dc clean RIVERS PROJECT
RESTORING OUR RIVERS
PROTECTING OUR DISTRICT

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BIANNUAL REPORT OCTOBER 2019

COMBINED SEWER OVERFLOW (CSO) CONTROL ACTIVITIES

CLEAN RIVERS PROJECT NEWS

Residents get "amazing" view of DC Water tunnel operations 100 feet under the District

More than 100 District residents suited up in hardhats and reflective vests on a warm Saturday in September. They grabbed flashlights and headed down 100 feet to the entrance of a massive underground tunnel. The Northeast Boundary Tunnel is the last segment in DC Water's underground storage and conveyance system that is helping clean the Anacostia River. Once finished in 2023, it will connect the rest of the tunnel segments to complete the 13.1-mile Anacostia River Tunnel.

"This was amazing," exclaimed, Megan, a District resident, surfacing from below. "I am excited to share this experience with friends so that people understand (the project's) lasting impact." Most tour-goers expressed similar reactions after seeing the tunnel and the giant tunnel boring machine up close.

"Absolutely outstanding! A wonderful experience to see personally how this impressive operation comes together. Thank you for all that everyone is doing to improve our waterways! Bravo!"

– BRETT H. PHILPOTT-FREEMAN

... continued on page 2

continued from page 1 **Residents get "amazing" view of DC Water tunnel**

DC Water hosted this community day to let residents experience the project first-hand and help them understand the project, its benefits and also its disruptions. "We realize the inconveniences that come with a project this expansive," said Carlton Ray, Director of the Clean Rivers Project. "We want to work with the community. For instance, we find alternative parking or offer rideshare services when parking is compromised, we offer more security patrols and we work with business owners to promote their businesses if construction has rerouted their normal foot traffic."

This tunnel system is part of the larger Clean Rivers Project that will significantly reduce combined sewer overflows to all three District waterways. Overflows occur during rain events when the combined runoff and sewage exceed the capacity of the sewer system. The combined sewer system directs the excess wastewater to the nearest water body—while not ideal, it is preferable to sewage backing up in basements.

"The tunnel system is already cleaning up the Anacostia River," said David L. Gadis, DC Water CEO and General Manager. "About half of it is operational and since opening in March 2018, 6.3 billion gallons of sewage and 2,500 tons of trash that would have otherwise ended up in the river were captured and treated. The result is a healthier river with improved water quality that is fostering the return of wildlife and marine life, such as the egret. It is also spurring a wave of waterfront development—promoting living, dining and recreation options on the banks of the Anacostia."

> "Fascinating to see this operation! This project has already changed my neighborhood – Bloomingdale – and I am excited to see it completed!"
>
> – CELESTE SCOTT

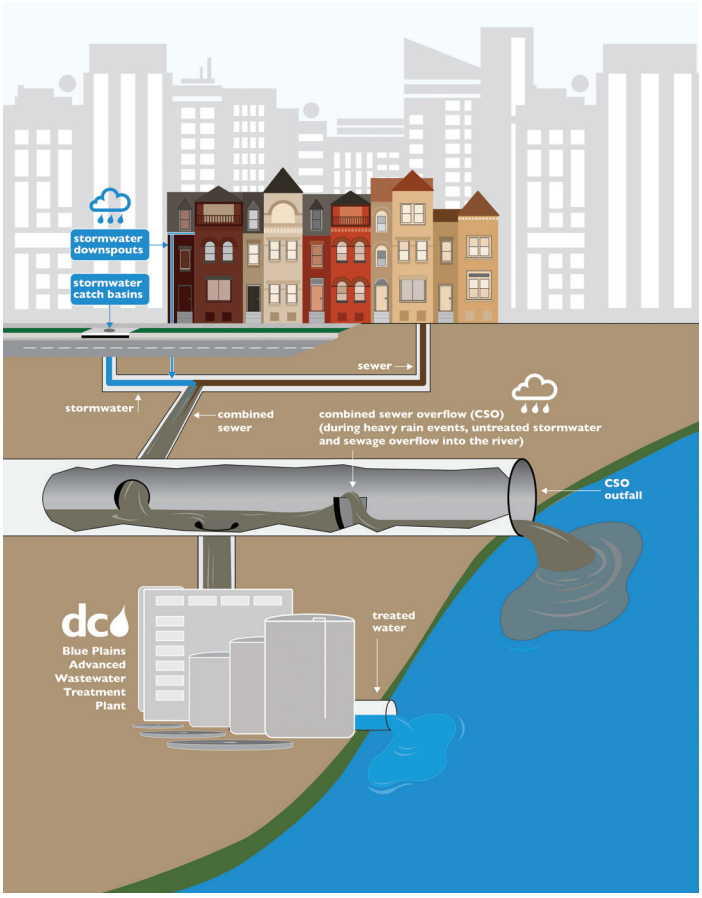
Ray said, "Adding the Northeast Boundary Tunnel will capture even more combined sewage and trash but will also reduce flooding and back-ups in Bloomingdale and LeDroit Park, and other neighborhoods along Northeast Rhode Island Avenue-- a problem that dates back to the 1800s and is due to undersized sewers in those neighborhoods." Ray also added appreciation for the joint venture Salini Impregilo Lane Healy for their dedication and hard work.

… continued on page 4

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**.

WHAT'S IN A TUNNEL BORING MACHINE?

This tunnel boring machine was named Chris, in tribute to Christopher Allen, the Assistant Director for the Clean Rivers Project who passed away in 2017. Allen brought to DC Water 47 years of construction management experience in large civil engineering projects, having managed projects at major international airports and the Pentagon.

Length: 120 m (393.701 ft) **Weight:** 680 tons **Rate of Progress:** approx. 60 ft per day **Type:** Earth Pressure Balance Shield

continued from page 2 **Residents get "amazing" view of DC Water tunnel**

Events like these tours also help residents understand the scale of the project and why the Clean Rivers Impervious Area Charge was added to water and sewer bills. Said one visitor to the site, Jacquelyn Vest, "I did not know what to expect and am leaving so impressed with the magnitude of the project, and the dedication and pride of those we met. I now understand why my bill increases for these improvements."

Expanded customer assistance programs are available to help customers pay their water bills. Residents are encouraged to apply through DOEE. More information can be found at **dcwater.com/customer-assistance** or call **311**.

For more information about the Northeast Boundary Tunnel, please visit **dcwater.com/nebp**. For more information about the Clean Rivers Project, please visit **dcwater.com/cleanrivers**.