



DC WASA Advances Water Pollution Control Efforts



Most Recent Phase Nearly Complete

In 2004, DC WASA launched the first phase of environmental projects to limit the number of overflows from the District's combined sewer system during heavy rain storms. These efforts aim to reduce combined sewer overflows (CSOs) into the Anacostia and Potomac rivers and Rock Creek by 40 percent. (See FAQs About the Combined Sewer System to learn more about CSOs.) These measures included \$140 million in projects like inflatable dams inside the combined sewers and tide gates to keep the river waters from entering the combined sewer pipes. Pumping station improvements are nearly complete, and when the last project is placed in service, the Authority will have achieved about 40 percent reduction in CSOs.

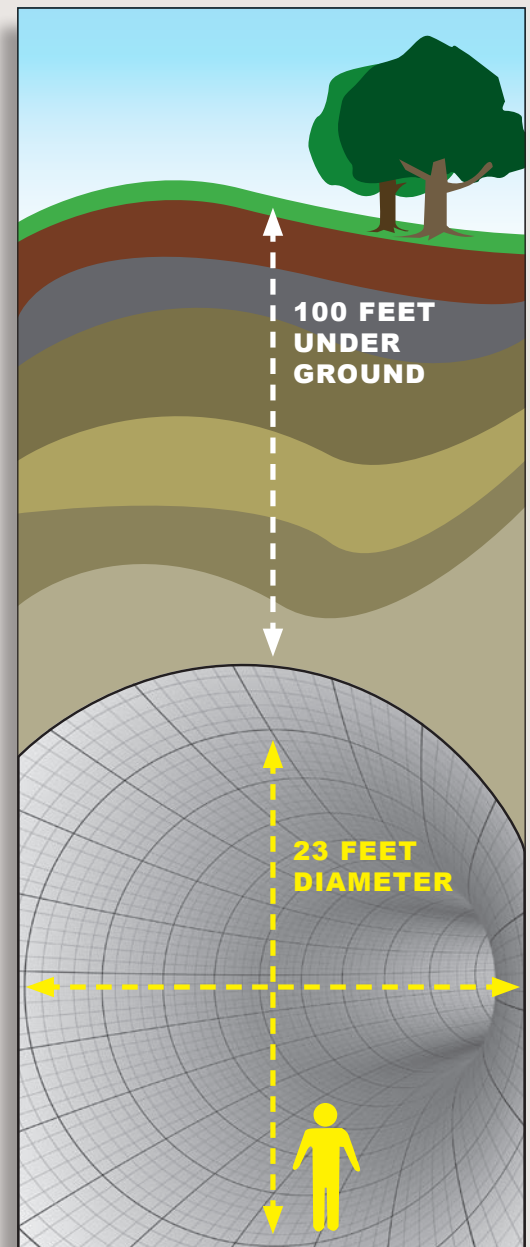
CSO Tunnel Project Update

The Long Term Control Plan outlines the projects that comprise the complex underground tunnel system that will store combined sanitary sewage and stormwater during intense rain events, to be conveyed to Blue Plains for treatment at the plant. There will be three major tunnel projects that link together to form the system. These tunnels are 23 feet in diameter and will be placed approximately 100 feet underground, which is deeper than the district's Metro tunnels.

Tunnel construction will begin with the section closest to the Blue Plains wastewater treatment plant. That way, as sections are completed, they can be placed in operation. The District's waterways will benefit with the incremental reduction of CSOs before the entire project is completed in 2025.

Design has already begun on the southernmost section—the Blue Plains Tunnel. Construction should run roughly from 2011 to 2015. The next section to be completed is the Anacostia River Tunnel, which will be built between 2013 and 2018. A Facility Plan for the Anacostia River Tunnel was developed and submitted by DC WASA to the U.S. Environmental Protection Agency in September 2008.

During the development of the first two tunnels, other smaller projects and localized sewer separations will also take place. By the time the \$2.2 billion Long Term Control Plan is completed in 2025, the projects will have reduced combined sewer overflows by 96 percent overall and 98 percent in the Anacostia River alone.



Miles of huge underground tunnels will help prevent combined sewer overflows (CSOs).

New Method for Calculating Sewer Charges Starts May 1, 2009



Beginning May 1, 2009, the way that DC WASA calculates the sewer charge will change. Currently, the sewer charge includes both the cost of sewer services and the cost for a \$2.2 billion construction project (the Long Term Control Plan or LTCP), which will reduce combined sewer overflows into local waterways. Both of these charges are based on the amount of water used per household.

Under the new method, the current sewer charge will be lowered and an Impervious Surface Area Charge (IAC) will be added. This charge is an investment in reducing pollution in the Anacostia and Potomac rivers and Rock Creek. It applies to all lots, parcels, properties and private streets in the District. All residential and commercial customers and other owners of property in the District will be billed.

Following are some Frequently Asked Questions about the impervious area charge:

What is an impervious surface area charge? The impervious surface area charge is based upon the amount of impervious surface on your property. An impervious surface is a man-made surface that cannot be easily penetrated by water such as rooftops, driveways, patios, parking lots and other paved areas, tennis courts, swimming pools, and any path or walkway that is covered by impervious material.

Why is the impervious surface area charge necessary? The charge is necessary to recover the costs of the \$2.2 billion Combined Sewer Overflow Long Term Control Plan (CSO LTCP) to reduce the discharge of excess flows into local waterways from the District's combined sewer system. (Combined sewer systems were constructed around the turn of the 19th century to carry sanitary sewage and rainwater runoff in the same pipe.)

Why is the cost of the CSO LTCP recovered in this manner? The cost of CSO control has been part of the sewer rate, which is based on the metered amount of water usage. The impervious surface area charge is a more equitable basis to recover the costs than the volumetric charge, since the impervious charge is

based on a property's contribution to rainwater runoff entering the sewer system.

How is the amount of the charge determined? The charge is based upon an Equivalent Residential Unit (ERU). An ERU is defined as the amount of impervious surface area measured in square feet based on a statistical median for a single family residential property. Initially, all residential customers will be assessed one (1) ERU (1000 square feet). All non-residential customers shall be assessed ERUs based upon the total amount of impervious surface area on each lot. This total amount of impervious surface will be converted into ERUs. Initially, the ERU will be billed at approximately \$1.24 a month.

More FAQs on the impervious surface charge can be found at the DC WASA website: www.dcwasa.com/customercare/iab.cfm#faq. Non-residential customers can find out how much impervious area has been assessed for their property through the "My Account" feature on the DC WASA website, accessed through the homepage. Property owners without a DC WASA account, those who need help registering for the "My Account" feature and anyone with questions may call Customer Service at (202) 354-3600 for assistance.

DC WASA Green Infrastructure Benefits Health of Waterways



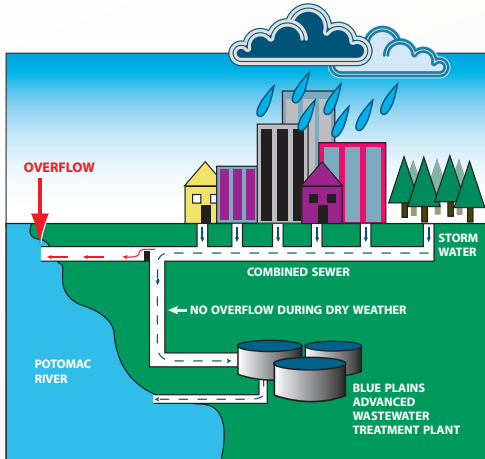
Low Impact Development (LID) is a land planning and engineering approach to managing rain water runoff that includes ways to detain, drain or infiltrate the water. LID is relevant in urban areas like the District, where more than 35 percent of the land area is covered over with impervious surfaces.

DC WASA retrofitted its Bryant Street and Eastside Pumping Stations using porous pavers—rather than asphalt—to promote ground infiltration of water. The Authority planted trees and native plants to absorb rain water and implemented a Baysaver technique, diverting water from the combined sewer system into tree boxes instead. The Authority monitors its LID projects to examine the effectiveness of these techniques.

DC WASA works with other agencies. For example, in coordination with the District Department of Transportation (DDOT) Urban Forestry Administration, DCWASA planted more than 3,000 trees in the Dis-

trict's CSO area in recent years. Last year, the two agencies completed a rain garden in two cloverleaves of an intersection at Irving and Capitol Streets, NW, where drought-resistant plants now catch and absorb water and pollutant runoff from the roadways. The Authority also provided \$300,000 in funds to the Chesapeake Bay Foundation for green roof projects, one of which is a green roof atop the U.S. Department of Transportation Building. Many more LID projects are expected to result from continued collaboration with environmental and District agencies, though they won't eliminate the need for the huge tunnel system to collect sewer to collect sewer overflows.

FAQs About the Combined Sewer System



How the District of Columbia's combined sewer system works.

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 US 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 53 CSO outfalls listed in DC WASA's existing discharge permit from the EPA.

Where are CSO Outfalls? There are 10 CSO outfall locations on the Potomac River, 15 on the Anacostia River and 28 along Rock Creek and its tributaries. DC WASA has posted signs for each outfall location.

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 WASA estimates that combined sewers overflow into the Anacostia and Potomac rivers about 75 times annually, spilling nearly 1.5 billion gallons into the Anacostia and 850 million gallons into the Potomac. Rock Creek averages 30 CSO events and 52 million gallons of overflow a year.

What are the possible public health impacts of CSOs?

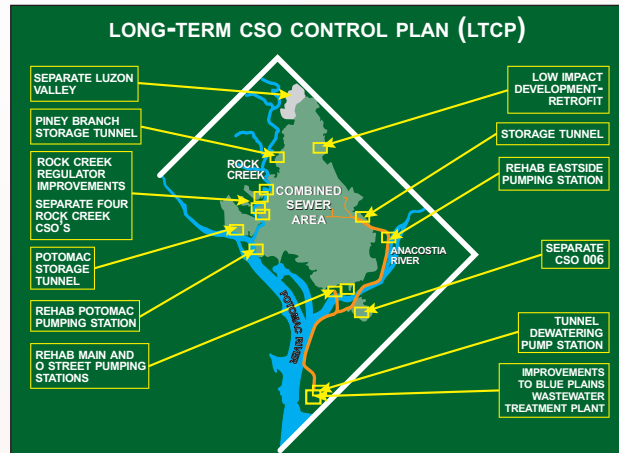
CSOs may pose a danger to the public because of the rapid flow of water exiting the outfalls and the potentially harmful substances it may contain. The public is advised to stay away from any sewer pipe discharge. CSOs could affect the receiving waters for up to 24 hours during small rainstorms and for 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 is 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 overflow during dry weather. This is called a Dry Weather Overflow (DWO). DC WASA has an intensive maintenance and inspection program to prevent DWOs from occurring. If you see a CSO outfall discharging during dry weather, call DC WASA at (202) 612-3400.

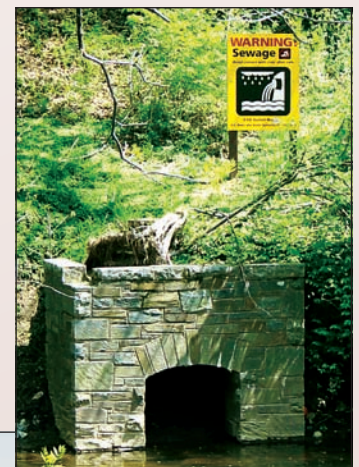


To improve water quality in the Anacostia and Potomac rivers and Rock Creek, the 20-year Long-Term CSO Control Plan includes: three deep underground storage tunnels, including side tunnels to reduce flooding; rehabilitation of existing pumping stations; and the elimination of 14 overflow outfalls. Various sections of this system will be placed in operation along the way to reduce overflows even before the entire project is completed.

Where can you get more information?

You can learn more by visiting DC WASA's website at www.dcwasa.com. Click on "Environment & Education," then "Combined Sewer System." You may also contact DC WASA Public Affairs at (202) 787-2200.

The complete text of the Long Term Control Plan for Combined Sewer Overflows can also be found at the following public libraries: Capitol View, Mount Pleasant, Northeast, Woodridge, Southeast, Shepherd Park, Tenley Friendship and Washington Highlands.

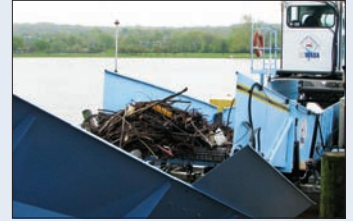


DC WASA is Committed to Environmental Stewardship

Protecting the District's waterways is a priority for DC WASA and the Authority has invested heavily in this commitment. Though the Blue Plains Advanced Wastewater Treatment Plant is held to some of the most stringent regulatory requirements in the nation and has undergone almost \$1 billion in technological upgrades, DC WASA is embarking on another \$900 million project. This upgrade will further reduce nitrogen levels in the effluent (treated wastewater) that leaves the plant as part of wide-range efforts to protect the Chesapeake Bay. The Authority also invests in research, partnering with national research foundations and universities on wastewater and water quality.

In addition, the Authority operates two skimmer boats that remove floatable debris on the Anacostia and Potomac rivers every Monday through Friday. These crews remove more than 400 tons of trash from our waterways each year.

DC WASA is implementing and studying natural systems to reduce the impact of rainwater on the sewer systems. Please see "DC WASA Green Infrastructure Benefits Health of Waterways" for more information on these. DC WASA also participates in ongoing public education and outreach efforts to protect District waterways, through community events, partnerships with environmental organizations, collaborations on public service announcements and anti-litter campaigns and through a variety of publications.



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www.dcwasa.com

Washington, DC 20032

5000 Overlook Avenue, SW

Water and Sewer Authority

District of Columbia



A District of Columbia Water and Sewer Authority Biannual Report  April 2009

COMBINED SEWER OVERFLOW (CSO) CONTROL ACTIVITIES



Update



District of Columbia

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