



DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BIANNUAL REPORT APRIL 2016

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

CLEAN RIVERS PROJECT NEWS

DC Water, the District of Columbia and Department of Justice agree on consent decree modifications for a greener District

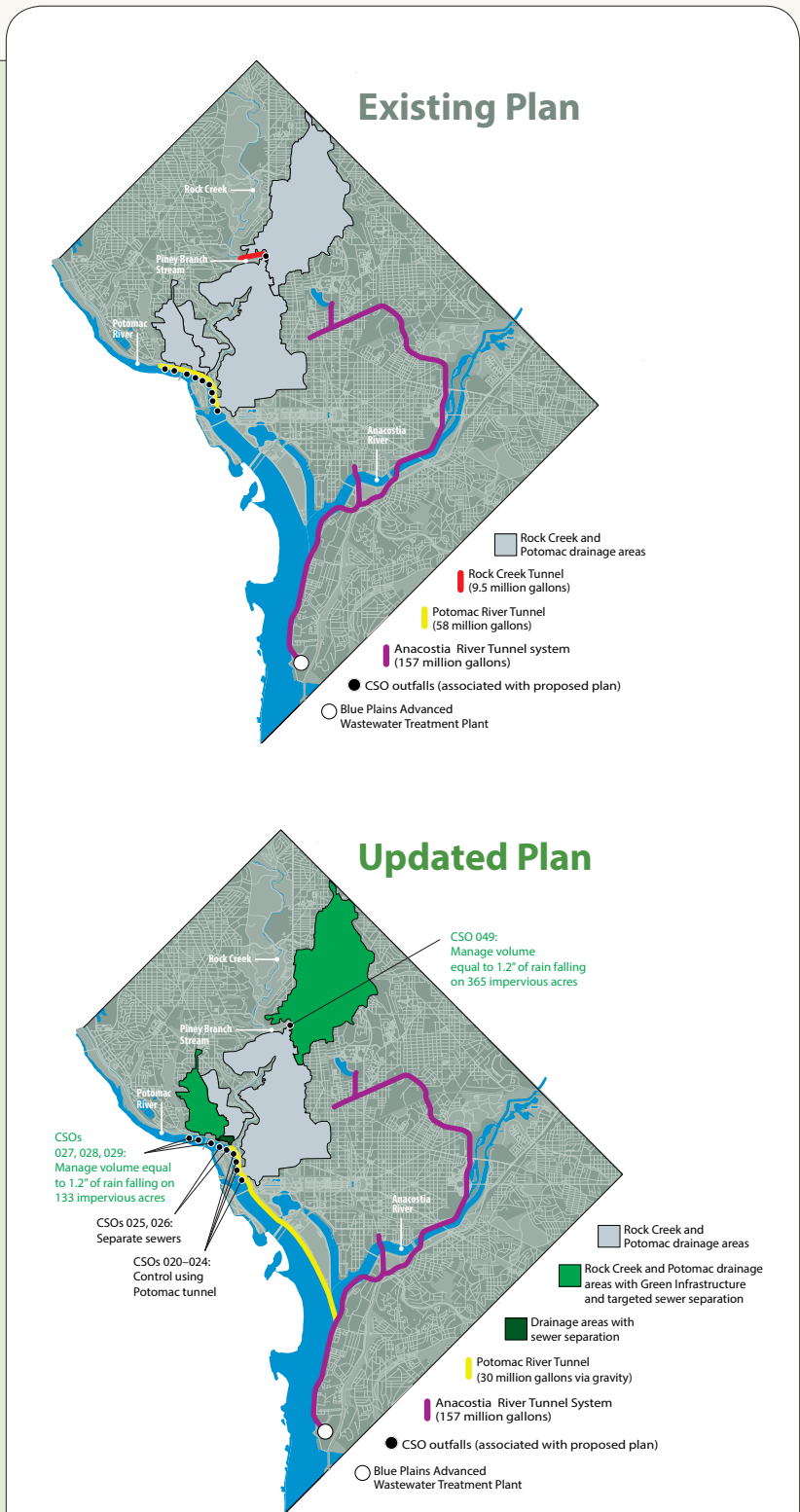
In 2005, DC Water entered into a consent decree that addressed the District of Columbia's combined sewer overflows, called CSOs. These overflows are common to older cities whose sewer systems were constructed before the 1900s. Combined systems use one sewer to handle both stormwater and sewage. Since the early 1900's it has become standard to install separate pipes for stormwater and sewage. About one-third of the District has the older type, the combined sewage system. These systems discharge to the Anacostia and Potomac rivers and Rock Creek during heavy rains when the pipes become full.*

The original agreement to address CSOs outlined two types of solutions—the first is to build underground storage tunnels to store the combined sewage in intense rain storms. The second is to use green infrastructure, also known as GI, to infiltrate the rain into the ground and keep it from running into the combined sewer system. The plan originally called for CSO control mostly through a large tunnel solution, with some green infrastructure.

On January 14, 2016, an amendment to the 2005 consent decree was entered in U.S. District Court to modify the plan to include a larger portion of green infrastructure. Under the modified consent decree for Rock Creek, DC Water will construct green infrastructure in the area that drains to combined sewer overflow CSO 049 (see map "Updated Plan") and eliminate the previously planned tunnel. For the

... continued on page 4

*Please see page 3 of this newsletter for more information on combined sewer overflows.



DC Water prepares to begin longest tunnel segment for Anacostia River relief

Two of DC Water's tunnel boring machines (TBM) have completed their dig and another is well on its way. But the longest segment, the Northeast Boundary Tunnel, is yet to come. Before the Authority even lowers a TBM into the ground, there is much prep work to be done. First among these is relocating utilities that are in the path of the project. Existing communication, electric, gas, sewer, water, traffic signal and street light lines are being relocated to areas that will remove them from the path of construction.

Beginning this spring, residents near these relocations can anticipate construction activities to take place 24 hours a day Monday through Friday, weather permitting. DC Water will provide work schedules, including work hours for each site, to impacted residents near the beginning of each project.

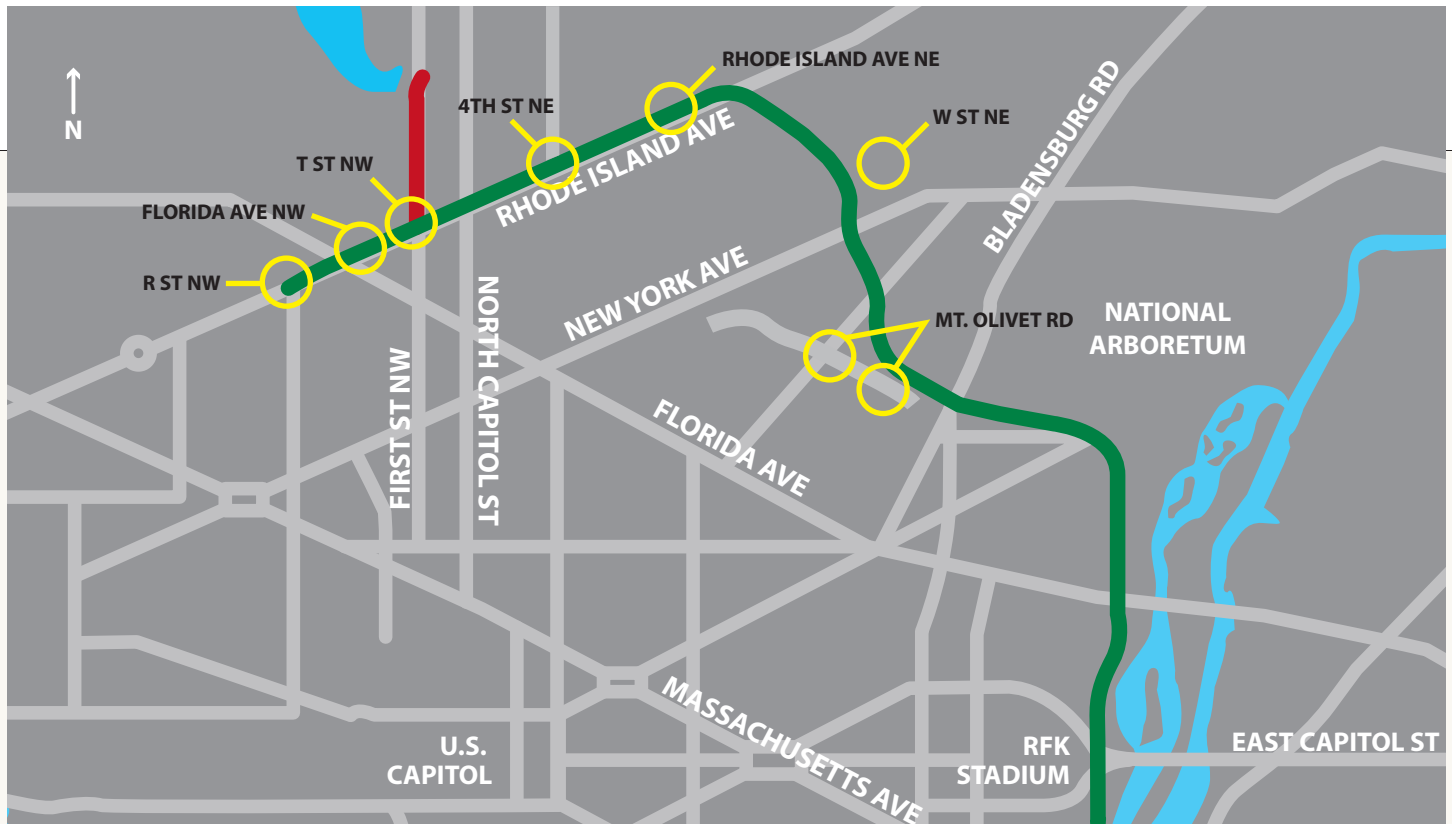
Residents within and surrounding the impacted areas should expect daytime parking restrictions, sidewalk and alley closings, lane shifts and other construction-related disruptions. DC Water is coordinating efforts with Washington Gas, Pepco, and Verizon during the process to minimize disruptions in these services. Affected residents will be provided advance notice.

Utility relocations will take place at pivotal points throughout the tunnel alignment as shown in the figure below.

- Mt. Olivet Road NE, between Virginia Avenue, NE and the Mt. Olivet Cemetery
- Intersection of Mt. Olivet Road NE and Capitol Avenue, NE
- Department of Public Works on W Street
- Intersection of Rhode Island Avenue and 8th Place, NE
- Intersection of 4th Street NE and Rhode Island Avenue, NE
- Intersection of T Street NW and Rhode Island Avenue, NW
- Intersection of 3rd Street NW and Florida Avenue, NW
- Intersection of 6th Street NW and Rhode Island Avenue, NW

The planned Northeast Boundary Tunnel is a large, deep, combined sewer tunnel that will increase the capacity of the existing sewer system in the District, significantly reducing combined sewer overflows and flooding to improve the health of the Anacostia River.

Utility relocations along the Northeast Boundary Tunnel

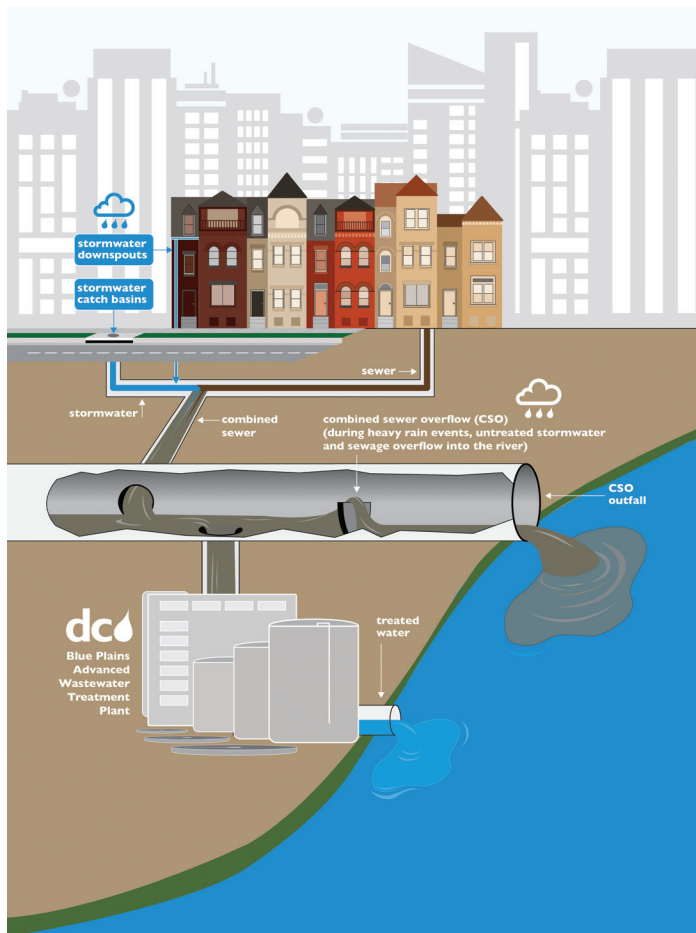


○ AREA OF UTILITY RELOCATION
 — NORTHEAST BOUNDARY TUNNEL
 — FIRST STREET TUNNEL

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 and Potomac rivers about 75 times annually, spilling nearly 1.3 billion gallons into the Anacostia and 640 million gallons into the Potomac. Rock Creek averages 30 CSO events and 49 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 External Affairs 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.

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continued from page 1 **Consent decree modification**

Potomac River, DC Water will use a combination of GI and separating the combined sewer pipes into stormwater and sewage pipes. The GI will be installed in the drainage areas for CSOs 027, 028 and 029; the separation of the pipes will be for CSOs 025 and 026; and construction of the Potomac River Tunnel will manage combined sewage for CSOs 020, 021, 022 and 024. To allow enough time to implement GI and to mitigate financial impacts to residents, the amended consent decree extends the construction time for portions of the plan from 2025 to 2030.

In the areas where green infrastructure will be used, stormwater runoff will now be managed through practices such as rain gardens, pervious pavement installations, and rain barrels. GI will be fully implemented by 2027 within the Potomac River sewershed and by 2030 in the Rock Creek sewershed.

The types of GI practices and their potential locations within the Rock Creek and Potomac River sewersheds are being evaluated with input from the community and others through public meetings, targeted community outreach, and online surveys. Construction on the first projects for

both the Rock Creek and Potomac River sewersheds will begin in 2017.

In addition to helping reduce CSOs, green practices can also provide environmental, social and economic benefits to the District. In addition to environmental benefits such as reducing the urban heat island effect and supporting habitat for pollinators and birds, GI aids in the beautification of neighborhoods. Equally important, the green infrastructure in DC will support local job creation through an agreement between DC Water and the District of Columbia. The agreement creates an ambitious local jobs program that includes training and certification opportunities for District residents interested in GI construction, inspection and maintenance. DC Water established a goal to have 51 percent of new jobs created by the GI project filled by District residents. The first training for District residents will take place in late 2016 with the goal to have the first candidates certified in early 2017.

To learn more about DC Water's Green Infrastructure Program visit www.dcwater.com/green



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