ChooseCleanWater COALITION

Polluted Runoff: Solutions

Anne Arundel County, MD

CBTRUST Chesapeake Bay Trust · Interfaith Partners for the CHESAPEAKE · WSA Anne Arundel County • Watershed Stewards Academy · Maryland Department of Natural Resources · ALLIANCE for the Chesapeake Bay · Anne Arundel County WATERSHED Protection & Restoration PROGRAM

St. Luke's Episcopal Church Restoration of Nature

UNDERWOOD & ASSOCIATES LANDSCAPE ARCHITECTURE • ECOLOGICAL RESTORATION A DESIGN/BUILD Co.

Chesapeake Stormwater Network · BEST URBAN BMP in the Bay Award

Problem:

During rain events, the surrounding 28-acre urban area washed polluted runoff into Back Creek, located directly behind St. Luke's Church. The runoff smothered habitat for aquatic animals and flushed sediment, chemicals, heavy metals and oil into the creek headed towards the Severn River.

This cove of Back Creek became unhealthy and unfishable. The church's property and the creek banks were completely eroded. Mosquitoes and invasive weeds dominated their land. The invasive vines choked out almost all native plants.

Solution:

St. Luke's decided to take action and "care for creation" - a massive stream restoration project. The project recreated a historic stream, wetland, tidal marsh, and living shoreline with over 9,000 of 100 plant species placed throughout the site. The pipe system that discharged directly into Back Creek was raised to capture runoff as soon as possible. Polluted runoff now flows down a series of step pools that slow the water and spread it out, allowing water to soak into the ground and replenish the aquifer. At the same time, the water is cleaned as it seeps through the naturalized stream channel.

Community engagement: Community volunteers including watershed stewards, church goers, and midshipmen from the US Naval Academy, contributed over 6,000 hours to this community project. The restoration created a green space for the surrounding community and is open to the public. It serves as an environmental learning center, and a meditative place to connect with nature.

Results: This project creates clean water which makes the coast of Annapolis more resilient, stops tidal flooding, and supports additional wildlife in the expanded wetland and forest.

Award-winning: The project won 2nd place in the Chesapeake Stormwater Network 2019 "BUBBA's" Best Management Practice in the Retrofit Category.

Left: Part of the stream was long ago replaced with underground pipes leaving just a ditch between two trees

Right: The pipe outfall before restoration

Photo Credit: Betsy Love

After restoration: A healthy, balanced ecosystem

Photo Credit: Amy Narimatsu

Key Project Facts

Project Location: Annapolis, MD

Type of Project: Stream restoration

Scale: 4 acres of restoration & an environmental education trail

Cost: $1.4 million

Funding Sources:

- Chesapeake & Coastal Bays Trust Fund
- The National Episcopal Church
- United Thank Offering
- Riverwise Congregations
- Watergate Pointe
- Annapolis Subaru
- Back Creek Conservancy
- Chesapeake Bay Trust
- Eastport Civic Association
- Maryland Environmental Trust
- St. Margaret's Episcopal Church
- Severn River Association
- Unity Gardens
- Private donors

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St. Luke's project site: https://go.umd.edu/5AZ

BUBBA Award: https://go.umd.edu/5A4

What is Polluted Runoff?

The growth of our cities has resulted in too many paved surfaces, which prevent rain water from being absorbed by the ground. Instead, the water runs off streets and buildings, collecting trash and dangerous chemicals on its way. This contaminated water overflows into our streams and rivers, creating public health hazards and toxic waters.

Stormwater projects create safe paths for polluted runoff to be captured and filtered before it reaches our waterways. It keeps communities healthy and the environment clean.

More Pollution Solutions:

mostcenter.umd.edu/casestories

When communities and their local governments work together to solve big problems like stormwater runoff, that's a story worth telling!