



FACT SHEET: DC Water Environmental Impact Bond

Today, the DC Water and Sewer Authority (DC Water) and its investors, Goldman Sachs and Calvert Foundation, have announced the nation's first Environmental Impact Bond (EIB), an innovative bond to fund the construction of green infrastructure to manage stormwater runoff and improve the District's water quality.

The proceeds of the EIB will be used to construct green infrastructure practices designed to mimic natural processes to absorb and slow surges of stormwater during periods of heavy rainfall, ultimately reducing the incidence and volume of combined sewer overflows (CSOs) that pollute the District's waterways. CSOs occur when the volume of wet weather flows exceeds the capacity of the sewer system, resulting in stormwater and sanitary sewer overflows into area watersheds. Currently, approximately two billion gallons of CSOs 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 as a result of climate change, which has increased the frequency and severity of intense rainfall events. If the green infrastructure control measures financed by this EIB are successful in managing stormwater runoff, green infrastructure will be validated as an effective climate adaptation tool – enhancing the natural resilience of the District in the face of the adverse impacts of climate change and creating a healthier future for District residents.

The EIB is based on an innovative financing technique whereby the costs of constructing the green infrastructure are paid for by DC Water, but the performance risks of managing stormwater runoff are shared amongst DC Water and the investors. As a result, payments on the EIB may vary based on the proven success of the environmental intervention as measured by a rigorous evaluation.

❖ Project Overview

- The proceeds from the EIB will provide the upfront capital needed to construct DC Water's inaugural green infrastructure project in the Rock Creek sewershed (Rock Creek Project A or RC-A).
- RC-A is part of the DC Clean Rivers Project, a \$2.6 billion long-term program to control CSOs that pollute the Anacostia River, Potomac River and Rock Creek.
- The green infrastructure practices will be installed primarily in the public right-of-way and include permeable pavement and bioretention facilities (e.g., rain gardens).



- Stormwater runoff is the predominant cause of CSOs, and green infrastructure practices in RC-A are designed to meet the 1.2” Retention Standard for 20 impervious acres.¹

❖ **Program Evaluation**

- DC Water is conducting a rigorous, three-step program evaluation of the effectiveness of green infrastructure in managing stormwater runoff:
 - o Step 1 - Pre-construction monitoring to measure the existing stormwater runoff without green infrastructure.
 - o Step 2 - With results from the pre-construction monitoring and DC Water’s green infrastructure design plan for RC-A, DC Water established outcome ranges predicting the expected reduction in stormwater runoff. An independent engineering firm selected by the investors confirmed these ranges.
 - o Step 3 - Post-construction monitoring to measure the actual stormwater runoff with green infrastructure.
- By comparing the actual stormwater runoff to the existing stormwater runoff, DC Water will calculate the effectiveness of green infrastructure in Rock Creek Project A as measured by the percentage reduction in stormwater runoff and determine the associated Performance Tier, which may trigger a contingent payment on the EIB.
- An independent validator will confirm the results of the analysis and Performance Tier.

❖ **Performance Tier, Outcome Ranges and Contingent Payment**

- Depending on the effectiveness of GI, a contingent payment may be due at the mandatory tender date:

Performance Tier	Outcome Ranges	Contingent Payment
1	Runoff Reduction > 41.3%	DC Water will make an Outcome Payment to Investors of \$3.3 million.
2	18.6% <= Runoff Reduction <= 41.3%	No contingent payment due.
3	Runoff Reduction < 18.6%	Investors will make Risk Share Payment to DC Water of \$3.3 million.

- The Outcome Ranges reflect the expectation that a successful project will result in Performance Tier 2 with no contingent payment due by either party.
- If green infrastructure outperforms expectations and the stormwater runoff reduction is greater than 41.3%, then DC Water will make an additional Outcome Payment to the investors for sharing its risk in the Project.

¹ The 1.2” Retention Standard refers to a storm that falls within the current 90th percentile rainfall event in the District, meaning that 90% of storms produce less than or equal to 1.2” of rain. For RC-A, GI practices have been designed to manage the volume of stormwater runoff produced by 1.2” of rain falling on 20 impervious acres in the Rock Creek sewershed.



- If green infrastructure underperforms expectations and the stormwater runoff reduction is less than 18.6%, then the investors will make a Risk Share Payment to DC Water.
- The amount of the contingent payments is identical and based upon the total interest to be paid on the EIB (through the mandatory tender date), and it reflects an equal probability of the project receiving either a Performance Tier 1 or 3 evaluation.

❖ **Principal Benefits of the EIB**

- The EIB allows DC Water to better manage or hedge a portion of the risk associated with green infrastructure.
 - o If green infrastructure underperforms expectations, the investor will make a Risk Share Payment back to DC Water allowing DC Water to recoup some of its investment.
- By structuring a contingent payment based upon the effectiveness of green infrastructure, DC Water is focusing on outcomes (reducing stormwater runoff) in addition to outputs (whether the required number of impervious acres of GI is built).
- This demonstration EIB establishes a replicable and scalable approach to financing green infrastructure for other communities across the country that are considering approaches to managing stormwater runoff and the water quality problem of CSOs.

❖ **Co-Benefits of Green Jobs**

- As part of its green infrastructure program, DC Water is also establishing an ambitious local jobs and workforce development program in partnership with the Water Environment Federation.
- Through its Green Jobs Program, DC Water will train and certify District residents to construct, inspect, and maintain green infrastructure facilities.
- DC Water has established a goal to have 51% of the new jobs created by the green infrastructure program filled by certified, District residents.



Appendix

**District of Columbia Water and Sewer Authority
Public Utility Subordinate Lien Revenue Bonds Series 2016B
(Environmental Impact Bonds)**

Summary of Key Terms and Participants

Par Amount	\$25,000,000
Use of Proceeds	Construction of green infrastructure for Rock Creek Project A (RC-A)
Tax Status	Tax-exempt
Bond Structure	Multimodal variable rate bonds, initially issued in a term mode at a fixed rate through the mandatory tender date
Contingent Payment	Payable (if due) at mandatory tender date
Security Pledge	Subordinate lien pledge of Net Revenues
Final Maturity	October 1, 2046
Mandatory Tender	April 1, 2021
Initial Term Rate	3.43%
Investors	Goldman Sachs Urban Investment Group Calvert Foundation
Investors' Counsel	Orrick, Herrington & Sutcliffe LLP
Bond Counsel	Squire Patton Boggs LLP
Financial Advisor	Public Financial Management, Inc.
Technical Advisor	Harvard Kennedy School Government Performance Lab
Pay for Success Transaction Coordinator	Quantified Ventures