



DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY  
**BIANNUAL REPORT APRIL 2015**

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

# **CLEAN RIVERS PROJECT NEWS**



*Cardinal Donald Wuerl, GM Hawkins and VIPs celebrate Nannie's christening.*

### **“Nannie”, DC Water’s newest TBM, gets her name, is christened, and blessed by VIPs**

DC Water added another hard worker to its ranks in December as the second tunnel boring machine (TBM) arrived and was prepped for duty. Named “Nannie” for Nannie Helen Burroughs, a prominent 20th century African-American educator and civil rights activist, this TBM is mining the second leg of the Anacostia River Tunnel system. Nannie’s leg is approximately two and a half miles long, beginning next to RFK Stadium and ending at the Poplar Point Pumping Station in SE, across the river from Nationals Stadium.

In all, the Anacostia River Tunnel will be 13.1 miles long and will hold combined sewage and stormwater runoff during rain storms, releasing it when the rains subside to be conveyed to, and treated at, the Blue Plains Advanced Wastewater Treatment Plant. The alternative would be a combined sewer overflow, when the

mixture of sewage and stormwater cannot fit in the sewer pipes and overflows to the Anacostia River. This tunnel is the long term solution to reduce combined sewer overflows to the Anacostia River by 98 percent.

It is customary to have a blessing and send-off. Nannie has had two—first she was blessed by Cardinal Donald Wuerl, from the Archdiocese of Washington, in a ceremony with Ken Kopocis of the U.S. EPA Office of Water, DC Water’s then-Board Chairman and City Administrator Allen Y. Lew and General Manager George S. Hawkins, who christened her with a bottle of DC tap water.

In January, DC Water hosted United States Vice President Joe Biden, U.S. EPA Administrator Gina McCarthy, Secretary of Agriculture Tom

## New pumping station coming to Poplar Point

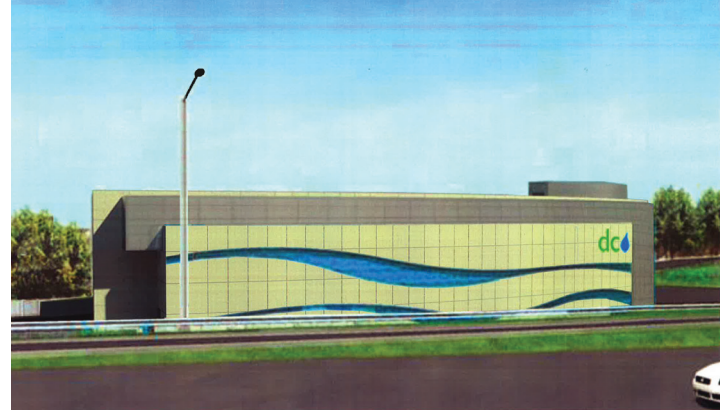
DC Water is beginning another important element of the DC Clean Rivers Project—replacement of the Poplar Point Pumping Station and other supporting structures. The new sewer pumping station replaces one that was built in 1915, which is outdated and has just a 45 million gallon per day capacity. The new station will have the capacity to pump 55 million gallons of sewage per day to help reduce combined sewer overflows (CSOs) to the Anacostia River and reduce nitrogen discharged into the Potomac River.

The project includes green infrastructure (GI), another way to reduce runoff that contributes to combined sewer overflows. A green roof, a gray water recycling system (recycling used water for landscaping and other uses) and a solar power system that will reduce power consumption are elements aimed at sustainability.

The new Poplar Point Pumping Station features a modern architectural design, natural landscaping with an emphasis on indigenous plants and flowers, and retaining walls designed to minimize earth disturbances.

E.E. Cruz, a heavy civil construction contractor, will lead the effort and provide opportunities to hire local residents. The contractor and DC Water co-hosted a job fair to highlight construction positions.

Located in Southeast Washington, development of the entire 110-acre Poplar Point site has long been the subject of discussion



Top: Poplar Point Pumping Station – East Elevation (viewed from I-295)

Bottom: Poplar Point Pumping Station – West Elevation (viewed from South Capitol Street)

among many immediate neighbors, the District Government and other stakeholders. DC Water has communicated widely with the community, soliciting feedback from the residents, and committing to maintain good neighbor policies.

Construction is scheduled to begin in the spring of 2015 and is slated for completion in April 2017.

## DC Water and Georgetown University Collaborate on Campus RainWorks Challenge



The U.S. Environmental Protection Agency hosts the “Campus RainWorks Challenge” each year, inviting undergraduate and graduate students to design innovative green infrastructure (GI) for university campuses. This year, DC Water and Georgetown University students, faculty and staff worked together to develop GI concept plans for areas around Lauinger Library on Georgetown University’s campus. The GI designs showcased options to creatively capture stormwater and develop underutilized campus space

including a bioretention outdoor classroom, a green roof above the library entrance, and permeable pavement in parking areas. In addition to mitigating combined sewer overflows (CSOs), all GI was designed to provide educational opportunities and increased awareness for students and visitors about stormwater, CSOs, and their impacts on the District’s waterways.

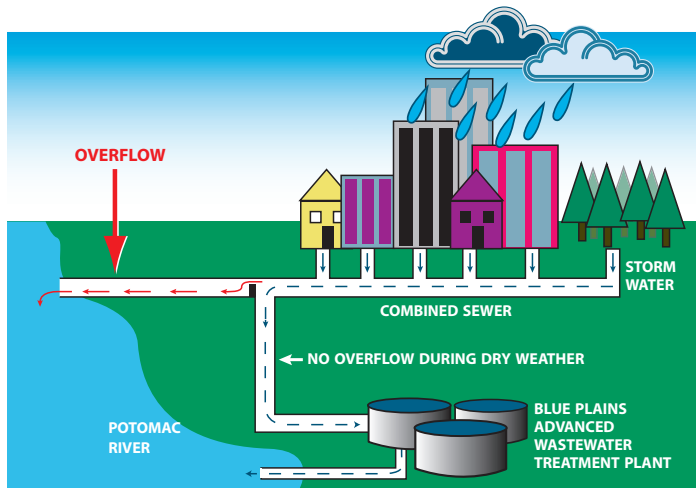
Georgetown University is within one of the CSO areas targeted by DC Water for GI implementation under the Long Term Control Plan modification that was released for public comment last year. “Our collaboration with the DC Clean Rivers team is part of a new academic course, ‘Sustainability: Theory and Practice.’ This innovative academic offering explores sustainability issues through a community-based lens, while generating results-oriented solutions that help address critical sustainability challenges,” said Robin Morey, Vice President, Planning & Facilities Management at Georgetown University. For more information on DC Water’s green infrastructure, please visit: [dcwater.com/green](http://dcwater.com/green).



## 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.

### 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.

### 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.

### 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](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.

# CLEAN RIVERS PROJECT NEWS

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## Joint Base Anacostia-Bolling gets new structures while outfall is abandoned and riverbank restored

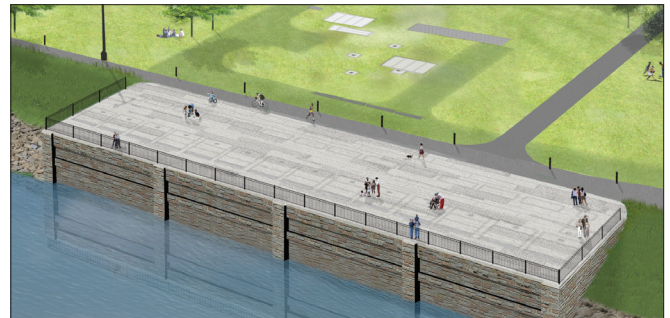
A key element in the Anacostia River Tunnel at Joint Base Anacostia-Bolling will be wrapped into a scenic overlook along the Potomac River. The overflow structure inside is a necessary component for the 13.1-mile long tunnel system. The overflow structure (see rendering) will be constructed to relieve the tunnel system to the Potomac River during storm events that exceed the tunnel's design capacity or occur when the tunnel is already full.

Additional elements of the contract include a diversion chamber, approach channel and drop shaft that divert flows from the Potomac Outfall Sewers into the new tunnel

system. An odor control and ventilation facility will also be built to treat air expelled from the tunnel system. The existing outfall pipe and structure will be abandoned and the riverbank will be restored to match the surrounding area. In addition, an instrumentation system will be installed for the entire Anacostia River tunnel system south of RFK.

DC Water awarded the Design-Build contract to Corman Construction, Inc. Design is underway with construction expected to

start in May 2015 and be completed by March 2018. This contract is important for bringing the first phase of the tunnel system online in 2018, bringing significant water quality improvements to the Anacostia.



continued from page 1 **Nannie**

Vilsack, Congresswoman Eleanor Holmes Norton and District Mayor Muriel Bowser for a policy announcement with Nannie proudly providing the backdrop. General Manager Hawkins and Clean Rivers Project Director Carlton Ray led the VIP guests on a tour of one of the deep drop shafts and to see Nannie the TBM. After the tour, the guests provided remarks related to the need for infrastructure investment in front of an audience that included national media.

Now that Nannie has met some well-known well-wishers, she is ready to get to work on her tunnel segment.



GM George Hawkins, Secretary of Agriculture Tom Vilsack, and District Mayor Muriel Bowser listen to VP Joe Biden discuss the national need for investment in infrastructure.



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