

# CLEAN RIVERS PROJECT NEWS

CONTROL ACTIVITIES  
COMBINED SEWER OVERFLOW (CSO)  
BIANNUAL REPORT OCTOBER 2012  
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY



## Green Infrastructure Reduces Runoff While Looking Great



Courtesy District Department of Environment (DDOE)

Green infrastructure (GI) can help in the campaign against runoff by using natural elements to absorb the first flushes of rainstorms, keeping that rain out of stormwater or combined sewer systems. Using the moisture to nourish vegetation is one way to capture the runoff—trees and treeboxes, rain gardens and green roofs use this method. Porous pavements allow the rain to penetrate the ground underneath, and rain barrels collect the rain during the storm, then make it available later for uses such as landscape irrigation. Greening the District with GI would create jobs, raise property values, clean the rivers and provide an enhanced ecosystem, all while beautifying the District.

## Update on Green Infrastructure Component of DC Water's Plan

Earlier this year, DC Water proposed to U.S. EPA a review of the requirements for the Rock Creek and Potomac River portions of the consent decree. DC Water hopes to pilot a project that would test the ability of green infrastructure to serve as a solution to CSOs. The Authority may be able to reduce the tunnel sizes serving Rock Creek and the Potomac if the pilot proves to reduce enough runoff. Discussions with U.S. EPA have been positive, though at press time for this newsletter no decision had been reached.



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The massive tunnel boring machine, with a view of the head that will eat through dirt and rock, more than 100 feet deep. Courtesy Herrenknecht AG

**An Environmental Legacy for Washington DC**

Growing up in the Caddo Lake Bayou Country in eastern Texas, Lady Bird Johnson exhibited a passion for the natural beauty she found around her.

When her husband became president in 1964 she made it her mission to preserve and protect the environment. In 1964 she formed *The Committee for a More Beautiful Capital*, whose positive contributions are still visible today. She encouraged her husband to declare the Potomac River “a national disgrace,” which drew attention to the declining health of America’s waterways and was a catalyst for the eventual Clean Water Act of 1972.

Almost fifty years later, a dramatic \$2.6 billion program by DC Water is getting underway to reduce combined sewer overflows (CSOs) in the Anacostia River by 98 percent and by nearly as much in the Potomac River.

A 13-mile network of 23-foot-diameter tunnels will carry combined storm runoff and sanitary sewage to the Blue Plains Advanced Wastewater Treatment Plant for treatment rather than sending it to receiving waters untreated during heavy rainstorms.

The construction of the 13 miles of tunnels will be completed by a 1350 ton, 400-foot-long tunnel boring machine. As in nautical tradition these machines are typically given a feminine name. What better recipient of this honor could there be than our environmental First Lady, Lady Bird Johnson? The tunnel boring machine will be formally named during a ceremony in early 2013.

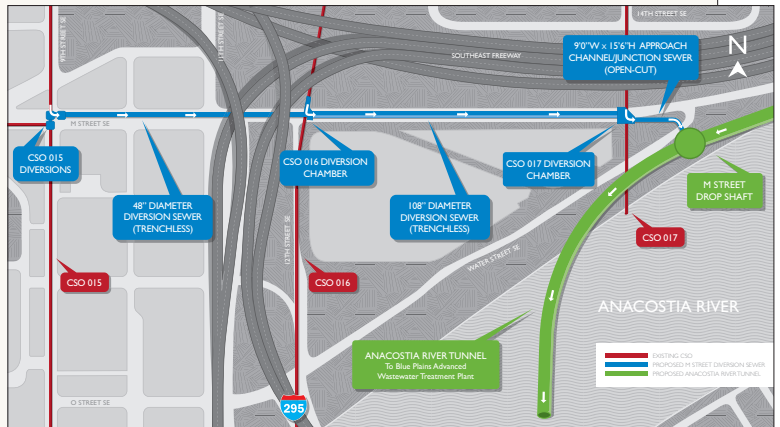
Be sure to follow DC Water on Twitter and Facebook as Lady Bird makes her journey to protect our waterways.

## Division E (M Street) Construction to Address CSOs Along Southeast Waterfront

Although the project has many construction sites across the District, Division E (M Street) may well be the most visible outside of Blue Plains. Division E, in the Southeast Waterfront neighborhood, consists of three diversion sewers to capture CSOs from existing outfalls and along the future tunnel system on M Street between 9th and 14th Streets SE.

Communicating the construction impacts has been a high priority. DC Water and its contractors worked closely with the Capitol Riverfront BID (Business Improvement District) and ANC 6B, coordinated traffic advisories with DDOT, and conducted door-to-door delivery of door hangers to ensure residents, businesses and the boathouse community were notified in advance.

To date, most of the utility relocation has been completed and current efforts include rehabilitation of the East Side Interceptor and the 36-inch



Proposed M Street Diversion Sewer and Anacostia River Tunnel

water main. The next phase will be the construction of two new sewer tunnels and three diversion structures (CSOs 15, 16 and 17) along with underground channels that feed into the larger tunnels.

Underway since April 2012, the project is scheduled to be completed in July 2014.

## Plant your Rooftop and Reap a Rebate



Courtesy District Department of Environment (DDOE)

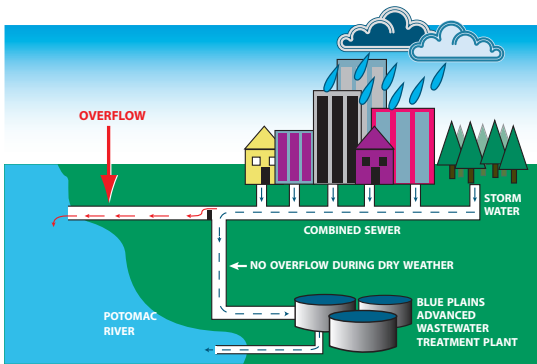
Adding a green roof to your building helps improve the environment by reducing the rain runoff that can overwhelm the combined sewer system or stormwater system. Now when you plant a green roof you can also reap a financial reward. The Anacostia Watershed Society and District Department of the Environment (DDOE) are offering \$5 per square foot on a first-come, first-served basis for qualified DC buildings of any size. This program is available for residential, commercial and institutional properties and property owners must first complete the application process.

Green Roofs provide numerous ecological, health and economic benefits. The owner of a green roof can benefit from lower energy costs, extended roof-life, possible future fee/tax credits, and increased property values. Green roofs also improve the District's air quality, lower the heat-island effect, and improve water quality.

You can begin the application process by visiting [anacostiaws.org](http://anacostiaws.org) and clicking on Green Roof Rebate Program in the upper right corner under Quick Links. For more information, or to register, contact AWS at (202) 557-5814 or (301) 699-6204 or [greenroofs@anacostiaws.org](mailto:greenroofs@anacostiaws.org).

## 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 53 CSO outfalls listed in DC Water’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 Water 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 Water 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 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](http://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 at the following public libraries: Capitol View, Mount Pleasant, Northeast, Woodridge, Southeast, Shepherd Park, Tenley-Friendship and Washington Highlands.