Why Consider P3's for Green Urban Stormwwater Retrofits?

Community Based Public-Private Partnerships Workshop

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Annapolis MD

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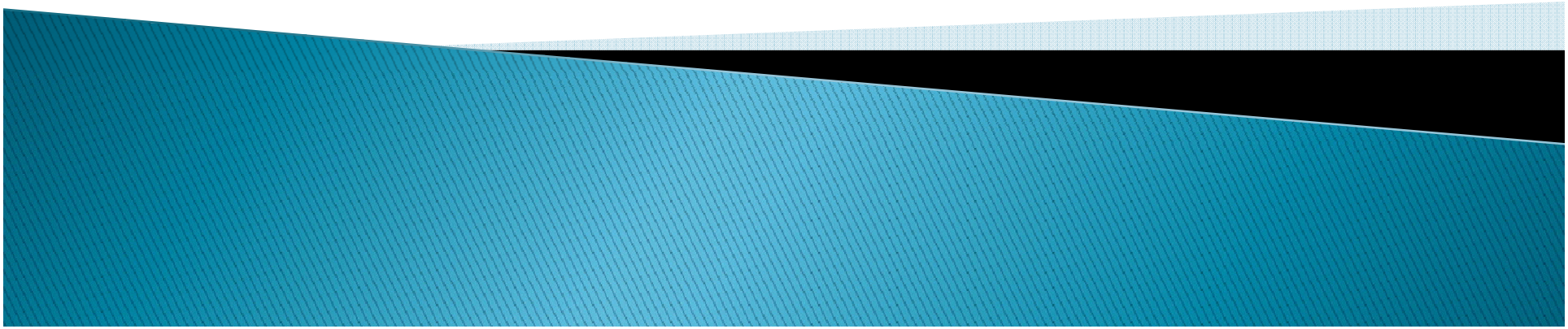
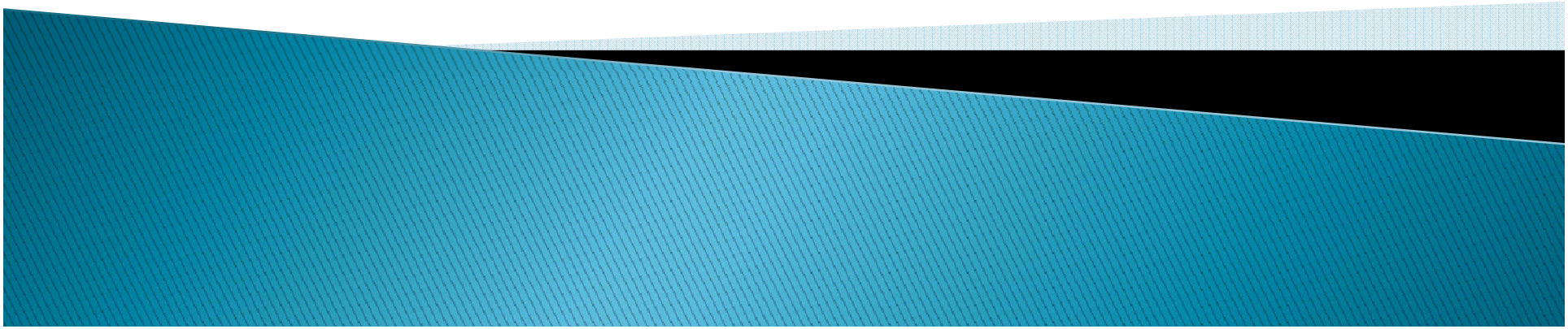


Focus Today: Solutions and Options for the Urban Storm Water Challenge

- How can we help local governments meet the growing demands for addressing the "Built" environment – urban runoff pollution control?
- What solutions are available that are:
  - More sustainable for the long term?
  - Deliver more benefits to local communities per dollar?
  - More cost effective than traditional means?
  - Responsive to the time demands (of permits, TMDLs…)?
- How can solutions advance community-based objectives as well as Chesapeake Bay and local water quality objectives?

Green Infrastructure Driven Urban Stormwater Retrofits

and Matching financing tools to the decentralized ways of preventing storm water runoff



Achieving Multiple Objectives

What are the Specific Challenges?

The Challenges

- The pace of progress in reducing & preventing pollution from the urban sector presents a clear challenge to our 2017 and 2025 goals for a clean Chesapeake Bay

- Urban loadings continue to grow, despite 30+ years of work; threaten progress in other sectors.

Stormwater WIP* Commitments Load Reductions from 2009-2025

% Reductions in Urban Loads			
	Nitrogen	Phosphorus	TSS
DE	13%	12%	5%
DC	13%	22%	16%
MD	24%	28%	29%
PA	41%	45%	50%
VA	13%	21%	30%
WV	3%	44%	50%

* State-authored Watershed Implementation Plans for the Ches Bay (WIPs)

The Challenges

- High cost of urban retrofits and limited financing tools impact local governments, slowing permit renewal pace and implementation
  - Non-Compliance costs as well
- Can not focus only on new development and redevelopment standards and meet our water quality improvement goals
  - The built environment remains as a source

Limited Financing Tools

The Built Environment

Remember Local Water Quality Needs

- Restoration of local water quality in urbanized areas
  - Watershed plans and pollution budgets typically call for 80-90% control of polluted runoff

LIMITS on Cities and Towns to Meet this Challenge

Bay States and Municipalities have limited urban retrofit experience and guidance

Regulatory Roadblocks

- Current BMP design standards restrict innovation
- State and Bay technology verification can restrict innovation
- Small to medium size cities may lack technical capability

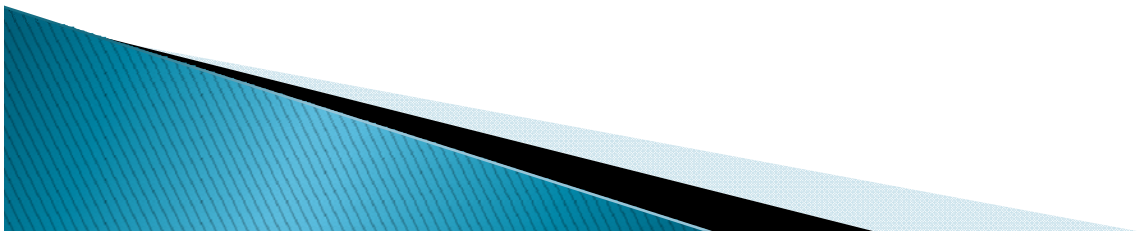
Changing institutional thinking to Go from "Grey to Green"

LIMITS on Cities and Towns to Meet the Challenge

- Traditional Urban Retrofit methods are difficult and costly
  - Reported as high as $300k per acre in MD
- Pace of Controls: Costs can be greatly reduced if work is accomplished on pace with redevelopment or maintenance schedules
  - Will this pace get the job done on time? (2025?)
- Affordability thresholds come into play – EPA has used 2% of Median Income (MHI) as a guide
- Limits on Available Financing Options for Controls
  - Municipal bonding authority caps
  - Storm Water Utility fees not always available
  - Fees not at a level to get the job done

Traditional Storm Water Approach

- Brick and mortar solutions (capital budgets)
  - Highly engineered solutions
- Regulatory Gridlock
  - Slow pace of permit renewals
  - Modest retrofit pace due to cost and control factors
- Storm Water considered as pollution – not an asset to local communities



Green Streets,
Green Jobs,
Green Towns

EPA Convened Experts Roundtables

- April and December 2012

- Seeking Ways to Better Assist Local Jurisdictions – break thru barriers
- Define New, Affordable Solutions for retrofits
- Explore Alternative Financing Tools

Better Cheaper Greener

Next Generation – Higher Performing, Lower Cost Green Infrastructure Design, Technologies; and Alternative Financing Strategies To Support Sustainable Urban Stormwater Retrofits

Two Basic Strategies: Reducing Urban Retrofit Costs

- Improve The Cost Efficiency of Technologies
  - "Next Generation LID/Greening Technologies"
  - Integrate solutions with community objectives
    - Bring costs per acre down
    - Sync with ongoing street maintenance/transportation, flooding abatement projects; Leverage ongoing redevelopment
    - More livable communities
- Alternative Financing Tools
  - "Public Private Partnership (P3) Business Model
    - Leverage public and private funding
    - Use market forces to drive down costs, increase value, create local jobs and promote innovation

Green Infrastructure is a Paradigm Shift: Rain as a Resource, Rather than a Waste

- Ground water recharge
- Enhance stream base flow
- Stormwater capture and use
- Augment water supplies

GI Solutions Address Multiple Benefits

- Impacts to human health and the environment
- Regulation
- Flooding
- Cost / Benefit: Cities are interested in the multiple benefits of green
  - Multiple Benefits / Triple Bottom Line
  - “Livability”
  - Becoming green leaders
  - Image as a Sustainable City

GI Leadership in the Mid-Atlantic Region

- City of Philadelphia's "Green City, Clean Water" Plan – large scale GI for CSO/SW
- 'RiverSmart Homes' Program, On-Site Rainfall Retention Standard in Washington, DC MS4 permit
- Green Streets legislation in Prince George's County, MD
- "Green Streets/Green Towns/Green Jobs" initiative of the Bay Trust & EPA Region III
- Lancaster, PA's Green Infrastructure plan linked to CSO control plans
- Green Design Competitions: Philadelphia, DC, Annapolis, MD
- Greening Capitols (Richmond, VA)

Community-Based Demonstrations of P3 Approaches

- EPA seeking other leaders in the Mid-Atlantic states to apply new tools
  - Details of the approach will be shared today
  - Customized to the community-based needs – not one size fits all
  - Working in partnership to break thru barriers
- P3 Tools shared today have the potential to:
  - Put more resources on the job!
  - Accelerate the pace of implementation
  - Break through the cost barriers for urban retrofit
  - Help us meet TMDL, Local Water Quality, and community goals in tandem!

Summary: The Specific Goals

- Meet our urban sector **Water Quality Goals** in a way that supports **local needs and values**
- Achieve more **affordable & sustainable** techniques
- Assist cities & towns w/alternative financing tools – that match the **decentralized** approaches to **prevent** SW runoff
- **Create local benefits** tied to Bay and River restoration: leading to creation of new jobs, improve local waters, provide multiple community benefits, combat the urban heat island effect

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