

WATERSHED SCIENCE BULLETIN

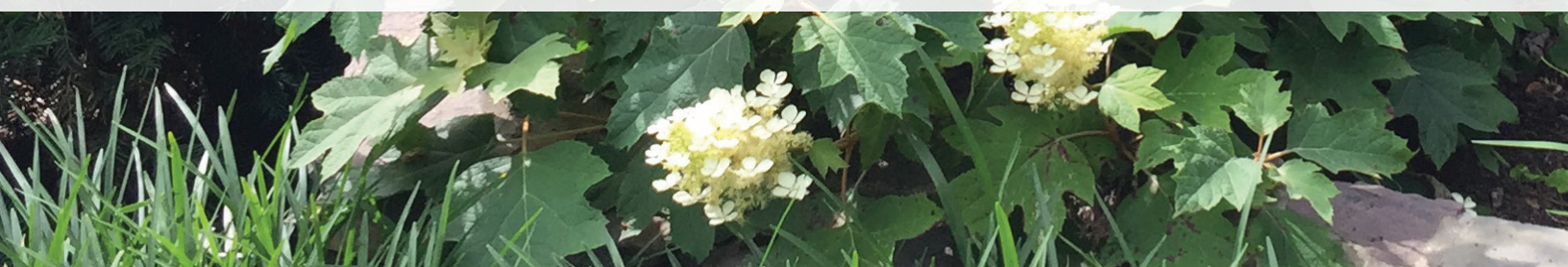
CENTER FOR
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Ask the Experts

Stormwater Rebate Programs



Watershed Science Bulletin is a publication of the Center for Watershed Protection Association

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Ask the Experts: Stormwater Rebate Programs

A holiday wish for many local jurisdictions is perhaps seeing a long line of land owners just waiting to implement stormwater controls on their property to help their communities meet permit requirements! Wish no longer—this issue of the Watershed Science Bulletin contains interviews with four stormwater professionals who share a description of their stormwater rebate programs and tips on how to start a program in your area.



A stormwater rebate program is one type of incentive that communities may adopt to increase the implementation of green infrastructure on private property. A rebate program provides a mechanism for communities



to address the ongoing challenge of finding impervious area for stormwater retrofits to reduce the impact of runoff on local streams while also meeting regulatory requirements. With much of the existing impervious acreage within a community associated with private land—with residential, commercial, and industrial land uses—financial incentives and a way to engage and inform these landowners are key to implementing practices on private property. A stormwater rebate program may help to accomplish both.

For this issue of the Bulletin, we greatly appreciated the opportunity to interview Ann English, Jeff DeHan, Julie Costantino, and Aileen Winquist from Montgomery, Prince George's, Howard, and Arlington counties, respectively, about their successful, yet different, stormwater rebate programs in Maryland and Virginia. The benefits and challenges to implement and initiate a program are shared, along with the resources needed to implement the program—in the end, however, all of the programs have resulted in a “win-win” for the community and land owner alike.

Sincerely,

Neely L. Law, PhD

Co-Editor, *Watershed Science Bulletin*





Ann English

RainScapes Program Manager, Watershed Management Division, Montgomery County (Maryland) Department of Environmental Protection

Ann English, PLA, ASLA, LEED® AP BD+C is the Program Manager for the RainScapes Program in the Watershed Management Division of the Montgomery County (Maryland) Department of Environmental Protection. In that role, she developed a RainScapes/Green Infrastructure training program for professionals that was initiated in 2009 and has been well-attended and used as a model for other jurisdictions and colleges interested in offering such training. She served on the technical review committees for the Sustainable SITES Initiative, the Chesapeake Bay Landscape Professional Certification Program (CBLP), and the National Green Infrastructure Certification Program (NGICP). Additionally, she developed the permeable pavement training module for CBLP and taught the NGICP certification course when it was offered in 2017 in Montgomery County, Maryland.

Her career spans private, nonprofit, and governmental sectors, but she also spent several years teaching at two universities, with a focus on plants and the impacts of their growing environment when designing with them. She earned a Bachelor of Arts in American History from the University of Pennsylvania, a Master of Regional Planning from Pennsylvania State University, and a Master of Landscape Architecture from the University of Georgia.

Program Website: <https://www.montgomerycountymd.gov/water/rainscapes/index.html/>

Q: Describe Montgomery County's stormwater rebate program, including who is eligible to participate in the program, which practices are eligible, information about the rebate/cost-share, the steps of the application process, and details regarding any other program innovations.

A: The RainScapes Program was grant funded in 2004–2006, and it was formally initiated in 2007. The RainScapes Program has four main elements: (1) RainScapes Rewards rebates, (2) RainScapes Communities—encompassing neighborhoods such as homeowners' associations (HOAs) and targeted improvement areas, congregations, and schools, (3) training landscape professionals and County residents, and (4) traditional outreach and speaking at events.

The program has the different “strands” to meet the range of needs we have in our county. One of those needs was for technical resources in straightforward language. So, we have created and provided an array of online materials to help people create better designs for their projects. Other resources include how-to videos and other fact sheets on the value of RainScapes projects and native plants¹.

RainScapes can be installed on any kind of property, but those on private, residential, institutional, and/or commercial properties may be eligible for financial assistance, as long as they pay into the County Water Quality Protection Charge (WQPC). RainScapes staff provide site assessment and any technical assistance. The staff use GIS analyses to evaluate a property; this can be accessed and

¹ <https://www.montgomerycountymd.gov/water/rainscapes/resources.html>

explained to the property owner while in the field using iPads. Transitioning to a database from an all-paper system was done from 2009–2010. This allows for better project tracking and reporting every step of the way.

The RainScapes Rewards Rebate Program provides rebates for green roofs, water harvesting (rain barrels/cisterns), pavement removal, permeable pavement retrofits, rain gardens, and conservation landscapes. We have discontinued rebates for canopy trees and dry wells. In the first case, DEP has an alternative free tree program; in the second case, dry wells are difficult to inspect and do not provide the multiple environmental benefits that the other projects provide.

A compilation of cost data to establish the range of costs per project type revealed that to support 50% of total project costs, we should raise our rebate caps. As a result, we tripled the amount available for residential properties from \$2,500 to \$7,500, and the amount available for non-residential properties was doubled from \$10,000 to \$20,000 as of November 1, 2018.

Our rebate process is laid out in easy-to-understand, informative fact sheets: "How to Apply," "Getting Started to Select a Project," and a schedule of rebates for eligible projects. Other resources include how-to-videos and other fact sheets. Interested parties can visit the website and follow a simple, three-step system to apply for a rebate:

1. Choose a project and complete the online application
2. Get approval and install your project
3. Schedule a final inspection and receive your rebate

Q: Is the RainScapes Program a part of Montgomery County's MS4 program? If so, how does it help the county achieve the goals of the MS4 program?

A: The program has specific goals under the MS4 program; for the 2010 permit, the program was charged to control runoff from 50 impervious acres. The program also contributes to the outreach and educational statistics reported in the MS4 report.

Q: What are a few major successes and challenges of the RainScapes Program? Has the program developed any innovative solutions to address those challenges?

A: Montgomery County's RainScapes Program has been largely successful. First and foremost, we met and have recently surpassed our MS4 permit goal of control credit for 50 acres for the 2010 permit. Second, the program has successfully transitioned from a spreadsheet/paper-based program to a database system, which allows tracking for projects throughout the process. The county's abilities to implement standardized, iPad-based field forms, develop the database for reporting needs, streamline application processes, and increase social media participation are some of the program's biggest successes because it has improved staff efficiency while allowing for greater project review and completion. Third, we instituted a training program for professionals in 2009, which has been used by other initiatives as a model for professional training by the Chesapeake Conservation Landscaping Council (CCLC) and the Water Environment Federation (WEF)/DCWater (NGICP). Fourth, although the program is small, it has had both a regional and national impact, with staff being asked to create and deliver lectures, workshops, and webinars for a variety of audiences. The fifth and final major success of the program has been obtaining broad support both politically and departmentally; as

a result, we are called to collaborate to develop solutions for difficult problems, such as lot-to-lot drainage complaints.

Although the RainScapes Program has been largely successful, we have also faced a few challenges. We are a relatively small group within a large department with many competing priorities. Additionally, despite a lot of outreach, we still encounter many residents who have not heard of RainScapes—success is highly dependent on having the staff and resources available for ongoing marketing. The final challenge we are facing is that our rebate model can exclude those who cannot cover the up-front project costs. We are exploring alternative funding ideas.

To address these challenges and further improve the RainScapes Program, the county has come up with quite a few innovative solutions. Transitioning to digital records and a database approach has alleviated some administrative challenges and has improved workflows, recordkeeping, and reporting. After an impervious area analysis revealed large, untreated impervious areas on congregational sites, we have been developing a congregational and neighborhood outreach model that partners with watershed groups and other nonprofits to deliver watershed-specific information and projects via grants/rebates and technical information/workshops. Other initiatives include professional training, a Montgomery County Public Schools curricular effort, and a revision of our design standards for our projects to simplify construction without compromising performance.

Q: What motivates homeowners and business owners to implement practices?

A: As a result of marketing research conducted from 2013–2014, we have a lot of information on the primary motivators for both our residential and commercial audiences. Table 1 outlines the results of that research.

Q: Does the RainScapes Program use private contractors specifically for program implementation, or are they used for other areas of the program as well/instead? If they are used, please explain their role/work model.

A: Our experience with direct contracting with designers/installers was not very effective for rapid project delivery. We have found that providing a list of designers/installers has provided the information rebate participants need to find a company they can work with on their desired RainScapes project.

The single contractor model of contracting by department limits our flexibility in terms of pricing, location, timing of installation, and maintenance of projects. Additionally, our program's work was conducted as part of much larger contracts and represented a tiny fraction of contract work to be done, which made scheduling a challenge. Also, many smaller firms have limited services and/or areas (providing only certain types of projects or only operating in parts of the county, for example), which means that each contract solicitation may or may not yield contractors in every area.

The RainScapes training lists have provided residents with a list of contractors who have attended training, and it identifies the type and number of projects completed through the RainScapes Rewards Program. This has been very well-received by both the professionals and the property owners in Montgomery County. For rebate projects, the role of staff is to oversee the initial design/

siting of a project and final inspection of the installed project. Contractors installing rebate projects are typically only subject to RainScapes oversight since our projects disturb less than 5,000 square feet.

Q: What are successful tools to ensure maintenance (especially regarding the issue of implementing practices on private property)?

A: We generally find that in the case of projects where the homeowners are invested in the design and installation, subsequent maintenance has not been an issue, particularly with more expensive projects. They have a stake in having a project that looks good on their property. This is particularly the case with homeowners who have hired a contractor to install a project. If there are any issues, RainScapes staff have been available to travel to the site and consult as well. From the perspective of county-installed or watershed-group-initiated projects (and some of the earlier DIY-ers), the results are more mixed. Residents who are not particularly invested or skilled as gardeners have struggled with maintenance, particularly weeding. We now have a link between the program's final inspection process and the application for the WQPC program to help ensure triennial inspections are conducted and that if there are any questions, people are clear on how to get answers.

Q: Where do you observe cost savings when implementing small-scale practices with homeowners/businesses?

A: The county sees cost savings through the inherent cost-sharing approach of a rebate program. As of early December 2018, a total of \$1,123,052 had been expended on 988 completed rebate projects (although, each project may have multiple parts, such as

Table 1. Primary motivators for participation in the RainScapes Program for residential and commercial audiences; results from marketing research conducted from 2013–2014

Residential Audience
Reasons for Installing a Project:
85.4% want to “do the right thing” for the environment
72.1% are incentivized by an available financial rebate
54.8% want to beautify their homes and properties
47.9% want to solve a drainage problem
46.6% want to attract birds and butterflies
43.8% want to reduce erosion in their yards
Ways to Increase Motivation to Participate:
93.7% would be motivated by eligible credit against the WQPC
64% would be motivated by receiving help/ advice when planning their projects
44.1% would be motivated by seeing examples of finished products
44.1% would be motivated by increasing the rebate amount
37.8% would be motivated by simplifying the application process
Commercial Audience
Reasons for Promoting the Installation of a Project:
87.5% want to solve drainage problems for their clients
80.5% want to reduce erosion problems for their clients
79.5% want to “do the right thing” for the environment
62.5% want to add to their portfolios of professional services
50% want to beautify their clients' homes and properties
50% want to raise awareness for watershed issues in their area

two rain gardens or four rain barrels constituting one project), and 55.45 impervious acres have been treated. The average cost per impervious acre overall is approximately \$20,254. The voluntary nature of project location is a distributive approach, and it allows projects to be installed where people want them and where they fit. We are evaluating the pros and cons of promoting RainScapes in specific geographic areas/communities. Previous targeted efforts had mixed implementation results on private property. This has been the case in several neighborhoods that received Green Street and stream restoration projects in the past (e.g., Sligo Park Hills, Forest Estates, Breewood).

Q: What advice would you give to someone thinking about implementing a program focused on private property?

A: When considering implementing a program focused on private property, there are quite a few recommendations that come to mind. These recommendations can be broken down into four major categories: (1) rebates/incentives, (2) administrative tasks, (3) training/education, and (4) marketing/outreach.

Developing proper incentives for the target community is essential. We significantly increased rebate amounts in November of 2018 to better align our rebates with our stated goal of targeting the amounts at a 50/50 cost share level. Understanding the actual cost to complete these projects is important; the more that information can be shared, the better off our programs will be. Additionally, we need to balance the incentives to install and the incentives to maintain in order to ensure that practices perform over time. We have promoted the concept of rebate incentive to install, but the credit program is the incentive to maintain. Ultimately, when it comes to residents, a rebate is always appreciated, but they like the credit option as well since it reduces their charge.

From an administrative standpoint, it is important to define a uniform set of attributes and a consistent reporting format in order to provide the information that is required by the state and any other relevant entities (e.g., county statistics, community reports, etc.). Those considering program implementation should consider how they want to enter and extract their data. Avoid a spreadsheet approach for data entry. A robust dataset set up in the initial stages of the program development can help avoid pitfalls with tracking program successes, costs, and any other reporting requirements. When it comes to the application process, the easier it is to apply, the better the results will be—think 1-2-3 like TurboTax!

Training staff and educating the public are two pillars that can affect the success of a program. It is important to take advantage of resources that are freely available. Contractor trainings have often increased program reach since the contractors often help market the program once they've learned more about it.

In terms of marketing and outreach, the seven points of contact rule from community-based social marketing is a great approach—we use multiple media outlets, including social media advertising, radio, and print advertisements to achieve this critical element of the program's success. It is also important to take the time to develop a meaningful message that resonates with the specific concerns of the community in question while wrapping stormwater into those concerns. Building up a program presence with designers and contractors takes time, but it is worth the effort; they function as a sales force of sorts. Communicating any changes in the program to both professionals and the general community is also a good outreach idea. It is important to note that although working with

watershed groups to target outreach can be a start-up approach, over time, the group will need funding and could be expanded if these groups have dedicated funding sources. Additionally, be sure to identify the funding requirements for various group efforts (volunteer vs. professional staff, scale, etc.). With that in mind, be sure to define the ways that watershed group partnerships can be the most effective in the effort to accomplish community outreach. Voluntary programs can be successful if the organizational infrastructure is developed properly. The RainScapes program has developed administrative, IT, and staff training, which support the program's mission. Additionally, outreach materials for the public provide content information in an easy-to-understand format. Also in place are "in-reach materials" in the form of a series of standard operating procedures, annual program reviews, and an evaluation of what is working well; this has helped us facilitate program growth and staff startup when there has been turnover.



Jeff DeHan

Associate Director, Stormwater Management Division, Department of Environment (DoE), Prince George's County, Maryland

Jeff DeHan has over 28 years of experience with program/project management and contract administration in a variety of environmental and stormwater management technical and administrative programs.

In his current position with Prince George's County's Stormwater Management Division, he manages a diverse range of administrative and operational functions, including budgetary management, personnel management, oversight of engineer consultant services and construction contracts, management to ensure compliance with National Pollutant Discharge Elimination System (NPDES)/MS4 permit

regulations and the Watershed Implementation Plan (WIP II), and the production/evaluation of policy and procedure recommendations.

Jeff managed the Site Development Inspection Section for 10 years, leading to his experience with site, stormwater, and environmental development compliance. Jeff also managed the Storm Drain Maintenance Division of the Department of Public Works and Transportation for 6 years, in which time he became well-acquainted with the county-wide management and rehabilitation of stormwater infrastructure. Jeff attended the University of Toledo and the University of Arkansas. Additionally, he was a member of the U.S. Army from 1979–1985, and he spent an additional 7 years with the 18th Engineer Brigade.

Program Website: <https://cbtrust.org/grants/prince-georges-county-rain-check-rebate/>

Q: Describe Prince George's County's stormwater rebate program, including who is eligible to participate in the program, which practices are eligible, information about the rebate/cost-share, the steps of the application process, and details regarding any other program innovations.

A: Prince George's County's Rain Check Rebate Program was authorized and enacted in September 2012 following the approval of supporting legislation (CB-40-2012). Prince George's County recognized the importance of working with private property owners to improve water quality, so the DoE implemented the Rain Check Rebate Program to provide opportunities and incentives to property owners in the county to participate in pollution reduction and water quality improvement practices within their local communities.

The Rain Check Rebate Program incentivizes and rewards property owners with a cash rebate for installing and maintaining approved stormwater management practices on their property². The property owners receive a direct cash rebate; additionally, the property owners' Clean Water Act fees may be discounted by maintaining their BMPs. There are two categories of eligible applicants for the program. Eligibility Category 1 applicants are either individual residences or individual members of a housing cooperative. Eligibility Category 2 applicants can be commercial businesses, multifamily dwellings, nonprofit organizations, homeowner/condominium/civic associations, or not-for-profit organizations, including housing cooperatives.

Seven practices are eligible for the Rain Check Rebate Program: urban tree canopy, rain barrels, cisterns, rain gardens, permeable pavement, pavement removal, and green roofs. The rebates for each practice are dependent on gallons of water stored, square footage, or number of trees planted. The rebates for Eligibility Category 1 and Category 2 applicants are slightly different; more detail on the differences can be found on the Chesapeake Bay Trust's website³.

In the administration of the county's Rain Check Rebate Program, DoE partners with the Chesapeake Bay Trust. To apply, all applicants must own the property and submit an online application³. Applications for all projects, except for rain barrel projects, must be approved prior to installation.

There are five steps to apply for a rebate through the Rain Check Rebate Program. First, the application instructions should be reviewed to determine eligibility. Next, applicants should determine which practices they would like installed on their property; program coordinators are available to assist property owners in finalizing practice types and sizes during a pre-inspection site visit. The applicant should then review and sign the appropriate property owner agreement and upload it online prior to submitting the application and other necessary documents by clicking "Get Started." The program coordinator reviews all applications and will contact applicants regarding next steps; the review process may take up to 2 weeks after submission.

Q: Is the Rain Check Rebate Program a part of Prince George's County's MS4 program? If so, how does it help the county achieve the goals of the MS4 program?

A: Yes, the Rain Check Rebate Program is a part of Prince George's County's MS4 program. From an education and outreach perspective, the Rain Check Rebate Program helps raise awareness of water pollution and stormwater management practices that improve water quality. From a restoration perspective, BMPs filter and treat runoff from impervious surfaces, reduce or slow

² <https://www.princegeorgescountymd.gov/313/Rebates>

³ <https://cbtrust.org/grants/prince-georges-county-rain-check-rebate/>

down runoff flows, and provide pollution reductions to local streams and watersheds. These BMPs promote environmentally sensitive design, and include rain barrels, rain gardens, cisterns, permeable pavers, pavement removal, tree plantings, and green roofs. While their impervious footprint may be small, the cumulative number of projects contributes to the County's NPDES MS4 permit local Total Maximum Daily Load (TMDL) reductions.

Q: What are a few major successes and challenges of the Rain Check Rebate Program? Has the program developed any innovative solutions to address those challenges?

A: Developing and working with multiple partners to make the program function has enabled us to recruit, nurture, and sustain relationships with property owners, contractors who build projects, and regulatory agencies that require projects. For example, DoE addressed resource and capacity issues in the administration and operation of the program by partnering with the Chesapeake Bay Trust (CBT). A pseudo-governmental agency, CBT is widely regarded as a leader with environmental stewardship programs and grant administration in the state. This collaborative structure has proven to be successful and efficient.

The successes of the Rain Check Rebate Program are in the numbers. The program provides up to \$3 million in cash rebates, grants, and technical assistance. We've approved 505 rebates and rewarded over \$450,000 in total cash rebates. Additionally, we've treated 8.86 impervious acres so far. Despite these successes, the lack of large-scale, community-based, and commercial projects to maximize stormwater benefit per square-foot is still a challenge, and few of these types of projects have come to us. As we move through marketing and planning of the program this year, thought will be given to the identification of larger parcels of impervious area by DoE staff or partnering organizations.

Since the approval of CB-86-2014 in December 2014, we have seen a great increase in applicants applying for the projects. The new legislative bill increased the maximum lifetime rebate allowable to residential property owners from \$2,000 to \$4,000 and amended the rebate amounts and requirements for each approved stormwater management practice. The bill also expanded the program eligibility to homeowner, condominium, and civic associations and authorized rebate disbursement prior to construction for nonprofit organizations. The increase of the rebate ceiling for residential projects—and the amendments to individual rebate amounts and requirements—has boosted project installations and provided a stronger incentive for higher cost/higher yield practices such as permeable pavement installation.

The first innovation is how the program enables the county to enter into contracts with residential property owners and nonprofits to finance eligible rebate projects. These contract agreements enable nonprofits to work with residential property owners to implement restoration projects on their property. Nonprofits finance the initial cost of the project and receive the rebate value directly. Residential property owners are responsible for any payment to the nonprofit for project costs above the rebate value.

The program has also reduced the Clean Water Act fee for many residents. Throughout Maryland, most counties have enacted and collected annual stormwater management fee assessments. While Prince George's County Clean Water Act fees are among the lowest in the state, property owners installing and maintaining water quality BMPs on their property are eligible for a reduced Clean Water Act fee based on the amount impervious area treated. With a cash reward (rebate) incentive to

install BMPs, supplemented with an annual Clean Water Act fee reduction, this is a “win-win” strategy for residents and business owners in Prince George’s County.

The last innovation is the county’s Stormwater Stewardship Grant Program⁴. In addition to the Rain Check Rebate Program, DoE sought to leverage the legislation and promote participation on a larger and more focused scale. Developing and implementing a grant opportunity program enabled DoE to run grant solicitations with focused and strategic water quality restoration outcomes. The projects funded on an annual basis may include: physical restoration projects, education and outreach projects, the engagement of public schools and faith-based organizations, tree plantings, and trash and litter reduction; however, the focus varies annually. The program has proven to be robust; since its inception in 2014, the program has approved 71 projects with \$5.8 million in grant awards. It has delivered multiple restoration projects contributing to our NPDES MS4 permit water quality restoration targets, as well numerous public participation projects.

Q: What motivates homeowners and business owners to implement practices?

A: A majority are self-motivated to improve the quality of stormwater discharged from their property and come into the program several different ways (media outreach, event participation, self-research, word of mouth, etc.). For some property owners, landscaping or homeowner improvement contractors who bid jobs introduce them to the program. Others have come to the program through stormwater audits performed by DoE as a direct result of a drainage concern received by the County Click 311 Program or prompted by the display of colorful yard signs placed on individual properties that have “beautiful” rebate practices in place.

Property owners are equally motivated by a fee reduction credit on the Clean Water Act fee included in their tax bill. By installing a stormwater BMP on their property that reduces the quantity or improves the quality of stormwater discharged from their property they may be eligible for this credit. A Fee Lookup Tool⁵ is available on the county website to estimate various hypothetical fee reductions based on adding stormwater best management practices to treat stormwater runoff.

Q: Does the Rain Check Rebate Program use private contractors specifically for program implementation, or are they used for other areas of the program as well/instead? If they are used, please explain their role/work model.

A: DoE has multiple partners that make this program run smoothly, each with their own expertise. For example, DoE partners with CBT on the administrative and operational functions of the program⁶. CBT provides support with public education and outreach; responding to phone calls and e-mails from property owners wanting information program and how they can take advantage of this opportunity, meeting with applicants needing guidance with BMP selection, reviewing and processing applications, and conducting inspections of installed practices.

DoE also partners with the Low Impact Development Center (LIDC). LIDC implements a Contractors Certification Course for local professional landscapers and other green businesses. The course

⁴ <https://www.princegeorgescountymd.gov/2837/Stewardship-Grant-Program>

⁵ <http://pgcdoe.net/pgcounty/PropertyManagement/Property>

⁶ <https://cbtrust.org/grants/prince-georges-county-rain-check-rebate/>

provides this audience with practical, hands-on information and guidance on rebate practices, practice selection, site assessment and site selection, construction techniques, rebate requirements, and the application process. Once contractors finish the course, they are added to a list of qualified contractors available to property owners looking for services under the Rain Check Rebate Program. This service supports the county's Jobs First Act in increasing and promoting local business development and job growth.

Q: What are successful tools to ensure maintenance (especially regarding the issue of implementing practices on private property)?

A: All eligible stormwater practices under the Rain Check Program require maintenance and applicants are provided with guideline documents specific to each BMP type. The guideline documents⁷ include an easy-to-follow maintenance schedule specific to BMP type and seasonal environments. Maintenance requirements fall into three categories: "required," "required at low frequency," or "required as necessary." All maintenance requirements are discussed with property owners during the initial site visit.

Q: Where do you observe cost savings when implementing small-scale practices with homeowners/businesses?

A: DoE plans several rain barrel events each year where rain barrels are available for purchase. Usually held within a municipality, the city or town buys 50-gallon rain barrels in bulk, resulting in a discounted price to property owners, which offsets most of the cost. Barrels cost \$75, and after the rebate, the out-of-pocket cost to the homeowner is nominal. A local contractor or qualified individual is available at these events to demonstrate how to properly install and maintain the rain barrel, easing concerns sometimes associated with the installation process.

Q: What advice would you give to someone thinking about implementing a program focused on private property?

A: Rebate programs focusing on private properties are staff intensive; it requires dedicated resources for education, coordination, and seeing the project through to the end. An assessment of the cost benefit will be required. The program should be diverse and offer rebate values that truly incentivize participation, as well as other program opportunities, such as the grant program to increase flexibility and scale.

⁷ <https://www.princegeorgescountymd.gov/324/Eligible-Practices>



Julie Costantino

**Sustainability Project Manager, Office of Community Sustainability,
Howard County, Maryland**

Julie Costantino has 7 years of experience working in the environmental field in the government and nonprofit sectors. Julie is a Sustainability Project Manager for the Howard County Government and manages the County's two residential stormwater programs. In addition, she facilitates the Stream Mapper citizen science project on Water Reporter, where volunteers submit pictures and basic observations about local streams in Howard County. She is also working to implement a native plant-pollinator program within the County and has begun outreach and education about native bees and their benefits. Julie has a Bachelor of Science in Natural Resource Management from the University of Maryland, and holds a

Chesapeake Bay Landscape Professional Level II certification in installation and design of small-scale stormwater BMPs. Her diverse background includes experience in environmental education and outreach, small scale BMP installation, plant-soil relationship research, stream restoration, and wildlife management.

Program Website: <https://www.cleanwaterhoward.com/what-is-your-role/residential-properties/cleanscapes/>

Q: Describe Howard County's stormwater rebate program, including who is eligible to participate in the program, which practices are eligible, information about the rebate/cost-share, the steps of the application process, and details regarding any other program innovations.

A: Howard County's CleanScapes Program was initiated in 2014. Property owners in Howard County, Maryland whose primary structure was built prior to 2003 are eligible for the program. CleanScapes allows eligible applicants to choose from eight different BMPs to install on their property while submitting an application for an opportunity to reduce their Watershed Protection Fee and/or reimbursement for their BMP(s). The reimbursement is a one-time payment for installing a CleanScapes practice, and credit is an annual percentage (based on the impervious area that has been treated by the practice) toward the applicant's Watershed Protection Fee. All practices are eligible for reimbursement and credit; however, the practice must meet the minimum requirements⁸. The specific types of eligible BMPs and their corresponding rebate information can be found on Clean Water Howard's website⁹.

Applicants are welcome to apply online. Then, an inspection will take place on the property to ensure that the proposed practice meets the minimum requirements. Information collected during the site visit, along with the initial application, will be reviewed by staff to determine the final award of credit and reimbursement. Inspections are performed on a rolling basis from spring to fall.

⁸ https://www.cleanwaterhoward.com/sites/default/files/bmp_cheat_sheet_2.pdf

⁹ <https://www.cleanwaterhoward.com/residential-reimbursement-form>

Q: Is the CleanScapes Program a part of Howard County's MS4 program? If so, how does it help the county achieve the goals of the MS4 program?

A: Yes, the CleanScapes Program helps Howard County achieve its MS4 permit goals. The impervious surface acreage treated by qualifying BMPs are tracked and counted toward the county's MS4 permit.

Q: What are a few major successes and challenges of the CleanScapes Program? Has the Program developed any innovative solutions to address those challenges?

A: A major success of the CleanScapes Program has been the ability to offer financial support to help Howard County residents in solving stormwater issues on private property. The CleanScapes Program is responsible for the installation of almost 250 practices in Howard County. We've provided over \$128,000 in reimbursements, and we have awarded an annual Watershed Protection Fee credit of \$3,065 to residents who install a BMP through the program. The exact amount each resident receives is equivalent to the percent of impervious area treated by their BMP relative to the total impervious area on their property. In other words, if you treat 20% of your impervious area, you will receive a 20% reduction in your Watershed Protection Fee. So far, we have treated 5.07 impervious acres, with rain gardens holding the majority of BMPs installed.

Columbia Association (CA) residents saw additional savings through a separate grant-funded program that offered a financial incentive to CA residents. CA covers 75% of the cost of a rain garden through the grant, and 25% of the cost is covered by the homeowner. The resident could then submit their 25% cost to the CleanScapes program for a 50% reimbursement, making their total payment for a garden 12.5% of the total cost. While this proved to be a success for Columbia residents, it also identified a need for a similar program for Howard County residents outside of Columbia. We wanted to increase practices being installed in the rest of the county, so we created a county program that is modeled after the CA rain garden cost share program (75% paid by Howard County and 25% paid by homeowner). Our program (Rain Gardens for Clean Water) was initially grant-funded in its first year but, after much success and a growing waitlist of residents, has been fully County funded for two additional years. This year, we were able to increase funding for the Rain Gardens for Clean Water contract and plan to request funding each year to continue the program.

Despite those successes, the CleanScapes Program has also faced a few challenges. Firstly, the number of residents interested in installing BMPs through CleanScapes exceeds the number of contractors installing practices. As the demand for stormwater practices grows, so does the need for qualified contractors. To address this, we are holding a contractor workshop in January of 2019 to inform landscaping companies working in Howard County about the CleanScapes Program and how they can get involved. The Chesapeake Bay Landscape Professional Program Coordinator will also be at the workshop to discuss the benefits of their two-tier sustainable landscaping training and how they can get involved. We hope that this will be the first step in engaging additional local businesses in CleanScapes, making it a more successful program for Howard County residents.

A second challenge has been that our current program requirements for impervious surface treatment have prevented some residents from being reimbursed. The existing model uses lot size to determine impervious treatment requirements (townhouse/condominium = 250 sq. ft.; > 0.25-acre lot = 500 sq. ft.; > 0.25-acre lot = 1000 sq. ft.). This assumes that if you have a larger lot, you have more

impervious area to treat, which is not always the case. This is seen particularly for homes with the 1000 sq. ft. impervious treatment requirement. Our goal is to incentivize residents to install stormwater BMPs on their property, and we recognize our current requirements for impervious treatment have been an obstacle for some homeowners and contractors installing practices. Since impervious treatment is the driving factor in meeting our MS4 permit requirements, we are working on a model that makes this requirement amenable to implementation while allowing the county to also meet its goals. One format we are considering is “percent impervious treated” since this is how credit towards the Watershed Protection Fee is determined. Any changes to the current requirements would need to be presented to and approved by the County Council.

Q: What motivates homeowners and business owners to implement practices?

A: A combination of financial incentives (being reimbursed for installation) and solving stormwater issues on their property. A lot of homeowners just want to do something to help the environment, and they see our programs as a chance to make a difference while also solving their drainage problems. Additionally, businesses can market cost savings of installing a CleanScapes practice to their customers.

Q: Does the CleanScapes Program use private contractors specifically for program implementation, or are they used for other areas of the program as well/instead? If they are used, please explain their role/work model.

A: The program does not require the use of private contractors for installation, although practices like permeable pavers require installation by a certified professional. Homeowners can install practices on their own, as long as they document the process and submit design specifications and progress photos.

Q: What are successful tools to ensure maintenance (especially regarding the issue of implementing practices on private property)?

A: During the 3-year recertification process we collect information about how people are maintaining their practices. During recertification, we ask a series of questions, including how the practice is being maintained, and request current photos of the practice. We respond to individual homeowner concerns are questions and offer resources and support in addressing those matters. To be more proactive, we are working on a comprehensive webpage dedicated to maintenance-related questions and concerns.

BMPs are initially certified through an inspection and verification of application materials, but they must be verified every three years to ensure the practice is still in place in functioned as designed. If a practice is not recertified, the landowner no longer receives credit toward their Watershed Protection Fee.

Q: Where do you observe cost savings when implementing small-scale practices with homeowners/businesses?

A: Cost savings occur when small-scale practices can be installed to county requirements and therefore homeowners can take advantage of reimbursements and credit toward the annual Watershed Protection Fee.

Q: What advice would you give to someone thinking about implementing a program focused on private property?

A: Have clear goals and guidelines for how the program will be implemented and who will be responsible for each aspect. Look to engage local community groups that can help carry out the goals of your program while also working towards their own mission. More than anything, be willing to adapt and change policies and requirements to improve your program. We found that as the program evolved there were certain aspects that we needed to adjust to ensure we continued to align with the goals of the program.



Aileen Winqvist

Watershed Outreach Program Manager, Office of Sustainability and Environmental Management, Arlington County, Virginia

Aileen Winqvist has 20 years of experience in environmental outreach and communication and a Master of Environmental Science from the University of Virginia. In her current position, Aileen manages outreach for Arlington County's stormwater programs, including public engagement for stream restoration and storm sewer projects, managing the StormwaterWise Landscapes incentive program, and coordinating educational programs on rain barrels and rain gardens. Aileen has helped to lead the "Only Rain Down the Drain" regional public education campaign comprising 15 other jurisdictions and water utilities for the past decade. Aileen

was honored with Audubon Naturalist Society's "Conservation Award for Public Official," and she has presented at the Potomac Watershed Forum, EPA's Non-Point Source Education Conference, EPA's Community Involvement Conference, and the North American Association of Environmental Educators.

Program Website: <https://environment.arlingtonva.us/stormwaterwise/>

Q: Describe Arlington County's stormwater rebate program, including who is eligible to participate in the program, which practices are eligible, information about the rebate/cost-share, the steps of the application process, and details regarding any other program innovations.

A: The StormwaterWise Landscapes program was developed by Arlington County in 2012. The program is open to residential property owners, HOAs, and businesses/institutional properties. We accept about 40 residential participants and approximately 10 HOA/business participants each year. There is an application period at the beginning of the year, and then participants are selected on a lottery basis. After they are selected for the program, county staff conduct a site assessment with the participant to discuss any drainage issues on the property and identify potential projects to reduce runoff. Following the assessment, staff provide a written site assessment report.

Acceptable projects for the program include conservation landscaping, rain gardens, pervious pavement, and pavement removal. Arlington County has other tree planting and rain barrel incentive programs, so those practices were not included as part of the StormwaterWise Landscapes program. County staff review project plans prior to installation to ensure the projects meet program requirements. Participants apply for reimbursement after they have completed their project and received a final inspection. The maximum reimbursement is 50% of the project cost, up to \$2,500 for a single-family residence and up to \$4,000 for HOAs.

Q: Is the StormwaterWise Landscapes Program a part of Arlington County's MS4 program? If so, how does it help the county achieve the goals of the MS4 program?

A: The StormwaterWise program helps Arlington meet the outreach requirements for our MS4 permit, which includes the goal of 200 participants in the StormwaterWise Landscapes program per 5-year permit cycle.

The program has broader outreach benefits as well because many residents view the StormwaterWise Landscapes Program as a valuable service from their local government. They appreciate the financial assistance with managing runoff on their property, but they also appreciate the technical assistance to identify potential solutions for their drainage issues.

Currently, Arlington is not counting StormwaterWise projects toward regulatory Chesapeake Bay TMDL credits, but we are tracking the project data, so we are prepared to take credit in the future as needed.

Q: What are a few major successes and challenges of the StormwaterWise Landscapes Program? Has the program developed any innovative solutions to address those challenges?

A: The StormwaterWise Landscapes Program has helped install over 200 projects treating runoff from about 4 acres in Arlington County. From 2013–2017, the program's return on investment has been about 3:1, with the property owners investing \$755,000 and the county providing \$240,000 in reimbursements (including \$80,000 in grant funding).

In a survey, 93% of program participants said they would recommend the program to their neighbor. Some feedback from participants are as follows:

- We are certainly much better consumers and stewards for stormwater than we were before.
- Thank you for helping to make our beautiful backyard a reality!
- Both rain gardens are working just as we had hoped, and I know we have reduced our runoff into Four Mile Run. We are proud to be a part of this very worthwhile program and hope to participate again in 2015!
- I would like to thank everyone at the Arlington County and ACE for giving me the opportunity to participate in such a noble environmental cause.
- I cannot get over the difference! Thank you so much!! Without StormwaterWise and your help, this never would have happened. I will never be able to express my gratitude!

The StormwaterWise Landscapes HOA program has yielded some very beneficial projects, because many HOAs in the County have large areas of land, extensive impervious cover (buildings and parking lots), and often were built prior to the requirement for stormwater management. Through the StormwaterWise Landscapes Program, many HOAs have been able to address challenging drainage issues and are beginning to convert their traditional landscapes to native plants.

An additional success of the program is providing additional training and experience with sustainable landscaping practices for local landscape designers and installers.

The challenges of the program include ensuring the quality of the projects and keeping participants on schedule to complete their projects. To help address this challenge, Arlington County developed project specifications for each project to help ensure consistency and quality of the projects. The project specifications include detailed design and construction guidance for each project and are available on the StormwaterWise Landscapes website. We also ask contractors to attend a 1-day training, which covers how the program works and includes a review of the project specifications and submittal requirements in detail. County staff also created a database to track participants and project information.

Q: What motivates homeowners and business owners to implement practices?

A: Most property owners are motivated by wanting to improve their property and solve a drainage issue or by wanting to make their property more environmentally friendly. The incentive programs work best when you can simultaneously meet your program objectives while also helping the property owners meet their goals. For example, there may be several projects that a property owner could undertake on their property, but one project may help the most with their particular drainage concern. In addition, although it is important to have guidelines for the program (such as minimum sizes for projects), it is important to allow some flexibility in the requirements as well because some properties have unique circumstances. If you focus only on your program's goals or requirements to the exclusion of the property owner's needs, some property owner may choose not to complete their projects.

Q: Does the StormwaterWise Landscape Program use private contractors specifically for program implementation, or are they used for other areas of the program as well/instead? If they are used, please explain their role/work model.

A: The StormwaterWise Landscapes Program has a list of contractors that have attended a StormwaterWise training session and have experience with sustainable landscaping projects. Program participants choose a contractor from the list for rain garden or pervious paver projects and sign a contract directly with the contractor. For conservation landscaping and pavement removal projects, participants can choose to hire a contractor or install the practice themselves.

Q: What are successful tools to ensure maintenance (especially regarding the issue of implementing practices on private property)?

A: The StormwaterWise Landscape Program asks participants to sign a participant agreement at the beginning of the program, agreeing to maintain the practices for at least 5 years. We have also used a formal maintenance agreement for some projects, for which participants can receive an additional reimbursement and is recorded on the deed of the property.

Q: Where do you observe cost savings when implementing small-scale practices with homeowners/businesses?

A: Conservation landscaping projects are typically the most affordable, and property owners can install these projects themselves. Some property owners may have a designer create a plan for their property and then keep costs down by doing some of the installation work themselves. The property owner may be able to work with the contractor to adjust the scope of the project if the initial estimate is too high. County staff always try to provide several project options for each property owner, so hopefully there will be a project that can fit their budget.

Q: What advice would you give to someone thinking about implementing a program focused on private property?

A: For someone starting an incentive program, many key considerations exist, including the scale of the program—how many participants can you accept each year. Will you have staff dedicated to the program? What is the program budget and what reimbursement amount will the program offer? What projects will be acceptable and what are the project requirements (minimum project size, design details, etc.)? Will you use credits for the projects to meet any regulatory requirements? Program schedule and deadlines are essential.