Catalyzing Environmental Markets to Accelerate the Implementation of Chesapeake Bay Clean Water Goals: Lessons from Anne Arundel County’s Full Delivery Pilot Project

Anne Arundel County Department of Public Works
CWEA Stormwater Conference, May 18, 2017

www.aarivers.org
The County’s Regulatory Mandates

MS4 Permit

- Municipal Separate Storm Sewer System (MS4) Permit (issued by MDE).
- Issued to each county (and Baltimore City in the state) with a population over 100,000.
- 5-year cycle, newest permit issued in February 2014.
- Requires treatment of 20% of the untreated impervious area in the county during the permit cycle. (5,862 acres)
TMDLs (Total Maximum Daily Loads)

• Think of it as a “recommended annual intake” of pollution required by the Clean Water Act.

• Based on models created by EPA.

• Theoretically, no new loads should be allowed to a waterway unless:
  • The waterway is de-listed for impairments.
  • There is a plan in place for de-listing.
Anne Arundel County Restoration Grant Program

• Open to non-profit partners
• Administered through CBT (www.cbtrust.org)
• Awarded $444,108 in year 1
  – Leveraged $572,428
  – Cost of about $14,125 per acre treated
• Awarded about $900,000 in year 2
  – Leveraging about $1,135,000
  – Cost of about $41,000 per acre treated
• Awarding about $1,000,000 in year 3
  – Cost of about $16,900 per acre treated
EMPOWERING BELIEVERS
BIORETENTION
TECHNICAL BRIEF
PAY FOR SUCCESS STRATEGIES FOR WESTERN STATES

PAY FOR SUCCESS STRATEGY RISK-REWARD SPECTRUM

- Traditional Grant Funding
- Partial Pay for Success
- Public-Private Partnership
- Full Delivery Contract
- Entrepreneurial Banking
Looking for Additional Ways to Engage the Private Sector

- Created a $5 million “pay for performance” project in the FY17 budget, requesting an additional $5 million in FY18.
- Sought “turnkey,” permanently protected (e.g., perpetually eased, transferred to County ownership) practices that the County can count towards MS4/TMDL compliance.
- Solicitation to final award took 8.5 months.
Not prescriptive of practice, just had to be approved by MDE for crediting towards MS4 permit.

Had to be on private property.

All “mitigation, natural resource, and water quality improvement credits” associated with the project belong to the County.
Had to be within the MS4 geography.

Projects had to be completed after the solicitation.

Proposals had to include 5 years of functional maintenance, if applicable.
Proposal Characteristics

- Received 5 proposals.
- 3 proposals were deemed technically qualified.
- Proposals included a variety of eligible practices:
  - Stream restoration
  - Stormwater facility retrofits
  - Septic to sewer conversion
  - Re-forestation
Stream Restoration
Stormwater Retrofits
Septic to Sewer Conversion

Diagram showing a septic system with plumbing vent, septic tank, leachfield/drainfield, and effluent absorption & purification, transitioning to a sewage treatment plant.
Proposers found, and locked up, interested landowners (project had to be on private property).

Proposers offered a wide range of practices, and thought creatively about site specific solutions.

Costs per acre treated were very competitive with going County rates.

A pipeline of feasible, worthy, third party projects has been initiated.
## Costs Per Acre Treated

<table>
<thead>
<tr>
<th>Practice</th>
<th>Cost per Acre</th>
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</thead>
<tbody>
<tr>
<td>Bioretention retrofits</td>
<td>~$200k</td>
</tr>
<tr>
<td>Stormwater pond retrofits</td>
<td>~$75k</td>
</tr>
<tr>
<td>Stream restoration</td>
<td>~$50k</td>
</tr>
<tr>
<td>Full Delivery submittals, not selected</td>
<td>~$53k - $65k</td>
</tr>
<tr>
<td>Full Delivery award</td>
<td>~$20k</td>
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</tbody>
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Treated acres provided through the Full Delivery award: ~188 for $3.8M
Next Steps

Pay for Success Strategy Risk-Reward Spectrum

- Traditional Grant Funding
- Partial Pay for Success
- Public-Private Partnership
- Full Delivery Contract
- Entrepreneurial Banking
Questions?

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