



# GREEN INFRASTRUCTURE SAVES BERKELEY SPRINGS

Projects reduce stormwater runoff while encouraging economic growth.

## PROJECT GOALS

Design and implement green infrastructure projects that will reduce stormwater runoff and flooding, allowing businesses to be unaffected by major storm events.

## COMMUNITY AND ECONOMIC BENEFITS

- Installation of a raingarden at the bottom of Greenway Cemetery reduces stormwater runoff and beautifies the area.
- Maintenance of rain garden provides volunteers with an opportunity to learn about green infrastructure.
- Reduced flooding by adding new tree boxes and permeable pavers to divert stormwater from the town's business zone to other areas where it can be controlled.
- Increased business and tourism due to a reduction in flooding.
- Decreased cleanup costs due to less flooding.
- Provides an educational opportunity for town residents to learn about green infrastructure and its positive impact on the livelihood of their town through informational signs and kiosks.

## ENVIRONMENTAL BENEFITS

- Decreased flooding.
- Increased wildlife habitat by planting additional trees and vegetation.
- Reduced stormwater runoff through raingarden installation.
- Improved local water quality.
- Created a water source for trees and vegetation by installing underground bioretention cells.

## CONSERVATION PROJECTS INSTALLED

- Permeable pavers and an underground silva cell system.
- Bioretention tree boxes.
- Planting native trees and vegetation.
- Raingardens.



Tree boxes and pervious pavement line N. Washington Street in front of the Morgan County Courthouse in Berkeley Springs, W. Va. (Photos by Ethan Weston/ Chesapeake Bay Program)

“When the flood’s on your doorstep, one inch of water can mean the difference between re-opening for business or calling insurance companies the next day.”

- **Matthew Pennington**

Region 9 Eastern Panhandle Regional Planning and Development Council

## PROJECT SUMMARY

In fall 2012, Berkeley Springs, West Virginia, faced a major flooding event that forced the closure of many businesses along the town's main street. This led the town, with the help of the Region 9 Eastern Panhandle Regional Planning and Development Council, to seek funds to design and implement green infrastructure practices to tackle the stormwater runoff problem. By 2018, with the help of local and regional partnerships, the community had added new stormwater control elements into some already scheduled capital improvement projects—a cost-effective solution for the small town. The new elements included constructing a raingarden at the bottom of Greenway Cemetery and installing tree boxes with vegetation and bioretention silva cells.

Since the completion of these green infrastructure projects, residents in the town have noticed that when it rains, flooding occurs at the end of the road while the improved section of the main street remains dry, allowing businesses to stay open. In the future, the town hopes to install additional green infrastructure projects along other areas of the roadway to control more floodwater and prevent it from flowing directly into the local stream and ultimately the Chesapeake Bay.

## THINGS TO CONSIDER

- Town planners need to find funding for maintenance as a non-regulated stormwater community that is unable to charge a stormwater fee.

## THE PARTNERS AND FUNDING SOURCES

- Region 9 Eastern Panhandle Regional Planning and Development Council
- Town of Bath.
- Chesapeake Bay Trust.
- West Virginia Department of Environmental Protection.
- Morgan County Commission.
- U.S. Silica
- Delectable Mountains Quilt Guild.
- Eastern WV Community Foundation.
- West Virginia Division of Highways.
- West Virginia Division of Forestry.
- Warm Springs Watershed Association
- Cacapon Institute
- U.S. Environmental Protection Agency
- National Fish and Wildlife Federation

## CONTACTS

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The raingarden at Greenway Cemetery reduces stormwater runoff and beautifies the area.



Tree boxes and permeable pavers divert stormwater from the town's business zone.



Tree boxes on mainstreet help reduce flooding, protecting the city's businesses.