



## **FACT SHEET: DC Water Environmental Impact Bond Results- Successful**

DC Water today announced that Rock Creek Project A, the inaugural green infrastructure project under the DC Clean Rivers Project, reduced stormwater runoff from the project area, that would otherwise contribute to combined sewer overflows in Rock Creek, by nearly 20 percent. DC Water's innovative approach to prediction, measurement, and reporting of the green infrastructure project outcome is a signature component of the 2016 DC Water Environmental Impact Bond (EIB), the first issuance of its kind in the country.

### **About Combined Sewer Overflows**

The proceeds of the EIB were used to construct 77 green infrastructure practices under Rock Creek Project A. These practices were designed to mimic natural processes to absorb and slow stormwater runoff during periods of heavy rainfall, ultimately reducing the incidence and volume of combined sewer overflows (CSOs) to the District's waterways. CSOs occur when the volume of wet weather flows exceed the capacity of the combined sewer system, resulting in a mixture of stormwater and sanitary sewage that overflows into area waterways.

Prior to the start of the DC Clean Rivers Project, approximately three billion gallons of CSOs would overflow into the Anacostia and Potomac Rivers and Rock Creek on an annual basis, adversely affecting the water quality of the rivers and tributaries in the region. CSO reduction has become an increasingly urgent environmental challenge, especially with an increased frequency and severity of intense rainfall events.

### **About the Environmental Impact Bonds**

The \$25 million, tax-exempt EIB was sold to Goldman Sachs Urban Investment Group and Calvert Impact Capital in 2016 in a private placement. The proceeds from the EIB provided the upfront capital needed to construct Rock Creek Project A, the inaugural green infrastructure project under the DC Clean Rivers Project, which involved the installation of approximately 20 acres of green infrastructure including bioretention (rain gardens) in planter strips and curb extensions, permeable pavement on streets and alleys, and two green infrastructure parks in the Rock Creek sewershed (District Wards 4 and 5).

The EIB was based on an innovative financing technique whereby the costs of constructing the green infrastructure were paid for by DC Water, but the performance risks and benefits of managing stormwater runoff at such a large scale were shared among DC Water and the investors. As a result, outcome payments on the EIB varied based on the proven success of the project, as documented by rigorous pre and post construction performance monitoring.

The objectives of the EIB were threefold:

- Transfer some of the green infrastructure performance risk from DC Water to the bond investors

- Improve transparency to local ratepayers by formally predicting, measuring, and publicly reporting the environmental impact of the green infrastructure
- Enhance future decision-making about how much and which types of green infrastructure to build

The outcomes-based, risk sharing elements of the DC Water EIB do not exist in traditional municipal or green bonds. These elements commit the issuer to rigorous prediction, measurement, and reporting on stormwater runoff reduction resulting from the GI installation to determine whether payments (for exceeding or underachieving the goal) were required.

**EIB Outcome Ranges**

<b>Tier</b>	<b>Runoff Reduction</b>	<b>Payments</b>
1	Greater than 41.3%	DC Water pays Outcome Payment of \$3,300,319.00 to Purchasers
2	18.6% to 41.3%	No Outcome Payment or Risk Share Payment
3	Less than 18.6%	Purchasers pay Risk Share Payment of \$3,300,319.00 to DC Water

**Results/Outcomes**

Post-construction monitoring found the green infrastructure reduced stormwater runoff by nearly 20 percent from previous levels. This falls within the ‘as expected’ outcome range established by the EIB and means no outcome payment is due to the investors and no risk share or underperformance penalty is due from the investors. The report from DC Water was independently validated by the engineering firm WSP.

**In addition, each of the three aforementioned objectives was achieved.**

The rigorous measurement and reporting inherent to the EIB provided DC Water with a number of lessons learned about green infrastructure that can be applied to other projects. In its final report on Rock Creek Project A, DC Water highlighted 15 lessons learned about porous pavement, bioretention, and other green infrastructure facilities, noting “significant information has been learned in terms of design, construction, and monitoring approaches that have added to DC Water’s body of knowledge and expertise related to GI...Collectively, the information gained through the performance monitoring and the resulting optimization allowed DC Water to be responsive, make corrections, and ensure a future for green infrastructure at DC Water.”

Based on these learnings, DC Water plans to implement a hybrid approach in the Rock Creek sewershed that blends the best of gray and green infrastructure. The hybrid approach provides the same degree of stormwater control as the all gray infrastructure alternative, lowers capital costs as compared to the all gray or all green alternatives, and will be implemented by 2030, the deadline in the 2016 Consent Decree Modification. This hybrid approach provides accountability to District ratepayers and delivers co-benefits such as more green space for public use, habitat creation for birds and pollinators, and more local green jobs as compared to the all gray option. DC Water’s ambitious local green jobs program includes training and certification opportunities, and job placement assistance for District residents interested in GI construction, inspection, and maintenance.

In 2016, at the start of the project, DC Water did not have ample experience with green infrastructure and it was deemed to carry a higher risk profile than gray infrastructure (e.g., underground storage or conveyance tunnels).

The EIB provided DC Water a novel financial instrument to share the risk of green infrastructure performance with investors in the form of outcome and risk sharing payments.

In the wake of DC Water’s pioneering transaction, several other municipalities – including Atlanta and Hampton, Va., – have issued EIBs to implement green practices that mitigate the effects of climate change and benefit communities.

Other key participants in the 2016 DC Water EIB include: Quantified Ventures who provided guidance in the inception and structuring of the bond; Orrick, Herrington & Sutcliffe LLP (investors counsel); Bond Counsel Squire Patton Boggs LLP (bond counsel); Public Financial Management, Inc. (financial advisor); and the Harvard Kennedy School Government Performance Lab (technical advisor).

### **About DC Water**

DC Water provides more than 700,000 residents and 21.3 million annual visitors in the District of Columbia with retail water and wastewater (sewer) service. With a total service area of approximately 725 square miles, DC Water also treats wastewater for approximately 1.6 million people in neighboring jurisdictions, including Montgomery and Prince George’s counties in Maryland and Fairfax and Loudoun counties in Virginia.

The Blue Plains Advanced Wastewater Treatment Plant is located at the southernmost tip of the District, covering 153 acres along the Potomac River. Blue Plains is the largest advanced wastewater treatment facility in the world and home to North America’s first thermal hydrolysis plant that enables anaerobic digestion to create electricity from wastewater.

The DC Clean Rivers Project is a \$2.7 billion program being implemented under a Federal Consent Decree to reduce combined sewer overflows by 96% to the District’s three waterways—the Anacostia and Potomac rivers and Rock Creek—improving the District’s water quality and contributing to a healthier fishable swimmable future for District residents. The 25 year DC Clean Rivers Project will be completed in 2030.

### **About Goldman Sachs**

Established in 2001, the [Urban Investment Group](#) (“UIG”) is a domestic, multi-asset class investing and lending business unit of Goldman Sachs focused on community and economic development through real estate projects, social enterprises, and lending facilities for small businesses in order to create stronger, more inclusive neighborhoods. Since its inception, UIG has committed over \$9.5 billion through its comprehensive community development platform, facilitating over 20,000 student loans for secondary and vocational education, 17,000 small business loans, the creation and preservation of over 39,000 housing units - the majority of which are affordable to low, moderate and middle-income families - as well as over 2,800,000 square feet of community facility space and over 11,200,000 square feet of commercial, retail, and industrial space.

### **About Calvert Impact Capital**

[Calvert Impact Capital](#) invests to create a more equitable and sustainable world. Through its products and services, Calvert raises capital from individual and institutional investors to finance intermediaries and funds that are investing in communities left out of traditional capital markets. During its 25-year history, they have mobilized over \$2 billion of investor capital. Calvert Impact Capital also offers loan syndications, where they originate, structure, and administer loans for institutional and accredited lenders seeking environmental and social

impact. To date, they have syndicated and/or administered more than \$300 million of capital for impact-oriented transactions.

### **About Quantified Ventures**

[Quantified Ventures](#) is an outcomes-based capital firm that develops public-private projects by structuring innovative financial transactions that drive transformational health, social, and environmental impact. As a certified B Corporation, they partner with corporations, governments, and nonprofits to solve some of the most intractable environmental, social, and health problems facing communities today. With DC Water, they pioneered the Environmental Impact Bond in 2016 to address local stormwater challenges. In 2019, they structured the first publicly-offered outcomes-based impact bond in Atlanta. Last year, they launched their first subsidiary company, ReHarvest Partners, to lead the transition to a more regenerative system of agricultural production by creatively deploying outcomes-based capital and monetizing environmental outcomes. They operate four synergistic areas of practice: Agriculture, Forestry and Land Use, Health and Human Services, and Urban and Coastal Resilience.