



ALLIANCE

for the Chesapeake Bay



IRVINGTON, VA

Green Stormwater Infrastructure Action Plan Recommendations

AGENDA

- 1. Who is the Alliance for the Chesapeake Bay?**
- 2. Program Overview**
- 3. Recommendations Walkthrough**
- 4. Questions**



VISION

We envision clean water and resilient landscapes, cared for by all the people who live, work, and play in the Chesapeake Bay watershed.

MISSION

The Alliance restores the lands and waters of the Chesapeake Bay watershed. Our collaborative and action-oriented approach delivers on-the-ground solutions, technical assistance, and builds capacity to achieve healthier lands and cleaner water.

VALUES

- Adaptive - We design tactics to achieve common goals.
- Collaborative - We partner across sectors and regions.
- Result-Oriented - We deliver efficient, measurable, and holistic programming.
- Equitable - We prioritize inclusivity in directing our impact.



AGRICULTURE



FORESTS



**GREEN
INFRASTRUCTURE**



**STEWARDSHIP
& ENGAGEMENT**



PROJECT BACKGROUND

- No cost planning, design, and implementation support of Green Infrastructure practices to address stormwater runoff, reduce flooding and erosion, and improve public spaces.



Town leaders and the Alliance tour the Commons. Photo credit: Alliance for the Chesapeake Bay

THE PROCESS

Site Visits



Desktop Analysis

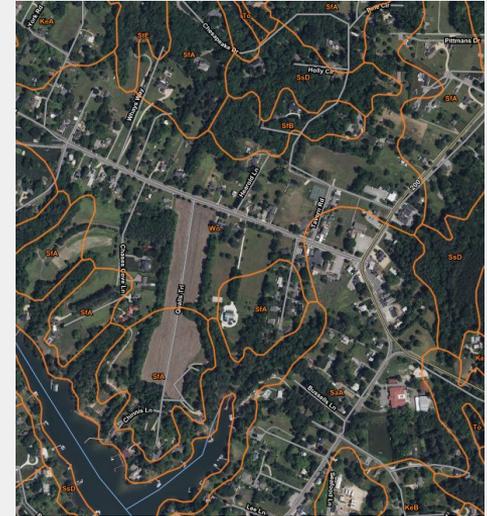


Photo (from left to right): Town leaders and the Alliance pose in the Commons;
Satellite imagery showing parcel lines; Satellite imagery showing soil lines.
Photo credit: Alliance for the Chesapeake Bay, ArcGIS, and USDA Web Soil Survey.

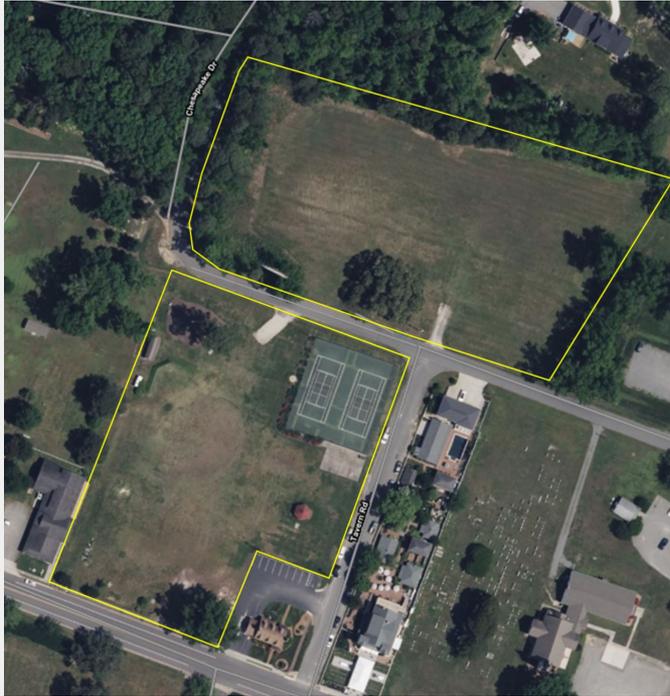


THE PRODUCT



- Area(s) of Focus
- Issues Identified
- List of Recommendations
- Key Local Contacts
- QR Codes for All Links

FOCUS AREA AND KEY ISSUES



FA: Town Commons and North Commons

KI: Flooding, Erosion, and Soil Compaction



Photo credit: ArcGIS, Town of Irvington, & Alliance for the Chesapeake Bay

RECOMMENDATIONS

IRVINGTON RECOMMENDATIONS				
ISSUES	GREEN INFRASTRUCTURE PRACTICE	COST	MAINTENANCE	PAGE #
Runoff, Flooding, Erosion	Permeable Pavement	\$ - \$\$\$		7
Runoff, Flooding, Erosion	General recommendations	\$ - \$\$	 -  	12

PERMEABLE PAVERS

What is the practice and how does it help?

A permeable paver system allows stormwater to pass through the surface and into an underlying stone reservoir, rather than running off traditional impervious pavement. By reducing runoff volume and slowing the flow of water, permeable pavers help prevent erosion, minimize flooding, and promote natural groundwater recharge. The stored water can then infiltrate into the soil over time, supporting healthier soils and reducing stress on local drainage systems.

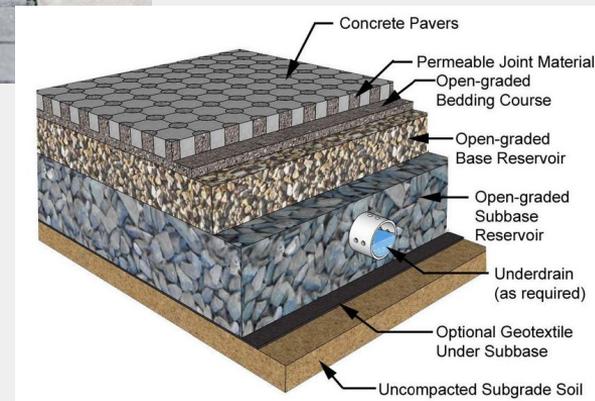


Photo Credit: Alliance for the Chesapeake Bay and David Smith, ICPI



POTENTIAL LOCATIONS - RANKED

Potential locations for permeable pavers were ranked by amount of impact. The amount of impact was determined by assessing which locations receive the most amount of stormwater in addition to the locations with public outreach opportunity. For example, the Shaded Patio was a top request by community members, so permeable pavers with signage at this location could have a large impact.

PERMEABLE PAVERS

COST: \$ - \$\$\$

MAINTENANCE:



Cost

- \$20-35 a square foot
- Location and size dependent

Maintenance

- Light, but routine



*Example:
Brick pavers*



*Example:
PICP*



*Example:
Grass fill pavers*



*Example:
Gravel fill pavers*

Photos: Alliance for the Chesapeake Bay, Resilient East, Archweb.com, TrueGrid Pavers

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PERMEABLE PAVERS

COST: \$ - \$\$\$

MAINTENANCE:



Design

- Work with licensed engineer
- Consider sediment pre-treatment areas
- Consider enhanced capacity underground retention basins



*Example of pre-treatment area.
Photo: City of Toronto, Canada*

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PERMEABLE PAVERS

COST: \$ - \$\$\$

MAINTENANCE:



Permitting

- Work with licensed engineer
- Dependent on size, location, and disturbance

Community Engagement

- Public Private Partnership

Regional Example

- Hampton Roads Planning District Commission



Permeable paver parking lot retrofit in Hampton, VA. Photo Credit: HRPDC.

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PERMEABLE PAVERS

COST: \$ - \$\$\$

MAINTENANCE:



Potential Funding

- Virginia Soil and Water Conservation District's Virginia Conservation Assistance Program (**VCAP**)
- Stormwater Local Assistance Fund (**SLAF**)
- National Fish and Wildlife Foundation's Small Watershed Implementation Grant (**SWG**)
- Green Streets, Green Jobs, Green Towns Grant Program (**G3**)
- Public-Private Partnerships (**P3**)
- National Fish and Wildlife Foundation's **Five Star Program**

GENERAL RECOMMENDATIONS

Partnership

- FOR & SWCD

Rain garden/Bioretention area

- SE Corner of Commons



Potential rain garden location circled in pink

Rainwater Harvesting

- Gazebo

Conservation Landscaping

- Turf removal

Soil

- Amendments
- Aeration

Signage

- Public education

THANKS!



NFWF

**Chesapeake Bay Small Watershed
Grants - Planning and Technical
Assistance**



Virginia Municipal League



You all!

THANK YOU!

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FOR OUR FORESTS. FOR OUR STREAMS. FOR OUR FUTURE.

