DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BIANNUAL REPORT APRIL 2021

COMBINED SEWER OVERFLOW (CSO) CONTROL ACTIVITIES

CLEAN RIVERS PROJECT NEWS

Clean Rivers Project stays on track despite rocky year

We will remember the year 2020 for the many challenges we faced. One of those was an unusually intense rain event in September that caused flash flooding in several District neighborhoods. Acting quickly, DC Water partnered with the District government to provide aid to residents impacted by the flooding.

Through it all, DC Water continued to improve the District's infrastructure, working hard to keep the $583 million Northeast Boundary Tunnel (NEBT) Project on schedule to continue improving the health of the Anacostia River and to meet the Federal Consent Decree requirement for completion in 2023.

The COVID-19 pandemic brought difficulties to all our work and personal lives. DC Water collaborated with the NEBT contractor to implement COVID-19 safety plans for each construction site based on Center for Disease Control and Prevention (CDC) guidance. This initiative spawned "Toolbox Talks" that kick off all three shifts every day, where supervisors provide health and safety information, temperature checks and a quick health screening. With the ever-changing landscape of the pandemic, it keeps everyone abreast of emerging information that they need to know.

As with every DC Water location, face masks are mandatory and workers must maintain physical distance whenever possible. Each construction site has handwashing stations. The stations, as well as shared tools, machines, vehicles, ladders, and portable toilets are frequently cleaned and disinfected.

The outreach team, normally involving communities surrounding the tunnel construction sites through in-person meetings, launched a series of virtual meetings to continue the engagement, while keeping everyone safe.

Despite the ongoing pandemic, the NEBT Project reached significant construction milestones. In April 2020, the tunnel boring machine (TBM) broke through the concrete drop shaft wall 100 feet underground at W Street NE, where it received maintenance work, and then crossed under the Rhode Island Avenue Metro underpass in June 2020. The TBM will complete the tunnel excavation work at 6th Street NW this spring. This will complete the TBM's tour of duty and bring us one step closer to completing the Northeast Boundary Tunnel.

EMPLOYEE SPOTLIGHT

Hadiah Jordan

Hadiah Jordan arrived in Washington, DC in 1982 to attend Howard University. Over the ensuing four decades, she made the District her home, marrying and raising a family while falling in love with this city. "I love playing outdoors. I have hiked nearly every trail in Rock Creek Park and I kayak in the Anacostia and Potomac rivers. I have long felt compelled to protect these waterways and the natural habitats surrounding them."

It's hard to argue with that, and Hadiah is doing her part, working for DC Water's Clean Rivers Project as the Public Outreach Coordinator. If you live in a neighborhood along the Northeast Boundary Tunnel (NEBT) construction route, you probably know Hadiah. Maybe you received a newsletter, email alert, media advisory, or public presentation about a traffic modification, safety detour or scheduled construction.

Hadiah began her work with DC Water on the utility relocation phase of the NEBT project in 2016. She continued into the construction phase in 2018 and plans on being there at the project's completion in 2023.

Why so much public outreach? It can be challenging to be a neighbor to one of nine active construction sites. Our goal is to be accessible and responsive to community questions and concerns. Hadiah reflects on her work and the city, "When I hike and paddle the parks and rivers of DC, I can see the difference the Clean Rivers project is making. Langston Hughes in *The Negro Speaks of Rivers*, refers to 'our ancient, dusky rivers' and I believe that the Anacostia and Potomac rivers are part of the legacy that we are all called to protect.

Anacostia River Tunnel System (Phase 1) Hits New Milestone

The tunnel terminates at Blue Plains Advanced Wastewater Treatment Plant where a massive clam bucket removes debris.

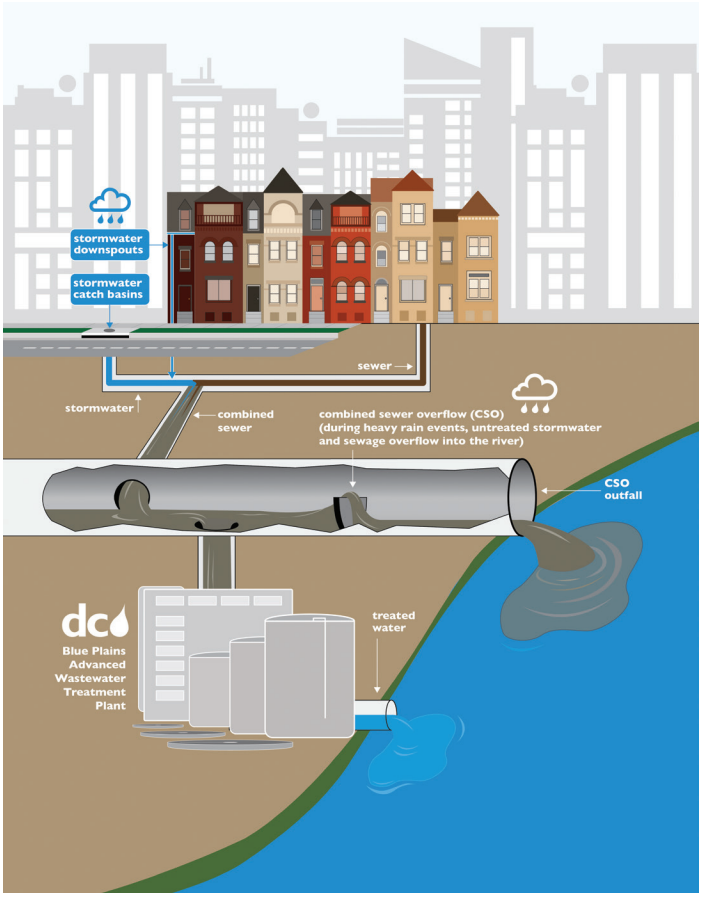
Since being put in service three years ago, DC Water's Anacostia River Tunnel Phase 1 has captured more than 10 billion gallons of combined sewage that would have overflowed into the Anacostia River. Additionally, the tunnel captured and removed over 4900 tons of trash, debris and other solids, preventing them from littering the Anacostia and its downstream neighbors—the Potomac and Chesapeake Bay.

This initial seven miles of tunnel, which was operational in March 2018, has prevented 90 percent of combined sewage from entering the Anacostia River, exceeding the projected capture rate of 80 percent. When the full tunnel system comes online with the completion of the Northeast Boundary Tunnel and its connection to the already operational First Street Tunnel in 2023, the combined sewer overflow capture rate will increase to 98 percent in an average rainfall year. At that time, the neighborhoods in Wards 5 and 6 along Rhode Island Avenue that have suffered from chronic flooding will also be better protected.

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. Many 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 allows CSOs, but the Environmental Protection Agency (EPA) requires communities to develop a plan to address overflows. There are 47 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, DC Water estimates that 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, 14 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 may pose a danger to the public because of the rapid flow of water exiting the outfalls and the potentially harmful substances it may contain. 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 intensive 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 web site at **dcwater.com/FinalLTCP**.

DC Water plans to solve largest CSO discharge to Rock Creek

DC Water weighed potential solutions to control the largest combined sewer overflow (CSO) to Rock Creek, which is the Piney Branch outfall, and submitted a proposal to EPA. This included an assessment of the first green infrastructure (GI) projects that DC Water installed as part of the Clean Rivers Project. The Authority will utilize a hybrid approach for controlling CSOs in the Rock Creek sewershed that blends the best of gray (traditional engineering) and green (GI) technologies in a financially responsible and effective manner.

DC Water is currently finalizing the design of the next GI project in Rock Creek. A project description is available on the website, with a 30-day comment period that closes on May 7th. Check **dcwater.com/green** for April meeting dates and details. If you are unable to attend one of the April meetings, there is an additional meeting on May 4th. We look forward to sharing information with you on our next exciting green infrastructure project in the District!

DC Water program to improve the health of the Potomac River

It is now time for DC's Clean Rivers Project to address the Potomac River with projects to mitigate long-standing combined sewer overflows (CSOs). The Potomac River outfalls, built in the 1800's, are located along the riverfront between the Lincoln Memorial and Georgetown. Two types of projects will work in tandem to significantly reduce combined sewage flows to the Potomac.

The first is sewer pipe separation—that is, installing separate pipes for storm-water and for sewage. Second, a massive tunnel system will store combined sewage during rainfall events and use gravity to convey them through the Anacostia River Tunnel for treatment at the Blue Plains Advanced Wastewater Treatment Plant.

Construction begins in Spring 2021 to separate two outfalls along the Georgetown waterfront. New sanitary sewers will be built along 31st Street NW and Wisconsin Avenue NW, allowing the disconnection of sanitary sewage connections from the outfalls to the river. This is slated for completion in the fall of 2022. We continue to plan and design the Potomac River Tunnel and meet regularly with community groups and stakeholders to ensure residents and businesses are informed regarding the upcoming work. Construction is scheduled to begin mid-2023.

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