DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

BIANNUAL REPORT APRIL 2019

COMBINED SEWER OVERFLOW (CSO) CONTROL ACTIVITIES

CLEAN RIVERS PROJECT NEWS

Rowers Notice Dramatic Improvement in Anacostia River Due to Reduced CSOs

PHOTO BY KRISTA SCHLYER
©KRISTASCHLYER.COM

The oars gracefully slice through the water as the sun rises and the wildlife wakens. Rowers on the Anacostia are greeted with nature right in the heart of the nation's capital. This wasn't always the case for Anacostia rowers, but it is becoming reality since DC Water's Clean Rivers Project began. Previously, combined sewer overflows from the District's sewer system brought trash, debris and bacteria into the river after most rainstorms.

"The river is cleaner in every way," says Jason Johnson, who coaches competitive rowing teams for the Capital Rowing Club. "Before, rain would bring so much debris and bacteria that I would have to cancel practice. I haven't had to cancel practice due to rain since the tunnel opened last year."

The first controls, implemented since 2009, reduced combined sewer overflows (CSOs) by 40 percent. But last year, DC Water put into service about half of its Anacostia River Tunnel System. Since then, DC Water has captured approximately 5 billion gallons of CSOs and more than 1100 tons of trash, debris, and other solids that otherwise would have been released untreated to the Anacostia. Johnson adds, "Not only is it now safer to be on the river, the Anacostia is cleaner in every way. I see more wildlife, including beavers, egrets and bald eagles, since the tunnel opened."

Further improvements on the Anacostia River will come with the completion of the Northeast Boundary Tunnel, scheduled for 2023. DC Water also has similar projects planned for the Potomac River and Rock Creek, all of which are scheduled for completion by 2030. To learn more about the Capital Rowing Club, visit capitalrowing.org. For more information on the DC Clean Rivers Project, please visit **dcwater.com/cleanrivers**.

NEWS FROM THE OTHER SIDE OF THE PIPE...

From **March 25** to **May 6**, the Washington Aqueduct will switch to chlorine as its primary drinking water disfinectant. This annual change helps keep clean DC Water's distribution system. More information can be found at **dcwater.com/chlorine-switch**.

DC Water Completes First Major Green Infrastructure Projects for CSO Control

"DC Water's projects have enhanced the neighborhood with flowers and planter strips in place of pooling water. The permeable pavement in the alley behind my house lets the water through instead of ponding. It was also a bonus to have the work completed so quickly."

– PATRICIA ROBERTS, BRIGHTWOOD PARK RESIDENT

DC Water has enhanced two areas of the District with green infrastructure (GI) that is as functional as it is beautiful. One project benefits the Rock Creek sewershed and the other protects the Potomac River sewershed. Both projects use green practices to absorb rain water before it can enter the sewer system. This helps prevent combined sewer overflows, a mixture of untreated stormwater and wastewater, from entering the waterways during rain events.

DC Water is achieving the reduction in overflows by planting rain gardens with native plants, disconnecting downspouts, directing roof runoff into rain barrels, and using permeable pavement that allows water to soak through it into the ground, instead of overwhelming the sewer system.

These practices will manage stormwater by taking advantage of the earth's natural processes, such as allowing the water to infiltrate into the soil, or evaporate into the air. In addition to managing stormwater, GI contributes to beautifying the streetscape and making it safer and more welcoming for pedestrians, bicyclists and drivers. In Rock Creek's first GI Project, 77 green infrastructure facilities and two green infrastructure parks were constructed in the Manor Park and Brightwood Park neighborhoods. Through the Potomac River's first GI project, 43 green infrastructure facilities were constructed in the Glover Park and Burleith neighborhoods.

Both projects were completed ahead of schedule. DC Water is responsible for proactively maintaining these facilities. However, if you notice any issues, please contact DC Water at (202) 354-3600 and note the Location ID listed on the label installed at each facility. To learn more about DC Water's green infrastructure initiatives, please visit **dcwater.com/green-infrastructure**.

Giant Tunnel Boring Machine Journeys Under the District

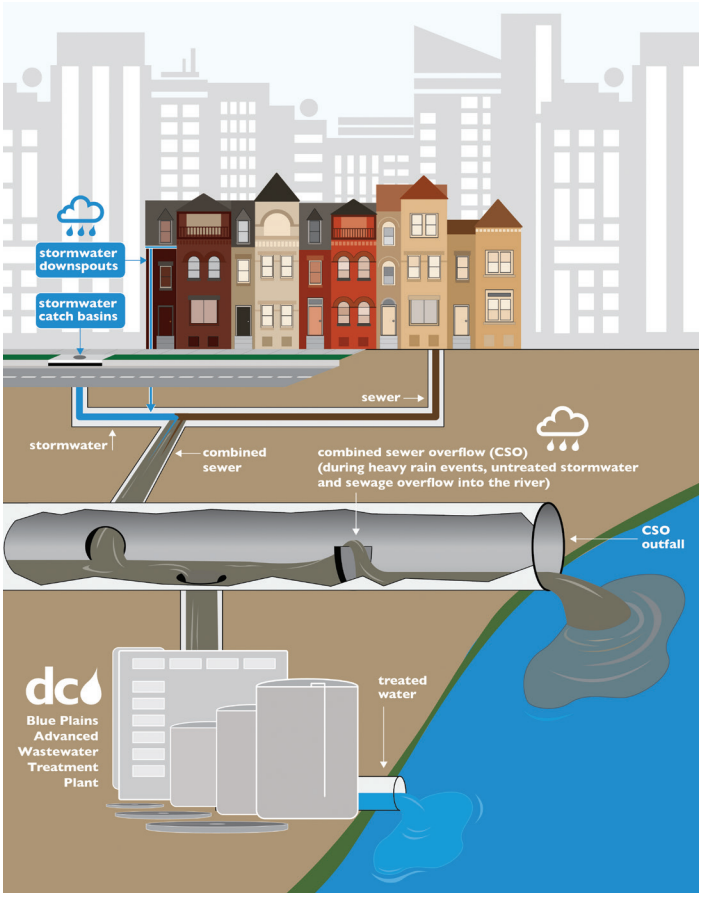
Mining on the Northeast Boundary Tunnel (NEBT), DC Water's largest tunnel segment yet, is in full swing. Excavating through clay and sand, the tunnel boring machine (TBM), named *Chris*, is on a five-mile-long journey northwest. The TBM will dig past the National Arboretum, and under the Ivy City and Brightwood neighborhoods on its way to the Cooper-Gordon triangular park.

Along its way, *Chris* will connect to sewer diversion facilities and drop shafts that connect the existing sewer system to the tunnel. The NEBT will also connect to the existing First Street Tunnel to create a single interconnected system that drains sewage by gravity to the Blue Plains Advanced Wastewater Treatment Plant for treatment. Once completed, the NEBT will provide additional CSO storage as well as improved flood protection for neighborhoods throughout Northeast DC. For more information on the NEBT, please visit **dcwater.com/nebt**.

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 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, 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 be found on DC Water's web site at **dcwater.com/FinalLTCP**. The Long Term Control Plan Modification for Green Infrastructure can be found at **dcwater.com/green-infrastructure**.

DC Water Creates Local, Green Jobs!

Once all these green projects are installed, they need a trained workforce to maintain them. DC Water officials saw the opportunity to create local jobs and partnered with the Water Environment Federation along with other organizations across the country to create a training and certification program.

Called the National Green Infrastructure Certification Program (NGICP), this program trains women and men to build, inspect and maintain green infrastructure. Once candidates have taken the course and passed the national exam, they are certified. With this training, they are better positioned for employment in the field of GI. With that comes portability and career opportunities with livable wages.

On the other side of the equation, the program creates a proficient entry-level workforce that will support the long-term success of green infrastructure.

DC Water established a goal to have at least 51% of new hires on the project filled by local, District residents and looks to these newly certified individuals to fill those positions. The free training program focuses on recruiting people who are currently out of work or need help finding a steady career. To date, 58 DC residents have been trained and certified through NGICP. The majority have come from Wards 7 and 8.

DC Water continues to champion NGCIP by facilitating bi-annual training sessions with its local training partner, the University of the District of Columbia. Half of those trained through this program (which began in 2016) are now employed. DC Water continues to support a pathway to stable jobs at livable wages through this training and certification. For more information on the program, please visit **ngicp.org**.