

Berlin, MD

Background

Berlin is a small community nestled in the Eastern Shore of Maryland with close ties to its history and its natural environment. Like many communities across the region with a rich history, Berlin has aging infrastructure that needs to be addressed with cause and concern. With one staff person dedicating 20% of her time to stormwater and a budget of only \$20,000 (of a total operating budget of \$10 million), effectively managing stormwater in the town was beyond challenging.

Both town officials and the community alike showed strong support for participatory resource protection efforts like “Grow Berlin Green,” which was created to highlight Berlin as a model community for environmental protection and conservation. Managed by a coalition of organizations including the



Flooding in Berlin

Assateague Coastal Trust, Lower Shore Land Trust, and Maryland Coastal Bays Program, it was anticipated at the start of the study that the organizational capacity already in place due to Grow Berlin Green (GBG) would help generate effective education and outreach on the need for dedicated financing of a stormwater program.

Prior to the start of this study, the Environmental Finance Center (EFC) at the University of Maryland received a letter of support from the Town Administrator and the Mayor that reinforced their commitment to becoming one of the first communities to receive assistance from EFC’s newly launched Stormwater Financing and Outreach Unit (Stormwater Unit). The various stakeholders working together to support a sustainable Berlin proved instrumental in raising the profile of local stormwater management needs and exploring ways to pay for implementation as a logical step in the town’s environmental efforts.

HIGHLIGHTS

Location: Maryland

Jurisdiction Type: Town

Population: 4,485 (2010)

MS4 Permit: Unpermitted

Project Period: 2011-2012

Funders: Maryland DNR and
Town Creek Foundation

In September 2011, the EFC was contracted by the town of Berlin to conduct a stormwater financing feasibility study as part of the Stormwater Unit, an effort made possible through the support of the Chesapeake and Coastal Service of Maryland's Department of Natural Resources (DNR). Additional funds from the Town Creek Foundation were provided for the project team to conduct outreach and education activities to support these efforts.

The immediate goal of EFC's stormwater efforts in Berlin was to recommend a long-term dedicated funding stream that is equitable and effective in generating sufficient revenue for the town to maintain a comprehensive stormwater program. Other outputs of the study included outreach and educational activities targeted to the various stakeholders throughout the community to inform the public of the significance of addressing local stormwater management needs and to get local feedback to inform the development of EFC's financing recommendations. The goal of this effort was to provide the town guidance for implementing a self-sustaining stormwater management program.

Approach

This year-long study incorporated information from various sources including town staff and officials, business leaders, residents, GBG, a 3-phase study done by the Army Corps of Engineers and then adapted by the town engineer, the Berlin Stormwater Stakeholder Committee, as well as EFC's independent analysis. Information was collected on the town's stormwater management needs and current stormwater activities, other taxes and fees charged to town businesses and residents, budget allocations, and the monetary costs of improving the stormwater program. Throughout the project period, the project team also engaged citizens through a series of public meetings, presentations to key stakeholders, and a stormwater photo contest to highlight the flooding issues created by heavy rainfall in the town. Promotional materials were developed and distributed including flyers and a fact sheet.



Outreach event in Berlin, October 2011

Key Findings and Recommendations

The project team evaluated a series of funding options to determine which would best fit Berlin's needs for a fair, equitable, dedicated, and sustainable revenue source to support a comprehensive stormwater management program. Based on Berlin's unique characteristics, the project team narrowed the field of potential financing mechanisms to two primary options: the continued use of general funds and a stormwater utility. In the end, the project team found a stormwater utility to be the most appropriate approach for Berlin's primary stormwater financing mechanism, while also recommending that the town continue to use its general fund and access grant funding.

Berlin was determined to have spending needs of approximately \$8.3 million over 10 years for repairs and improvements to the stormwater system, utilizing a stormwater utility and bond financing to generate ample revenue. The EFC recommended distributing the costs of paying for repairs and

improvements in proportion to the types of land uses that were contributing to the problem. Just as a building owner or tenant is responsible for paying its share to process the wastewater and potable water it uses, or to provide the electricity it consumes, the project team recommended that building owners and tenants recognize and be accountable for the stormwater that is created from their portion of the built environment.

A stormwater utility fee allows for the assessment of the amount of impervious surface contributing to the stormwater problem on a per property basis. Creating a stormwater utility would allow Berlin to:

- Allocate the costs of stormwater management in a manner that was fair and equitable;
- Assist in the reduction of stormwater runoff to address flooding and water quality issues;
- Generate adequate revenues for stormwater management activities;
- Have stronger accountability for stormwater management spending; and
- Address and reduce water quality stressors.

The project team recommended the use of a rate structure based upon Equivalent Residential Unit (ERU) (also known as an Equivalent Runoff Unit) where 1 ERU equals 2,100 ft². It was further recommended based on the project team's communication with town staff that each ERU on a property be assessed \$45 per ERU per year for non-residential properties and \$50 per year for residential properties. The project team calculated revenue based on a flat rate fee for residential properties and a fee structure for non-residential units based on impervious surface.

The residential fee was based on the fact that an average property has about 2,100 ft² of impervious surface and, therefore, all properties are billed for 1 ERU per year. The average impervious surface for residential properties was determined using the data provided by town staff. Thus, it was recommended that all residents be charged \$50 per year regardless of property size or amount of impervious surface. Revenue from residential properties would yield a total of \$70,000 per year based on \$50 multiplied by 1,400 properties.

The non-residential fee was based on the amount of impervious surface on each individual property. Thus, if a commercial property was estimated to be 25,000 ft² with an impervious surface of 10,000 ft² and each ERU is equal to 2,100 ft², the property would be billed for 5 ERUs. If each ERU is worth \$45 a year, the total bill per year for the business would be \$225. The EFC recommended that every commercial property, regardless of status (governmental, non-profit, etc.), be assessed a stormwater utility fee based on its contribution to the problem. Revenue from all non-residential properties would yield an estimated total of \$391,846 per year, based on 290 non-residential properties each paying \$45 per ERU per year.

For more information, please visit the [EFC website](#).

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