



DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BIANNUAL REPORT SPRING 2024

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

CLEAN RIVERS PROJECT NEWS

Potomac River Tunnel construction has begun!



In November 2023, DC Water issued Notice-To-Proceed to CHJV, a joint venture of Civil & Building in North America (CBNA) and Halmar, the design-build contractor for construction of the Potomac River Tunnel (PRT). The \$819 million contract is the largest ever awarded by the Authority. The 5.5-mile-long tunnel will control combined sewer overflows (CSOs) to the Potomac River, improving water quality in this critical natural resource. Once the PRT is operational in 2030, it will reduce CSOs to the Potomac River by 93 percent in an average year of rainfall.

The 18-foot-diameter tunnel will run deep underground beneath the Georgetown waterfront, along the edge of the National Mall and East Potomac Park, past Hains Point and connect by gravity to the existing Anacostia River Tunnel. Construction will require two tunnel boring machines. Starting from West Potomac Park, one machine will mine south through mostly soft ground, and another machine will head north to bore through rock. Mobilization for this project began in February at the West Potomac Park Site. Work is expected to begin at CSO 022 later in 2024. Other sites are expected to begin in 2025-2026.



Celebrating the completion of the Northeast Boundary Tunnel

District residents were invited to participate in a special occasion on a Saturday morning in October 2023 as DC Water marked the successful completion of the Northeast Boundary Tunnel (NEBT). The critical infrastructure project reduces combined sewer overflows (CSOs) to the Anacostia River by 98 percent in any given year. DC Water placed the NEBT into operation on September 15, 2023.

The NEBT is the final and longest component of the Anacostia River Tunnel system (ART), which began operating in 2018. It is designed to capture and store excess stormwater and wastewater during heavy rain events, preventing them from discharging into the Anacostia River. The NEBT expands the ART capacity by 90 million gallons, significantly reducing CSOs, which have long been a challenge for sewer management in the District of Columbia. Since 2018, the ART has captured over 16 billion gallons of overflow and 10,000 tons of debris.



The river was the star of the festive fall event held at Anacostia Park. The celebration highlighted the remarkable performance of the ART system in capturing and treating stormwater and wastewater, reducing pollution, and safeguarding the health of the river ecosystem. The project reflects a commitment to environmental stewardship, as the captured water is treated at the Blue Plains Advanced Wastewater Treatment Plant before being released back into the Potomac River.

Community members, environmentalists, and city officials gathered to commemorate and celebrate the completion of this vital infrastructure, underscoring the collaborative effort

between government agencies and the local community. The Northeast Boundary Tunnel celebration served not only as a moment of pride for Washington, D.C. but also as an example of how innovative engineering solutions can address environmental challenges.



Introducing the PRT Design Build Contractor

DC Water has accomplished the mega task of constructing and completing the four tunnels that form the Anacostia River Tunnel system (ART)—the Blue Plains Tunnel, the Anacostia River Tunnel, the First Street Tunnel, and the Northeast Boundary Tunnel. Moving forward to fulfill the requirements of the 2005 federal consent decree, the DC Water Board of Directors approved a design-build contract for the construction of the Potomac River Tunnel (PRT). At \$819 million, the largest-ever construction contract awarded by the DC Water and Sewer Authority was awarded to the joint venture of CBNA Halmar JV, based on its best-value proposal to the Authority.

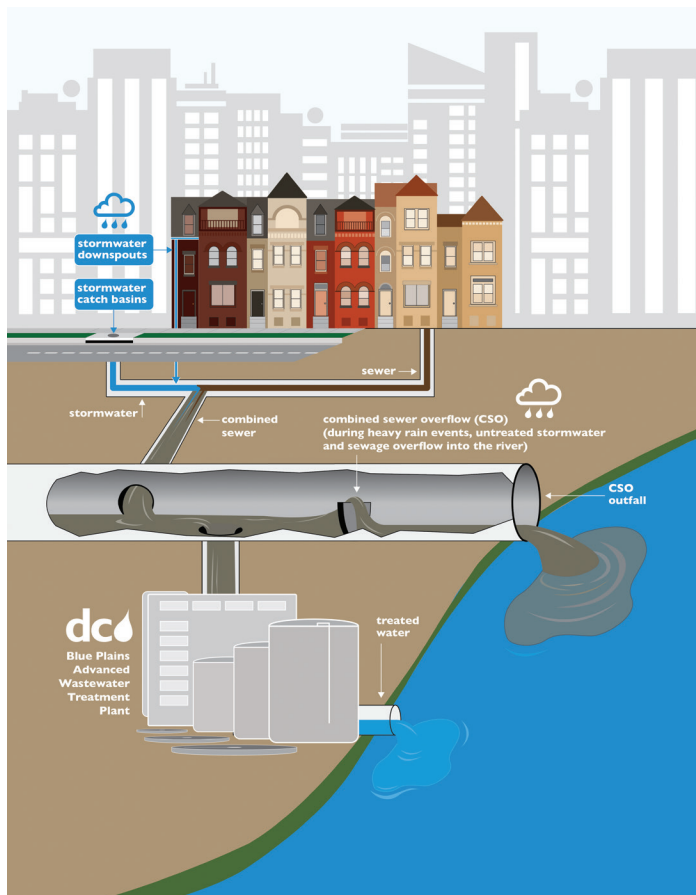
In a design-build contract, the construction and design contractors work together as a team to complete the project. The construction contractors, CBNA, a U.S.-based subsidiary of Bouygues Construction, and Halmar International LLC, will be working with COWI and Hatch, the designers, to complete the project.

The Potomac River Tunnel will connect to the Blue Plains Tunnel at the Joint Base Anacostia-Bolling overflow site. The joint venture will begin construction in 2024 and complete the project in 2030. The PRT, when completed, will connect to the operating ART and form a combined network of 18 miles of deep tunnels with 26 shafts to divert flows from the existing sewer system to the Blue Plains Advanced Wastewater Treatment Plant.

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, 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 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**.

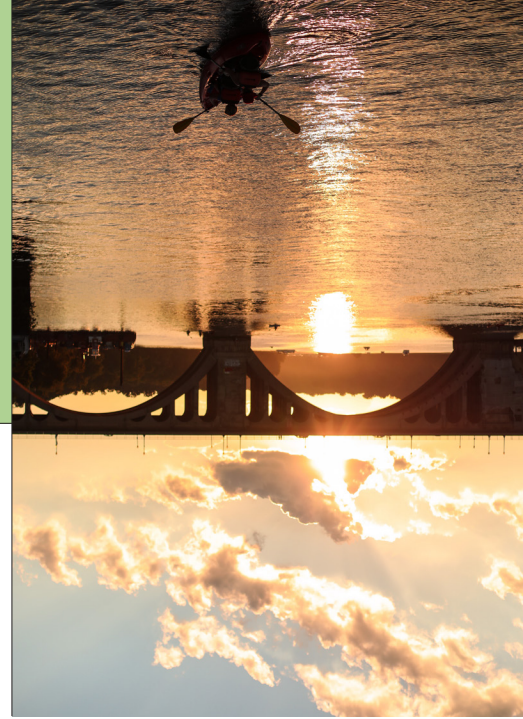
Where can you get more information?

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 website at **dcwater.com/FinalLTCP**.

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DC Water's Clean Rivers Project — where are we now?

This newsletter typically focuses on specific entities that make up DC Water's Clean Rivers Project. As we enter the 19th year of the project, it's a great time to remind everyone just what this massive infrastructure project entails.

The image below shows DC Water's ongoing program to reduce combined sewer overflows (CSOs) into the District's waterways - the Anacostia and Potomac Rivers and Rock Creek. The Project is a massive infrastructure program designed to capture and clean wastewater during rainfalls be-

fore it ever reaches our rivers. When completed in 2030, the Clean Rivers Project will provide a system-wide CSO volume reduction of 96% in an average rainfall year. The Clean Rivers Project is comprised of a system of deep tunnels, sewer and diversion facilities to capture CSOs and deliver them to the Blue Plains Advanced Wastewater Treatment Plant. The Project is also installing Green Infrastructure to assist with the reduction of CSOs to the Potomac River and Rock Creek.

- Targeted sewer separation was completed at 8 CSOs.

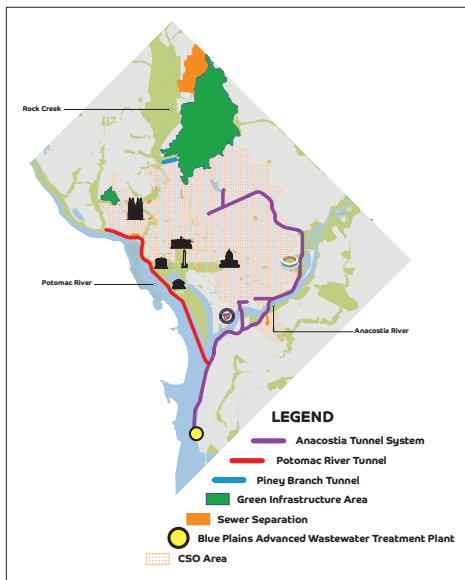
Project in Construction

- Construction of the Potomac River Tunnel is underway! The tunnel will be completed in 2030 and will provide a 93% CSO volume reduction to the Potomac River.

Coming Soon

- Additional Green Infrastructure projects are in design for the Rock Creek sewershed to achieve a total of 92 impervious acres of land managed with green infrastructure in Rock Creek. The next project is expected to begin in 2025.
- The Piney Branch Tunnel is a 4.2-million-gallon underground storage tunnel to capture CSOs that would otherwise overflow into Piney Branch and ultimately Rock Creek during heavy rains. This project is in the planning and design phases with construction expected to begin in 2025.

We look forward to continuing to provide information on the Clean Rivers Project through this biannual newsletter. You can always visit our website to get the most up-to-date news at dcwater.com/cleanrivers.



Completed Projects

- The complete Anacostia River Tunnel System is in service delivering 98% CSO volume reduction to the Anacostia River in an average year. As of December 2023, it has captured 16.2 billion gallons of CSO and 10,137 tons of trash, debris and other solids.
- Three Green Infrastructure projects, two in the Rock Creek sewershed and one in the Potomac River sewershed, have constructed hundreds of permeable pavement and bioretention facilities. Drain the Rain, DC Water's Downspout Disconnection program, disconnected 471 downspouts and installed 281 rain barrels.



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