



DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BIANNUAL REPORT SPRING 2025

**COMBINED SEWER OVERFLOW (CSO)
CONTROL ACTIVITIES**

CLEAN RIVERS PROJECT NEWS

One of the powerhouses behind DC Water's Clean Rivers Project, the tunnel boring machine, Lucy. Mary and Emily Edmonson's namesake machines will arrive soon.



The Edmonson Sisters: From Rivers of Justice to Cleaner Rivers

DC Water will follow a tradition that dates back to the 1500s in the construction industry. Miners and construction workers have long prayed for Saint Barbara's protection as they faced daily dangers working underground and handling explosives. Saint Barbara is regarded as the patron saint for miners. The tunneling industry has evolved by utilizing tunnel boring machines (TBMs), and underground workers follow a tradition of naming them, like ships, after prominent women in history, while continuing to seek the patron saint's protection. DC Water selected the sisters Mary and Emily Edmonson as the namesakes for the TBMs to excavate the Potomac River Tunnel (PRT). The PRT requires two TBMs and Mary and Emily were chosen because of their history and relationship with the District and the Potomac River.

The Edmonson Sisters escaped enslavement and became icons in the abolitionist movement through their protests of the Fugitive Slave Act. They helped pave the way for civil rights with a daring escape from slavery in 1848 that began on the Potomac River. At ages 15 and 13, Mary and Emily were among the 77 enslaved people who tried to escape from Washington, DC to New Jersey on the schooner, The Pearl. The Pearl left Washington, DC sailing on the Potomac River in what was the largest escape attempt by enslaved individuals in US history.

Mary died of tuberculosis at age 20. Emily became a Washington, DC resident and prominent civil rights and political rights activist alongside her Anacostia neighbor, Frederick Douglass. She passed away in her Anacostia home in 1895.

DC Water is proud to honor the Edmonson Sisters. Their contributions were instrumental in advancing civil rights. The TBMs bearing their names will help create a cleaner Potomac River. One TBM is set to arrive in fall 2025 to begin mining north to Georgetown. The second will arrive in 2026 to begin mining south to Joint-Base Anacostia Bolling.



Mary Edmonson (standing) and Emily Edmonson (seated), shortly after they were freed in 1848.

The Light at the End of The Tunnel is a Park

At the end of 2024 DC Water completed restoration of the final construction site along the five-mile alignment of the Northeast Boundary Tunnel project. The R Street construction site was unique in that it was in the small triangle park at the intersection of R Street, 6th Street and Rhode Island Avenue NW.

The park's brick walkways were reestablished, and the original ornamental iron fencing was refurbished and returned. Three new benches were installed. In the interior of the park, three willow oaks, nine Canadian serviceberry and native shrubs, grasses, blooming perennials, and ground covers were planted. A newly installed irrigation system will water the plants and trees. On each side of the park, bioretention facilities were built to capture stormwater runoff.

Since 2012 the triangle park has been known as Cooper-Gordon Park. It was named for Margaret Cooper and Lillian Gordon.

Margaret Cooper was a George Washington Hospital nurse. She served as president of the East Central

Civic Association for 37 years and ANC Commissioner for 15 years. She showed such commitment to improving lives in the Shaw community that the DC Council declared May 4, 1996, "Margaret B. Cooper Day".

As a professional dancer, Lillian A. Gordon once shared the stage with Nat King Cole and performed in the "Black Broadway" theaters along U Street. But it was in her retirement and senior years that she became known for building Shaw into an active civic community of strength and inspiration.

As part of the restoration design and visitor experience, a sculpture was incorporated into the park to honor Cooper and Gordon. The DC Commission on the Arts and Humanities (CAH) in partnership with DC Water made a call to artists for submissions to design and fabricate a sculpture to be installed at Cooper-Gordon Park.

The artist Chris Soteri Tousimis was selected to create the art installation which was unveiled Dec. 14, 2024. He hopes the sculpture, titled "Let Us Lift Each Other Up: A Tribute to Margaret Cooper and Lillian Gordon,"

"Let Us Lift Each Other Up: A Tribute to Margaret Cooper and Lillian Gordon" Statue in Cooper-Gordon Park.



will act as a focal point and a sense of community pride, as well as draw attention and interest to the two women and community leaders the park is named for.

The design elements and polished finish of the sculpture allow local community members to see it differently each time they look at it. The sculpture appears unique from every angle and changes with the light throughout the day and seasons. The ever-changing visual experience of the sculpture is an invitation for the neighborhood and commuters to stay engaged with Cooper-Gordon Park.

A System That Mimics the Natural Environment

This spring, DC Water will begin construction on its third large green infrastructure (GI) project in the Rock Creek watershed as part of the DC Clean Rivers project. The goal of GI is to mimic the natural environment within an urban setting. It includes practices that capture and filter stormwater runoff generated by rain or melting snow on impervious surfaces such as roads, sidewalks, parking lots, and buildings that do not allow water to soak into the ground. Stormwater runoff picks up trash, sediment, and other pollutants that

flow into the sewer system, potentially reaching local creeks and rivers and contributing to combined sewer overflows (CSOs).

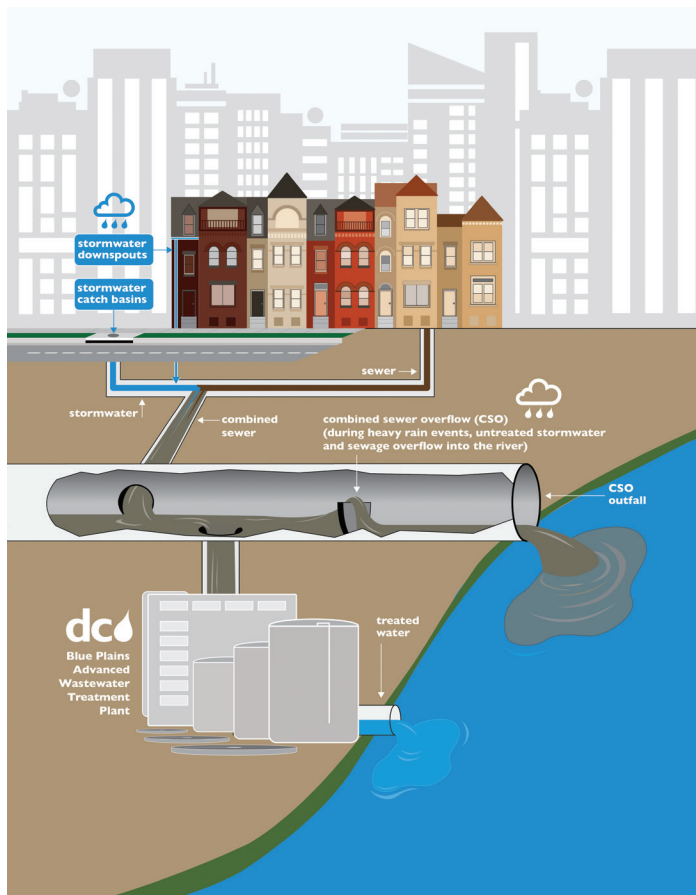
The first two GI projects, Rock Creek Projects A and B, were completed in 2018 and 2023. Construction of the third, Rock Creek Project C (RC-C) will begin in 2025. All DC Clean Rivers GI projects are designed to manage stormwater runoff by integrating measures to capture, filter, and slow down runoff, helping to reduce CSOs.

RC-C is designed to manage 1.2 inches of stormwater runoff from at least 25 impervious acres by capturing runoff in permeable pavement alleyways. These facilities will encompass eight project areas throughout Ward 4. The project areas were selected for their feasibility of design and construction, cost-effective implementation, and ability to meet the required stormwater volume capture. RC-C will be completed in late 2027 and followed by Project D, the last of the GI projects.

FAQs About the Combined Sewer System

What is a Combined Sewer?

A combined sewer is a single pipe that carries both sanitary wastewater and stormwater runoff. Most older cities in the United States are served by combined sewers. In the District, the combined sewer system was designed and built by the U.S. Army Corps of Engineers. Modern practice is to build two pipes in the street—one for stormwater runoff, and one for wastewater from homes and businesses.



What is a CSO and why does it occur?

A CSO is a combined sewer overflow. During dry weather, sewage from homes and businesses is conveyed to the District's wastewater treatment plant at Blue Plains, where the wastewater is treated to remove pollutants before being discharged to the Potomac River. During certain rainfall conditions, the capacity of a combined sewer may be exceeded. When this occurs, the excess flow, a dilute mixture of wastewater and stormwater runoff, is discharged to the Anacostia River, Potomac River, Rock Creek and tributary waters. The Federal Clean Water Act and the Environmental Protection Agency requires that communities develop a plan to address and reduce overflows. There are 48 potentially active CSO outfalls listed in DC Water's existing discharge permit from the EPA.

When do CSOs occur?

CSOs occur during wet weather and are more frequent in wet years than dry years. During years with average rainfall, combined sewers overflow into the Anacostia River about 20 times annually and the Potomac River about 77 times annually, spilling approximately 391 million gallons into the Anacostia and 677 million gallons into the Potomac. Rock Creek averages 32 CSO events and 35 million gallons of overflow a year.

Where are CSO Outfalls?

There are 10 CSO outfall locations on the Potomac River, 15 on the Anacostia River and 23 along Rock Creek and its tributaries. DC Water has posted signs for each outfall location.

What are the possible public health impacts of CSOs?

CSOs pose a danger to the public because of the rapid flow of water exiting the outfalls and the harmful substances they carry. The public is advised to stay away from any sewer pipe discharge. CSOs could affect the receiving waters for up to 24 hours during small rainstorms and for up to three days when it rains one inch or more.

What are the environmental impacts of CSOs?

CSOs can adversely affect the quality of rivers and streams by contributing to high bacterial levels and low dissolved oxygen levels, which are harmful to fish and other aquatic life.

What is a Dry Weather Overflow (DWO)?

In dry weather, sanitary wastewater normally flows to the Blue Plains Advanced Wastewater Treatment Plant through pipes with regulators. During wet weather, regulators are designed to let the excess flow discharge directly to a river or creek. If regulators become blocked by debris or trash, wastewater can also overflow during dry weather. This is called a dry weather overflow (DWO). DC Water has an extensive maintenance and inspection program to prevent DWOs from occurring. If you see a CSO outfall discharging during dry weather, call DC Water at **(202) 612-3400**.

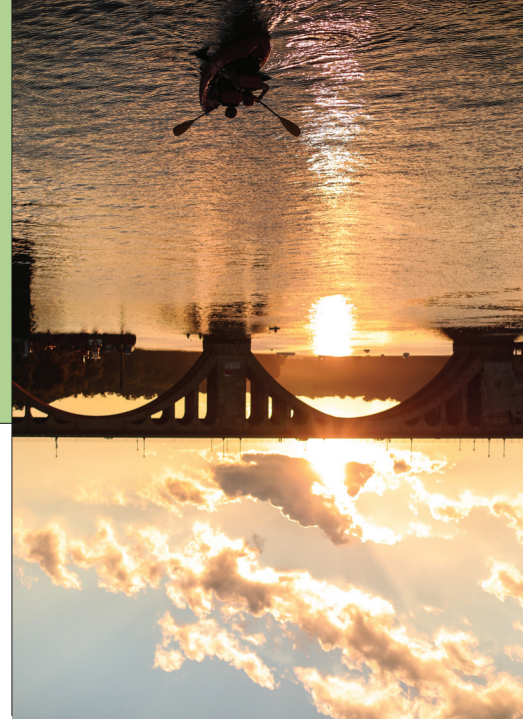
Where can you get more information?

You can learn more by visiting DC Water's website at **dcwater.com/cleanrivers**. You may also contact DC Water's Office of Marketing and Communications at **(202) 787-2200**.

The complete text of the Long Term Control Plan for Combined Sewer Overflows can also be found on DC Water's website at **dcwater.com/FinalLTCP**.

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Mobilizing for a Cleaner Potomac River

Mobilizing the Potomac River Tunnel Sewer Overflow construction site marks a significant milestone in DC Water's Clean Rivers Program. At this site adjacent to Rock Creek and Potomac Parkway, just west of the historic Watergate Complex, DC Water will construct a critical diversion facility. The facility will include a diversion chamber, approach channel, drop shaft, and other structures designed to convey flow from CSO 022 into the tunnel system. The combined stormwater and sewage captured by the tunnel will flow by gravity to DC Water's Blue Plains for treatment before it is returned to the Potomac River.

CSO 022 is a significant source of untreated discharge into the river, contributing 30 million gallons of combined sewer overflows during an average rainfall year. Once operational in 2030, the tunnel will reduce CSO discharges to the Potomac River by 93 percent, significantly improving water quality.

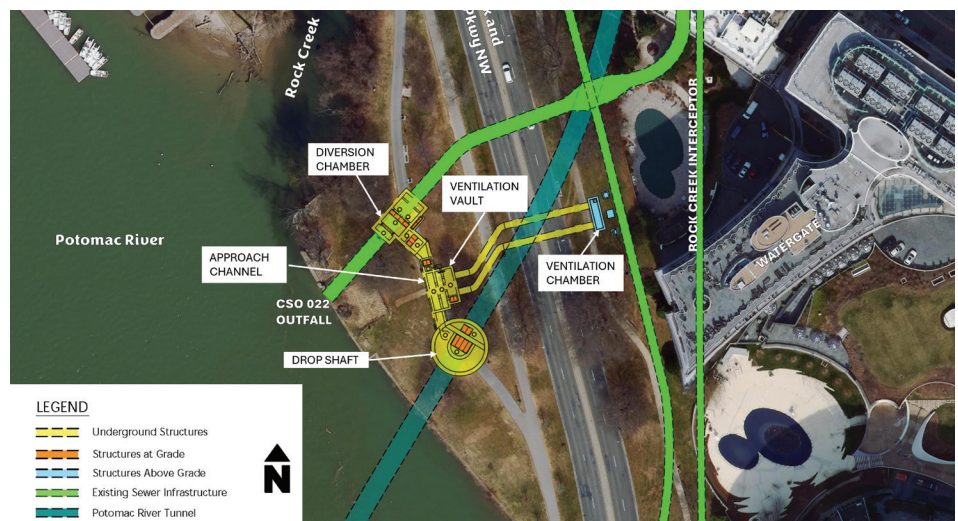
The site's location presents unique

logistical challenges. Close to transportation corridors such as the Rock Creek and Potomac Parkway, residential and business areas, as well as trails and parkland managed by the National Park Service, the project requires a high level of coordination and planning with local and federal agencies to minimize disruptions.

DC Water has prioritized safe and sustainable construction practices including state-of-the-art tunneling methods, 24/7 noise and vibration monitoring, and strict erosion

and sediment control measures to minimize impacts on nearby communities and ecosystems.

Recognizing the importance of public trust and collaboration, DC Water will continue to engage extensively with stakeholders through public meetings, newsletters, and a regularly updated webpage. These efforts ensure that the community stays informed about project milestones, potential impacts, and the long-term benefits of this transformative infrastructure project.



DC Water is constructing new facilities (yellow) to connect to the existing CSO 022 outfall (green) and divert the captured combined stormwater and sewage to the Potomac River Tunnel (blue).



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