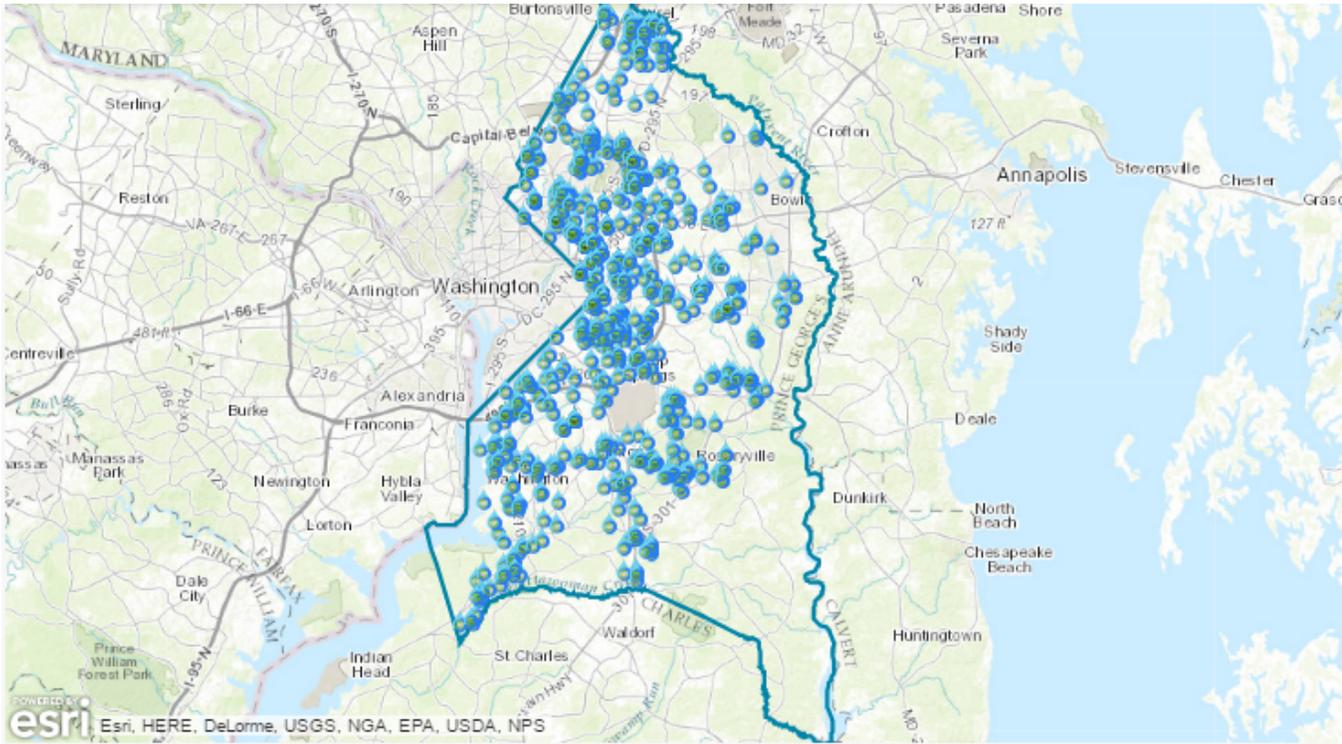




Prince George's County Urban Stormwater Retrofit Public Private Partnership



The Prince George's County Urban Stormwater Retrofit Public Private Partnership is a Pay for Performance service delivery model designed to improve water quality through installation of high impact stormwater control measures throughout Prince George's County. The approach delegates project selection, design, construction, operation, and maintenance responsibility to a team of private partners. The agreement also requires the development and implementation of social and economic development programs. The County relies primarily on stormwater utility fees to back debt issuances for the initial installations and to cover ongoing operation and maintenance costs.

Background

The Prince George’s Urban Stormwater Retrofit Public Private Partnership (“The Clean Water Partnership”) is a 30-year public private partnership between Prince George’s County, Maryland and Corvias Solutions. The Clean Water Partnership is an alternative delivery approach to municipal stormwater management created to comply with several regulatory requirements, including the County’s Municipal Separate Storm Sewer System (“MS4”) stormwater permit, the County’s allocation of Chesapeake Bay Total Maximum Daily Load (“TMDL”), and the subsequent Maryland Phase II Watershed Improvement Plan. Through a “Master Program Agreement”, the County has committed to investing \$100 million in stormwater management installations during an initial three-year period. The table below summarizes the key features of the approach.

Table 1. Key Project Details¹²

Project Title:	Prince George’s County Urban Stormwater Retrofit Public Private Partnership
Primary Facility/Service:	Distributed Best Management Practices (BMPs) covering 2,000 acres (with possible expansion to 4,000 acres)
Local Government Entity:	Prince George’s County
Primary Partner:	Corvias Prince George’s County (Program Manager), CH2M Hill Constructors Inc. (General Contractor), Bowman Consulting Group, Ltd and CH2M Hill Engineers, Inc. (Design Engineers), Stormwater Maintenance LLC (Maintenance)
Delivery Model:	Design, Build, Operate, and Maintain (“DBOM”)
Contract Period:	3 years (Program Agreement), 30 years (Maintenance Agreement)
Population Served:	909,535 ³
Major Initial Outlays:	\$100 million over a three period to cover development and installation costs for stormwater control measures.
Flow of Revenues:	Prince George’s County collects stormwater revenues from county residents through stormwater fees. Revenue is used to secure debt, the proceeds of which were used to pay private partners for program implementation.

Corvias Solutions is considered the manager of the partnership and is charged with overseeing all subcontractors throughout the design, construction, and maintenance of stormwater improvement projects. Corvias oversees a team that includes the following organizations:

- **CH2M Hill Constructors, Inc.:** serves as the “general contractor” and is responsible for procuring subcontractors to supply materials and implement proposed projects.
- **Bowman Consulting Group, Ltd and CH2M Hill Engineers, Inc.:** serve as the “design engineers” and are responsible for planning the design of proposed projects.
- **Stormwater Maintenance LLC:** serves as the “Prime Maintenance Contractor” responsible for completing all O&M work.
- **Maryland Environmental Service:** an independent self-supporting state agency, serves as the “Completion Certifier” and “Maintenance Monitor” responsible for inspecting and accepting completed projects, issuing Impervious Area Credit Certificates, and inspecting operations and maintenance work.

¹ Summary of Principal Terms: Master Program Agreement for the Urban Stormwater Retrofit Program Public-Private Partnership between Prince George’s County and Corvias Prince George’s County Stormwater Partners, LLC. October 17, 2014.

² Summary of Principal Terms: Master Maintenance Agreement for the Urban Stormwater Retrofit Program Public-Private Partnership between Prince George’s County and Corvias Prince George’s County Stormwater Partners, LLC. October 17, 2014.

³ U.S. Census Bureau (year data was published). 2015 Population. Retrieved from <http://census.gov/topics/population.html>

The scope of Corvias' agreements with the County includes completing projects on an initial program area of 2,000 publicly owned impervious acres. Corvias becomes eligible to oversee the expanded program area of 2,000 additional acres if it achieves a set of program performance milestones related to project delivery and socioeconomic benefits. Project delivery milestones include measures related to the generation and delivery of modified and improved land area ("Impervious Area Credits") to the County, adherence to the scheduled construction timeline and budget, and successful implementation of social and economic development programs. Socioeconomic milestones include measures related to participation of County residents and local small, minority, veteran, disabled and woman owned businesses as well as the implementation of a mentor-protégé program for the County workforce.

Under the Master Maintenance Agreement, Corvias is responsible for overseeing the ongoing operations and maintenance (O&M) of accepted projects (those deemed complete by the Completion Certifier). In addition to providing management and oversight, Corvias prepares Project Maintenance Plans, prepares annual O&M plans and budgets, and manages the Prime Maintenance Contractor and Maintenance Monitor. Project Maintenance Plans describe the long-term maintenance needed for each type of project constructed and provide the basis for annual O&M plans. Project Maintenance Plans are developed in conjunction with the budgets for each O&M project. The prime maintenance contractor is responsible for carrying out O&M work and the maintenance monitor is responsible for inspecting each O&M project annually at a minimum.

Workflow

The installation workflow of the Clean Water Partnership consists of four primary stages:

1. **Annual planning:** Corvias specifies the projects being considered for the upcoming fiscal year. Each annual plan includes estimates for the total cost and maximum design cost for each project. Annual plans also highlight the planned actions for social and economic development programs and maximum costs for those programs.
2. **Development period:** Corvias engages the Design Engineer and General Contractor to begin design and preconstruction planning and to solicit subcontractors to provide needed materials and construct budgeted projects. Before commencing work, Corvias prepares a budget book for each project, which includes the number of impervious area credits to be delivered and Best Management Practices (BMPs) to be constructed or installed, a milestone and performance schedule, maximum project cost, and scheduled acceptance date.
3. **Construction Period:** Corvias constructs projects that the county approved in the previous stage.
4. **Acceptance:** The Completion Certifier inspects and evaluates the projects to ensure that they comply with design specifications and provides an "Impervious Area Credit Certificate" for the accepted acres of the project. If the Completion Certifier determines the project, as designed and installed, falls short of Impervious Area Credits compared to the proposed amount in the budget book, Corvias is required to solve the issue with the project at its own expense.

Flow of Funds

Under the Master Program Agreement and Master Maintenance Agreement, the County makes different types of payments for initial project implementation and on-going maintenance. Payments include:

- **Initial payment:** \$1,000,000 upon completion of the Master Program Agreement to reimburse initial costs and advance a portion of Corvias' fees.
- **Design and Construction Fees:** The County also pays Corvias as design and construction costs are incurred and milestones are met. Design costs are paid at four milestones (30%, 60%, 90% and 100% of design completion). Construction milestones vary from project to project.
- **Base and Incentive Fees:** Corvias is permitted to charge a base fee on all project costs including those related to the social and economic programs, and an incentive fee based on performance related to several criteria.
- **Final Project Payment:** For final payment of a project under the Master Program Agreement, Corvias must submit the required Impervious Area Credit Certificate (issued by Maryland Environmental Service). If Corvias was not granted the certificate, it must correct the issue at its own expense in order to earn the certificate and receive final payment.

- **Maintenance Costs:** Under the Master Maintenance Agreement, the County is obligated to pay Corvias for all the annual O&M costs and program expenses excluding the Maintenance Monitor costs that are paid directly to the Maintenance Monitor by the County. The agreement also includes the payment of a “Base Fee” equal to 5% of the annual O&M costs and expenses (excluding their bond and Insurance expenses). Corvias is also able to earn “Incentive Fees” up to an additional 5% of the annual O&M costs and expenses (excluding their bond and Insurance expenses). Incentive fees are based on Corvias’ ability to meet specified performance goals.

While the Master Program Agreement encourages opportunities for privately arranged financing, the initial installations are being financed almost exclusively through County issued debt.⁴ The County also hopes to begin funding a portion of the installations with below market rate loans from the State’s Clean Water Revolving Loan Fund (“SRF”).⁵ The County will also rely on County-issued Revenue Bonds to fund project installations. The Bonds will be backed and retired with revenue from stormwater utility fees (the “Clean Water Act Fees”) that are implemented by the County to provide funding to address federal Clean Water Act requirements.

The Clean Water Act Fees are collected from property owners across the County. The Clean Water Act Fee consists of a flat administrative fee of \$20.58, per tax account, per year and a variable impervious area fee at a rate of \$20.90 for every 2,465 square feet of impervious area⁶. Impervious areas on private property are determined by analysis of aerial photography, measurement from engineer drawings, field surveys, and inspections by the Department of the Environment⁷. Exemptions to the fee can be granted to certain parties via a financial hardship program, and property owners can receive fee reduction credits for installing BMPs on their property, including rain barrels, permeable pavement and rain gardens. The fee is collected from local property owners annually as a line item in their annual tax returns. Revenue from the fees will also be used to cover ongoing maintenance payments.

According to the project manager, Jim Lyons, private sector financing was not a primary driver of the program. The program was designed to tap into the expertise of the private sector in evaluating different project opportunities and for implementation efficiencies. The project was designed to meet environmental goals in an economically efficient manner while aggressively encouraging local economic and community goals. While still in its early phases, the project has already provided key opportunities to local small, minority, veteran, disabled and woman owned businesses job opportunities for community members.⁸

⁴ *Summary of Principal Terms: Master Program Agreement for the Urban Stormwater Retrofit Program Public-Private Partnership between Prince George’s County and Corvias Prince George’s County Stormwater Partners, LLC.* October 17, 2014.

⁵ According to Jim Lyons (Program Manager, Prince Georges County), as of November 2016, the County was in discussions with the State to obtain an SRF loan. Interview with Author, November 22, 2016.

⁶ *Fee Structure.* Prince George’s County. <http://www.princegeorgescountymd.gov/276/Fee-Structure>

⁷ *Prince George’s County Clean Water Act Fee Regulation.* Prince George’s County. 2013.

<http://www.princegeorgescountymd.gov/DocumentCenter/View/16231>

⁸ Jim Lyons, Program Manager, Prince Georges County. Interview with Author. November 22, 2016.

Acknowledgements

Written by Jeff Hughes † and Andrew Alexandrovich.* December 2016.

This research was conducted by the Environmental Finance Center at The University of North Carolina under a cooperative agreement from the EPA Water Infrastructure Resiliency and Finance Center (WIRFC). This research was a collaborative effort within the EFC, WIRFC and other key partners including the West Coast Infrastructure Exchange. Special thanks to Jim Lyons (Prince Georges County Clean Water Partnership Program Manager. Thanks also to members of the USEPA's Environmental Finance Advisory Board who provided valuable insight. Lexi Kay Herndon provided editorial assistance.

This report is a product of the Environmental Finance Center at the University of North Carolina, Chapel Hill. Findings, interpretations, and conclusions included in this report are those of the authors and do not necessarily reflect the views of EFC funders, the University of North Carolina, the School of Government, or those who provided review.

We are grateful to the U.S. Environmental Protection Agency for funding this research.

Cover photo: Courtesy of Prince George's County Clean Water Partnership <http://thecleanwaterpartnership.com/current-projects/>

† Jeff Hughes is a member of the United States Environmental Protection Agency's Environmental Finance Advisory Board.

* Andrew Alexandrovich is a Masters Student at the Nicholas School of the Environment, Duke University.

About the Environmental Finance Center

The Environmental Finance Center at the University of North Carolina, Chapel Hill is part of a network of university-based centers that work on environmental issues, including water resources, solid waste management, energy, and land conservation. The EFC at UNC partners with organizations across the United States to assist communities, provide training and policy analysis services, and disseminate tools and research on a variety of environmental finance and policy topics.

The Environmental Finance Center at the University of North Carolina, Chapel Hill is dedicated to enhancing the ability of governments to provide environmental programs and services in fair, effective, and financially sustainable ways.

www.efc.sog.unc.edu

About the Water Infrastructure Resiliency Finance Center

The Water Infrastructure and Resiliency Finance Center identifies financing approaches to help communities make better-informed decisions for drinking water, wastewater, and stormwater infrastructure that are consistent with local needs.

<https://www.epa.gov/waterfinancecenter>



© 2016 Environmental Finance Center
at the University of North Carolina, Chapel Hill
School of Government
Knapp-Sanders Building, CB# 3330
University of North Carolina at Chapel Hill
Chapel Hill, NC 27599-3330
<http://efc.sog.unc.edu>

All rights reserved