



ALLIANCE
for the Chesapeake Bay



GREEN INFRASTRUCTURE TECHNICAL ASSISTANCE FOR TOWNS

Virginia Small Towns Conference, Chincoteague - May 14, 2026

AGENDA

- **Who is the Alliance for the Chesapeake Bay?**
- **Green Infrastructure Technical Assistance for Towns - Program Overview**
 - **Final Product Walkthrough**
- **Case Study: Moving Towards Implementation**
- **Other Green Infrastructure Resources for Local Governments**



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.



AGRICULTURE



FORESTS



**GREEN
INFRASTRUCTURE**



**STEWARDSHIP
& ENGAGEMENT**



GREEN INFRASTRUCTURE TECHNICAL ASSISTANCE FOR TOWNS

PARTNERSHIP WITH MUNICIPAL LEAGUES

- **Maryland Municipal League**

- Focused on advocating for the interests of member local governments and on education and training for member local governments
- 160 member local governments including villages, towns and cities
- More than 2 million Marylanders live in member municipalities
- Non-profit, non-partisan association



- **Virginia Municipal League**

- Mission is to 'strengthen local government through advocacy, education and information'
- 217 member local government including cities, towns and counties
- Non-profit, non-partisan association



PROGRAM OVERVIEW

- Goal: Provide recommendations to Towns to utilize green stormwater infrastructure (GSI) to address erosion and flooding issues.
- Priority given to smaller municipalities with fewer resources

Site Visits



Desktop Analysis

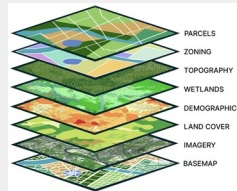
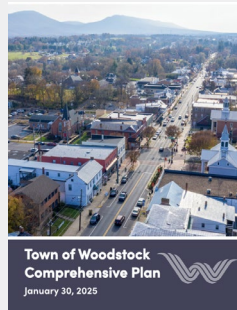


Image: NASA Earthdata

Collaboration



Product



GREEN INFRASTRUCTURE ACTION PLAN

• Recommendations

1
SWALE

A swale is a broad ditch or depression, often vegetated, designed to manage runoff and encourage water infiltration. A swale constructed below the outflow of the level spreader will direct and filter stormwater flowing from the slope into the wooded area adjacent to the trail. The swale will slow down runoff and allow for some of it to soak into the ground. Plantings can be incorporated in the swale and along the edges. A weir, or small wall, can be incorporated to create a series of "step downs" to help reduce high velocity water.

MAINTENANCE

Sediment and debris like leaves and trash will need to be periodically removed from the swale to prevent blocking the flow of water. Undesired vegetation growing inside and along the banks of the swale will also need to be removed. The swale will need to be monitored for water pooling. Water should not pool inside the swale channel for more than 2 or 3 days after a storm event.

COST

A vegetated swale will cost approximately \$20-\$40 per square foot. It would be prudent to include this update to the trail in the larger park improvement project happening adjacent to the site. That would allow the contractor to build this swale while already on site, thus reducing mobilization costs.



Explanation of the practice

Maintenance requirements

Estimated costs

Photo of the practice

GREEN INFRASTRUCTURE ACTION PLAN

• Recommendations

2 SWALE CONTINUED

POTENTIAL FUNDING SOURCES

Central Shenandoah Planning District Commission **Watershed Wellness Grant**

- The CSPDC Watershed Wellness Grant is a reimbursement grant that provides up to \$100,000 in non-match funding for planning, design, and construction of practical, cost-effective, and ready-to-go best management practice (BMP) stormwater projects that improve water quality and reduce runoff in the Chesapeake Bay watershed. Funding is available for localities and non-profits within the five-county CSPDC region. Applications will be accepted on a rolling basis throughout 2025 until all grant program funds are expended. All projects must be completed by December 19, 2025.

Virginia Soil and Water Conservation District's Virginia Conservation Assistance Program (VCAP)

- VCAP is a cost-share program that provides financial incentives and technical and educational assistance to property owners installing eligible green infrastructure practices in Virginia's participating Soil and Water Conservation Districts. These practices can be installed in areas where problems like erosion, poor drainage, or poor vegetation occur.

SUGGESTED IMPLEMENTATION PARTNERS

- Valley Engineering
- Shenandoah Valley Soil and Water Conservation District - District office at 540-534-3105

DESIGN

It is best to work with an engineer or a landscaper for this practice.

PERMITTING

It is recommended to confirm with your contractor or engineer on whether or not this practice will require permits. If bundling this improvement project with the adjacent community park improvements, these could all fall under one permit.

COMMUNITY ENGAGEMENT

Community engagement will need to occur around construction on the trail that could lead to disrupted access for the public. A temporary sign could be placed on site explaining that the disruption is necessary to reduce erosion and ensure the future of the trail. Additionally, information could be included in Town Council communications or through social media.

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Potential funding sources

Potential implementation partners

Design considerations

Permitting requirements

Community engagement strategies

GREEN INFRASTRUCTURE ACTION PLAN

• What else is in the plan?

SITE INFORMATION FOR MT. CRAWFORD, VA

343 MILES

When rain falls in Mt. Crawford, it takes a 343 mile journey to the Chesapeake Bay.

Water from Mt. Crawford flows through the waterways listed below:

- North River
- South Fork Shenandoah River
- Shenandoah River
- Potomac River
- Chesapeake Bay

AREA OF FOCUS

This Green Infrastructure Action Plan focuses on the town-owned property behind Mt. Crawford's Town Municipal Building.

This area is sloped, and the majority of water runs downhill to the west, entering the floodplain and the North River below. To the west of the building, a paved accessible trail and boat launch for canoes and kayaks have been built to provide public river access to the North River.

Due to the steep slope of the site, stormwater runs off the parking lot at the top of the site and has begun to cause erosion along parts of the trail. A new town park is being constructed adjacent to the Town Municipal Building and will provide additional amenities to the public visiting the area.

With increased public access to the area, it is important to manage erosion along the boat ramp trail so that it can continue to be an asset to the community.



KEY ISSUES IDENTIFIED

Erosion is occurring at several points along the newly constructed river access trail behind the Town Municipal Building. The table on the following page outlines green infrastructure practices that can help reduce or prevent this erosion, protecting the trail's structural integrity and minimizing pollution entering the North River. Additional details for each practice are provided in the pages that follow.

It is also recommended that Mt. Crawford consult the original engineer or designer of the level spreader installed at the upper portion of the trail. Level spreaders help diffuse stormwater and reduce erosion; however, given the current erosion issues, a reevaluation of its effectiveness is advised.

GREEN INFRASTRUCTURE RECOMMENDATIONS

ISSUES	GREEN INFRASTRUCTURE PRACTICE	COST	MAINTENANCE	PAGE
Erosion, runoff	Swale	\$\$	🔧	6
Erosion	Tree and shrub planting	\$	🔧	8
Erosion, runoff	Erosion mat and conservation landscaping	\$	🔧	11
Erosion, runoff	Channel drain	\$\$	🔧	13
Invasive Species	Invasive species management	\$	🔧	15



LOCAL RESOURCES

- ALLIANCE FOR THE CHESAPEAKE BAY**
Name: Rick Mittler, Local Government Projects Coordinator
Email: rmittler@allianceforthebay.org
Phone: (804) 775-0951
Address: 672 Hull Street, Suite 101C, Richmond, VA 23224
- CENTRAL SHENANDOAH PLANNING DISTRICT COMMISSION**
Name: Zac Beard, Program Manager
Email: zach@csdpc.org
Phone: (540) 885-0774
Address: 112 MacTully Place, Staunton, VA 24401
- SHENANDOAH VALLEY SOIL AND WATER CONSERVATION DISTRICT**
Name: Megan Dalton, District Manager
Email: info@svswcd.org
Phone: (540) 534-3105
Address: 1934 Deyern Avenue, Suite B, Harrisonburg, Virginia 22801
- VIRGINIA DEPARTMENT OF FORESTRY**
Name: Stuart Baker, Area Forester
Email: stuart.baker@DOP.virginia.gov
Phone: (434) 987-8326
Address: 90 Forestry Center Lane, Crimora, VA 24431
- VIRGINIA MUNICIPAL LEAGUE**
Name: Mitchell Smiley, Policy Manager, Transportation and Natural Resources
Email: mzmiley@vmtl.org
Phone: (804) 401-7425
Mailing Address: P.O. Box 1264, Richmond, VA 23244
Office Address: 13 E. Franklin St., Richmond, VA 23219

LINKS

1. [Watershed Wellness Grant](http://www.csdpk.org/programs-services/wip-ii/): www.csdpk.org/programs-services/wip-ii/
2. [Central Shenandoah Valley Master Gardener](http://www.cvmrga.org): www.cvmrga.org
3. [The Eight Essential Elements of Conservation Landscaping](http://www.chesapeakebaylandscape.org/resources/the-eight-essential-elements): www.chesapeakebaylandscape.org/resources/the-eight-essential-elements
4. [Native Plant Center](http://nativeplantcenter.net): nativeplantcenter.net or www.allianceforthebay.org/native-plant-center/
5. [Plant Ridge & Valley Native A Guide for Gardeners](http://www.allianceforthebay.org/public-planting): www.allianceforthebay.org/public-planting
6. [Japanese Knotweed](http://extension.psu.edu/japanese-knotweed): extension.psu.edu/japanese-knotweed
7. [Blue Ridge Prism](http://www.blueridgeprism.org): www.blueridgeprism.org
8. [Virginia Invasive Plant Coalition](http://www.virginianvses.org/resources): www.virginianvses.org/resources
9. [Virginia Invasive Plant ID & Control Tool](http://www.blueridgeprism.org/plants): www.blueridgeprism.org/plants
10. [Headwaters Master Naturalist](http://www.headwatersm.com): www.headwatersm.com

ADDITIONAL RESOURCES

- [Native Plants or Wildlife Habitat and Conservation Landscaping](http://www.chesapeakebaylandscape.org/resources/the-eight-essential-elements): www.chesapeakebaylandscape.org/resources/the-eight-essential-elements.pdf
- [Using Green Strategies to Improve Operations and Maintenance of Green Infrastructure in the Chesapeake Bay Watershed](http://www.chesapeakebaylandscape.org/resources/the-eight-essential-elements): www.chesapeakebaylandscape.org/resources/the-eight-essential-elements.pdf
- [Sustainable Landscapes Maintenance Manual for the Chesapeake Bay Watershed](http://www.chesapeakebaylandscape.org/resources/the-eight-essential-elements): www.chesapeakebaylandscape.org/resources/the-eight-essential-elements.pdf
- [Vegetation in Stormwater Best Management Practices](http://www.chesapeakebaylandscape.org/resources/the-eight-essential-elements): www.chesapeakebaylandscape.org/resources/the-eight-essential-elements.pdf

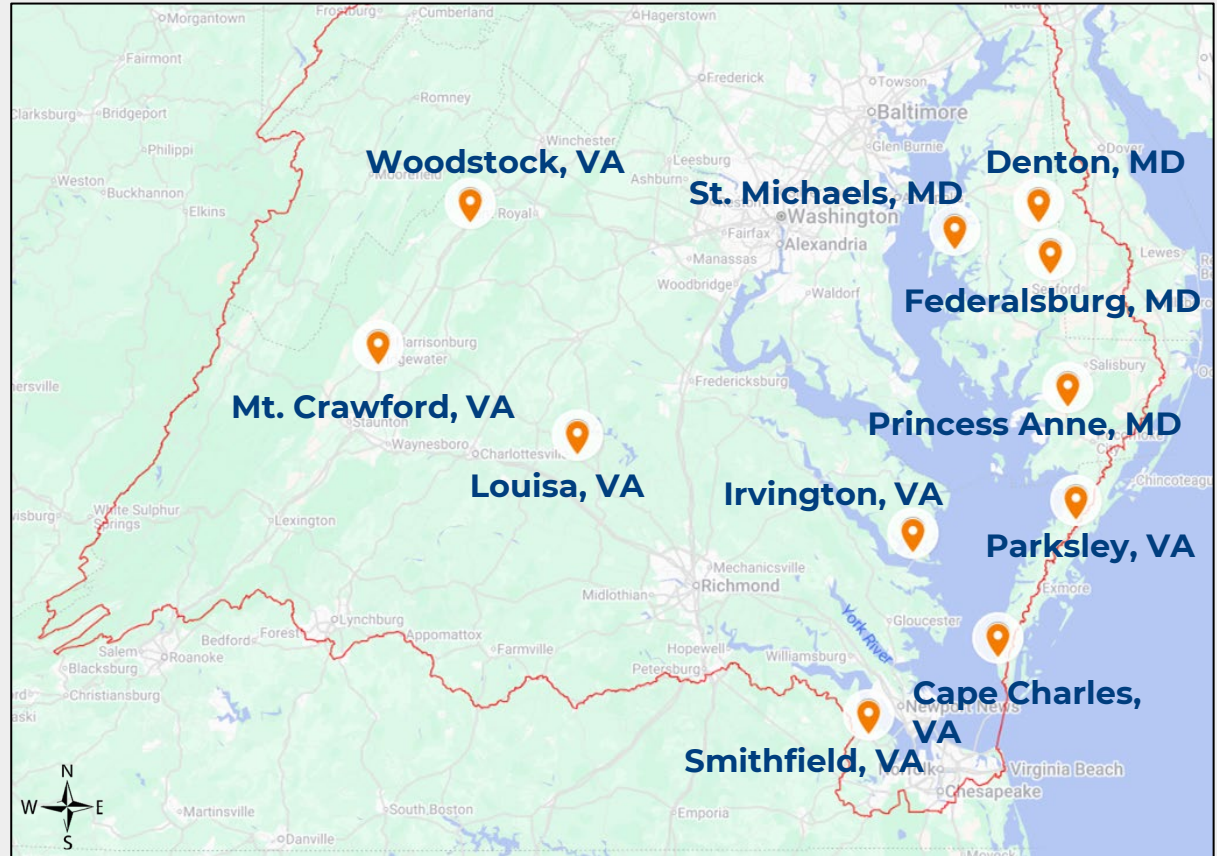
LOCAL GOVERNMENT TECHNICAL ASSISTANCE - CASE STUDY

- 450 residents
- 2 town employees
- New Comprehensive Plan in 2023
- New boat launch and planned community park



SUMMARY OF LOCAL GOVERNMENT TECHNICAL ASSISTANCE IN 2025

- 11 towns and 57 local officials
- Partnership with 2 municipal leagues
- Identified 30+ potential GI projects
- *Potential to reach hundreds of small towns*



MOVING TOWARDS IMPLEMENTATION



THANKS TO OUR PARTNERS AND FUNDERS



**Chesapeake
Bay Trust**

Empowering people. Restoring nature.



Celebrating 70 Years

1936 - 2026

MARYLAND MUNICIPAL LEAGUE



For our forests. For our streams. For our future.

| allianceforthebay.org

TOWN INTEREST FORM

Is your
town
interested?



THANK YOU!

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TITLE: Local Government Specialist

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

