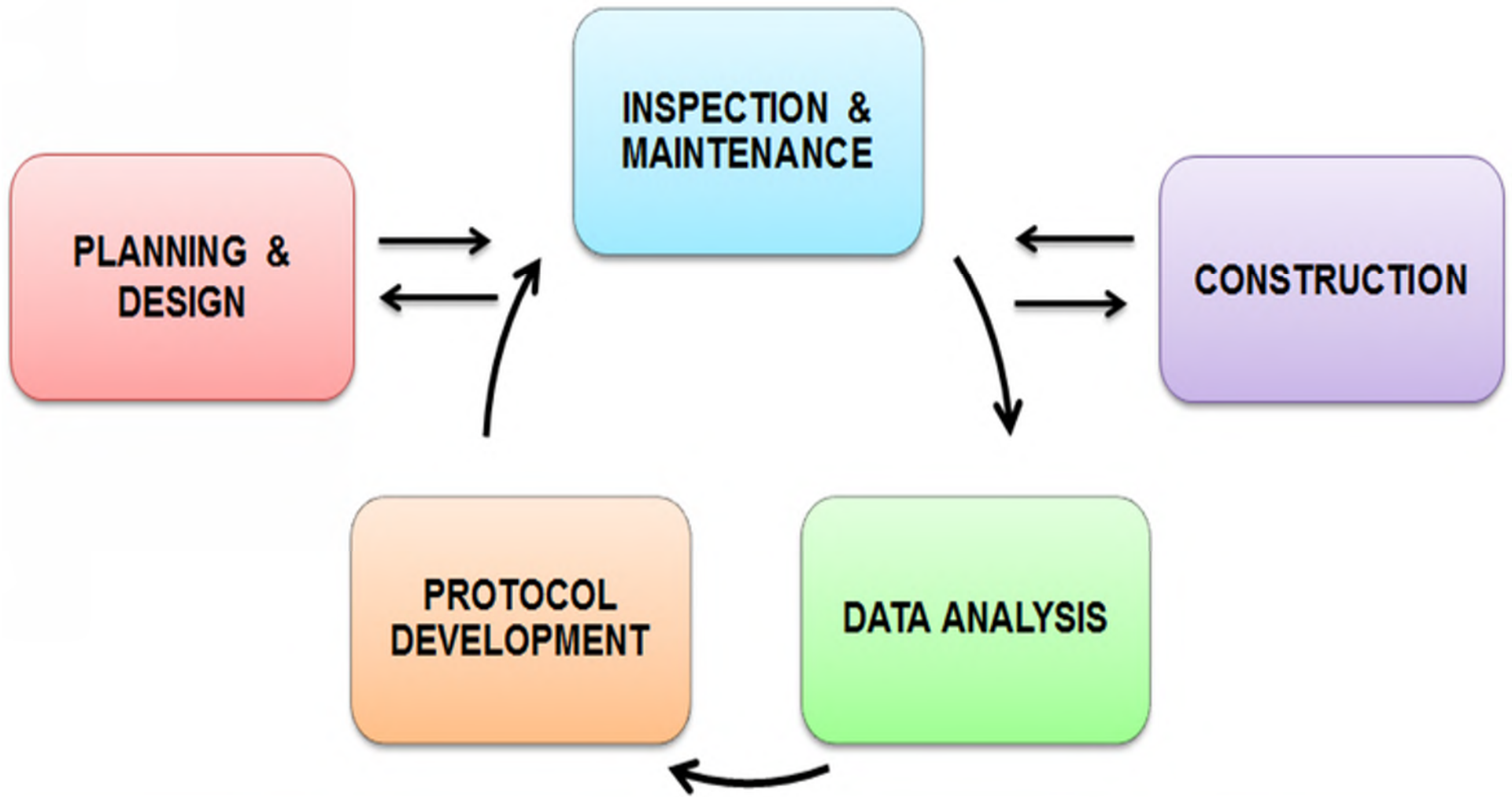
- Achievement of greater cost savings, innovation, efficiencies, and economic development output are realized
- More effective utilization of a partnership— shared goals and interests foster collective teaming behavior in the overall infrastructure strategy as opposed to the relational dynamics of an environmental contractor
- Can increase efficiencies and job creation opportunities that do NOT duplicate efforts across CIP, DPWT & CWP, but leverage the established subcontractor capacity & workforce development programs across all of them
- Improvements needed to the existing funding strategy that causes inflated pricing, delayed payments and reputational impact that reduces opportunities for S/MBE firms to grow.

Collaborative Infrastructure

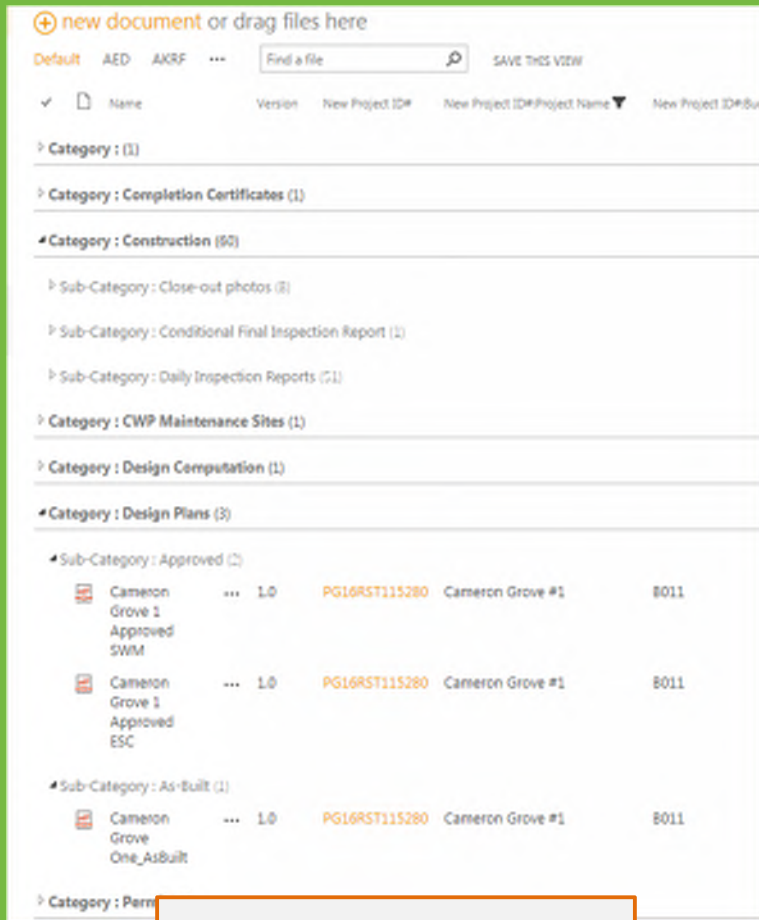




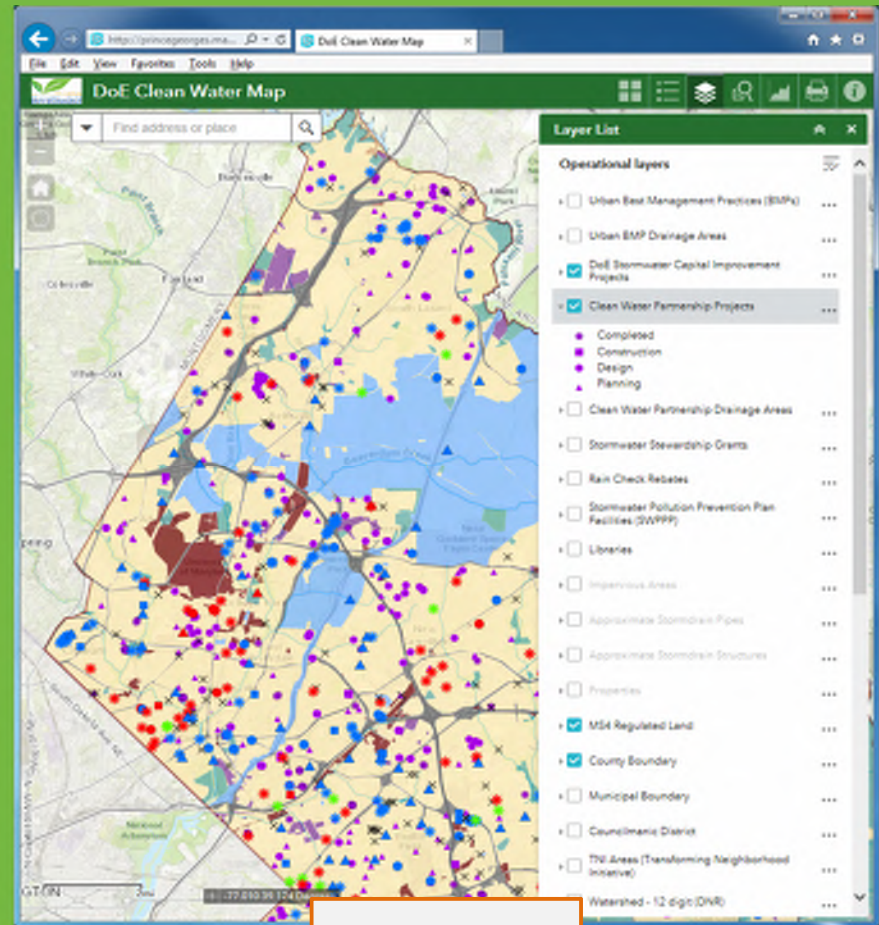
Collaboration



Collaboration



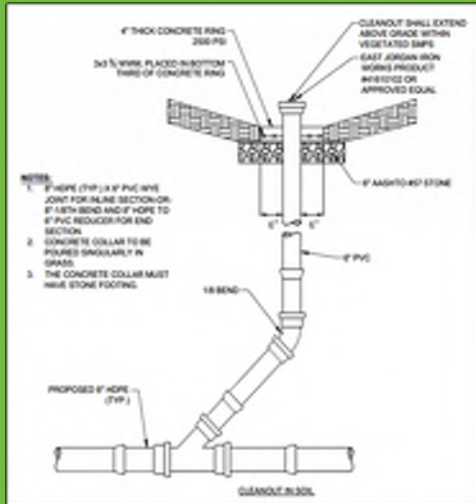
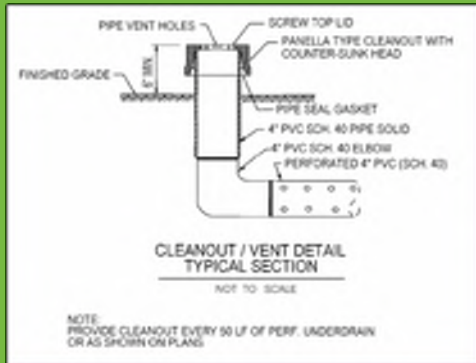
Sharepoint



GIS

Data Sharing





Impacting Design



2012



2013



2015

Impacting Design



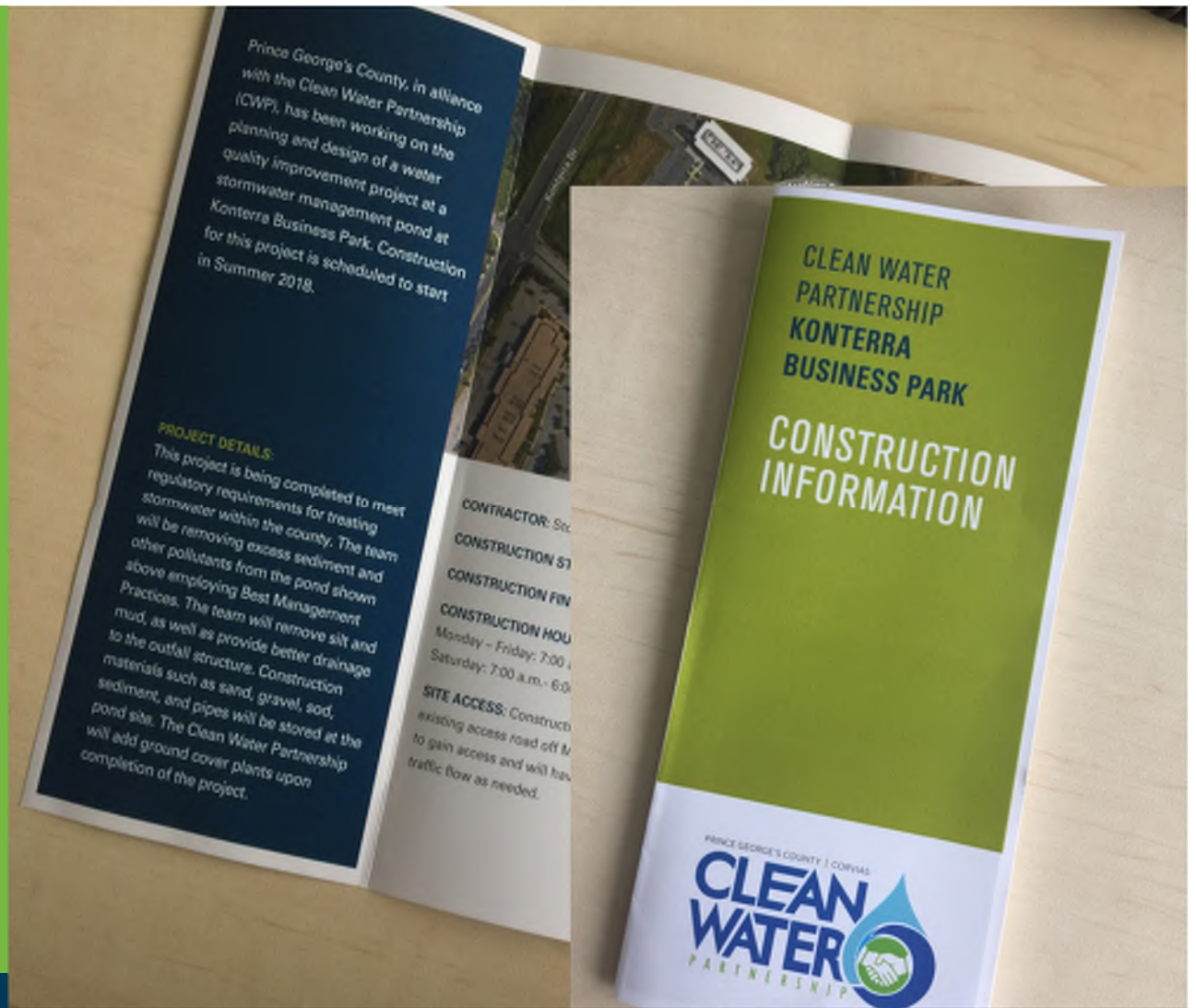
Impacting Design





Impacting Design

- Research and Strategize
- Develop a plan
- Translate into plain language and graphics
- Share information with stakeholders
- Document efforts
- Assess outcome



Outreach Coordination





- Confirm proper elevations, materials, placement
- Monitor erosion & sediment control devices

Inspections



Stabilization



Stakeholder Buy in





Proactive vs Reactive Maintenance



Before - Low flow is clogged, silted in & wooded



After - provided more capacity & forebay for filtering

Proactive vs Reactive Maintenance



Pond Retrofit - Before

After - excess nutrients are being held by the forebay



Proactive vs Reactive Maintenance



- Aesthetic standards
 - Naturalistic vs. manicured appearance
- Number of visits to the site per year
 - Trash and sediment removal, weeding are major drivers
- Need for specialized skills/equipment
 - Access issues for subsurface maintenance
 - Untested materials or products
- Labor standards
 - Prevailing wage/job classification
- BMP location and type affects all of the above
- Amount of oversight required

Maintenance Cost Drivers



- Specialty Skills Needed to Maintain LID Practices
 - Native plant care
 - Arboriculture
 - CCTV pipe inspection
 - Pipe and inlet cleaning
 - Porous pavement vacuuming
 - Reading design and planting plans
 - Use of mobile devices and software
 - Data collection
 - Identification and reporting of performance issues
 - Public engagement and outreach
- Workforce Base
 - Construction
 - Landscaping/grounds maintenance
 - Masonry
 - Pipe inspection/Utility location
 - Workforce development programs, CBLP

Training and Workforce Development





Community Involvement



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- Eric Jones, CBLP - ejones@akrf.com
- Jen Wijetunga, P.E., CPSWQ – jwijet@menv.com

To learn more about the Clean Water Partnership, visit our website at
<https://thecleanwaterpartnership.com>

Questions?

