

Update

Biannual Report April 2006



Soil Sampling for Tunnel Construction in District Begins

After several years of planning, DC residents and businesses will soon see engineering activities that mark the start of WASA's 20-year plan to help clean up the District rivers. This summer, work begins in the Anacostia River area on a \$2.2 billion project to control combined

(sanitary and storm) sewer overflows (CSOs) to the river during heavy rainstorms. The project involves the construction of approximately eight miles of Metro-size underground tunnels. The tunnels will



Sonic drilling rigs, like this one, will soon be in Southeast DC neighborhoods along the prospective tunnel routes to collect soil samples between 150–250 feet deep.

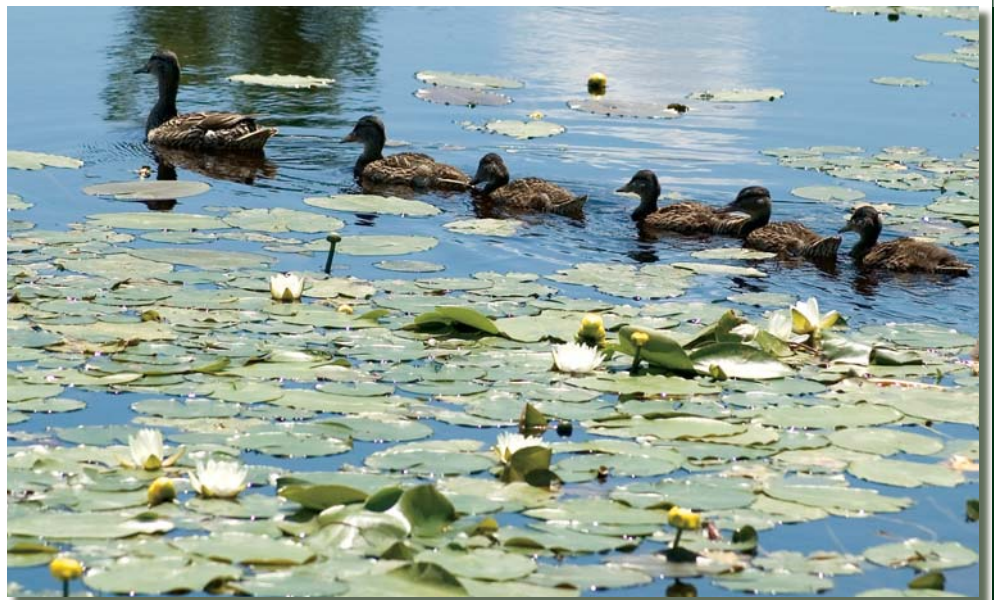
be designed to capture and store overflows until pumping stations can deliver the stored CSOs for treatment to the Blue Plains Advanced Wastewater Treatment Plant.

Actual tunnel construction is about six years in the future. However, because these tunnels

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WASA—An Environmental Partner in the District's Future

With the recent unveiling of the design for the new baseball stadium along the Anacostia River, it's becoming clear that a large part of the District's future development is being focused along the Anacostia riverfront. The District of Columbia Water and Sewer Authority (WASA) has long been a leader among environmentalists working to improve the river as new entertainment, business, and living areas are developed along the waterfront.



By helping to remove trash and debris and reduce high bacteria levels from combined sewer overflows (CSOs), WASA is a leader among environmentalists, community groups, governments, and businesses working to improve conditions for the aquatic life in the District's rivers and streams.

Anacostia River at Top of List for CSO Control Projects

Nearly a third of the District is served by a combined sewer system—mostly in the downtown and older parts of the city. In dry weather, the system delivers wastewater to WASA's Blue Plains Advanced Wastewater Treatment Plant. During heavy rains, however, the volume of combined sanitary and stormwater can be more than the combined sewer system can hold, and the excess flow spills from several outfall locations into District rivers. These discharges to the Anacostia, Potomac and Rock Creek are called combined sewer overflow (CSO). Since 1996, WASA has been working on various projects to control CSOs and to help clean up these

waterways. Particular attention has been paid to the Anacostia, the most impaired of the three. WASA's long-term (20-year) CSO control plan will reduce overall overflows by 96 percent, and by 98 percent on the Anacostia.

\$140 Million in CSO Work Underway

WASA is currently completing construction on approximately \$140 million in projects that are projected to reduce overflows by 40 percent by 2008. To date, overflows are down by 24 percent since the replacement of tide gates that keep river water from entering the sewer system, and the inflatable dams that hold back

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overflows until they can be treated. Engineering designs are underway to separate the combined sewers in selected areas



Construction of the new Eastside Pumping Station—a critical player in river clean up—is almost complete.

and Rock Creek watersheds. Additionally, design and construction work is underway on the rehabilitation of our major sewage pumping stations to increase their capacity.

Long-Term CSO Control— A \$2.2 Billion Investment

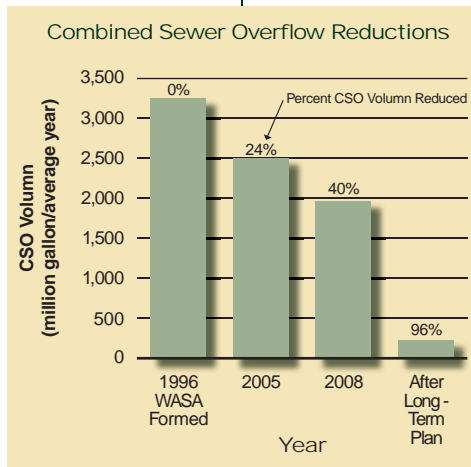
In December 2004, WASA reached an agreement in a suit filed by the federal government to implement a very extensive program that will dramatically reduce the overflows from

the District's combined sewer system that affect the Anacostia, Potomac, and Rock Creek/Piney Branch waterways. The agreement calls for WASA to implement a plan over a 20-year period for a variety of capital investments throughout the District, including:

- Miles of huge subway-size underground tunnels to store the combined wastewater and stormwater until it can be treated at the Blue Plains Advanced Wastewater Treatment Plant.
- Elimination of 14 CSO outfalls along the rivers near public areas, including the

Georgetown waterfront and the Anacostia marinas through sewer separation and outfall consolidation

- Pump station rehabilitation and new construction
 - Improvements at Blue Plains wastewater plant to increase excess flow capacity
- Realizing the significant impact the \$2.2 billion cost of the long-term control plan will have on District ratepayers, WASA continues its



efforts to secure federal funding assistance. To date, \$87 million in Congressional funding has been received.

FAQs About The Combined Sewer System

What is a Combined Sewer?

A combined sewer is a single pipe that carries both sanitary wastewater and storm 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 business 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



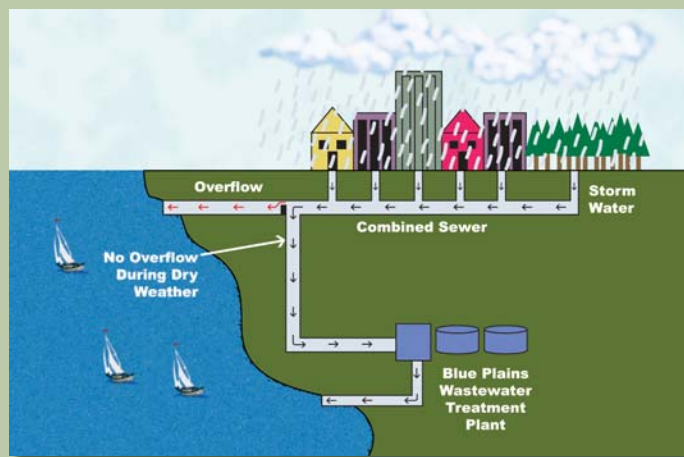
allows CSOs, but the Environmental Protection Agency (EPA) requires communities to develop a plan to address overflows. There are 53 CSO outfalls listed in WASA's existing discharge permit from the EPA.

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. 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, 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.



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

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.

see FAQs About CSO's next page

Soil Sampling Begins *from page 1*

are deep (about 100 feet) underground, our engineers must obtain information about the soil layers between the ground surface and the underground location of the tunnels. Therefore, starting this summer, engineers will be using vertical drilling equipment to collect soil samples, also known as borings, along prospective tunnel routes. The borings or holes are expected to range between 150 feet to 250 feet in depth. Each boring may take from four to six days to complete.

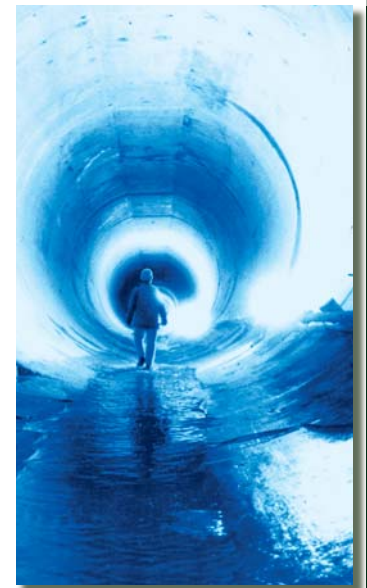
The soil borings will occur at various locations in Southeast DC, including the Benning Road, Pennsylvania Ave, 11th Street and South Capital Street areas. Some of the borings may be in or beside public streets and may result in traffic and pedestrian detours. Because there

is some flexibility to boring locations, WASA will avoid entrances and exits to and from businesses and parking facilities. WASA also plans to stop drilling

operations during rush hour periods and will work hard to minimize any possible inconvenience to the community.

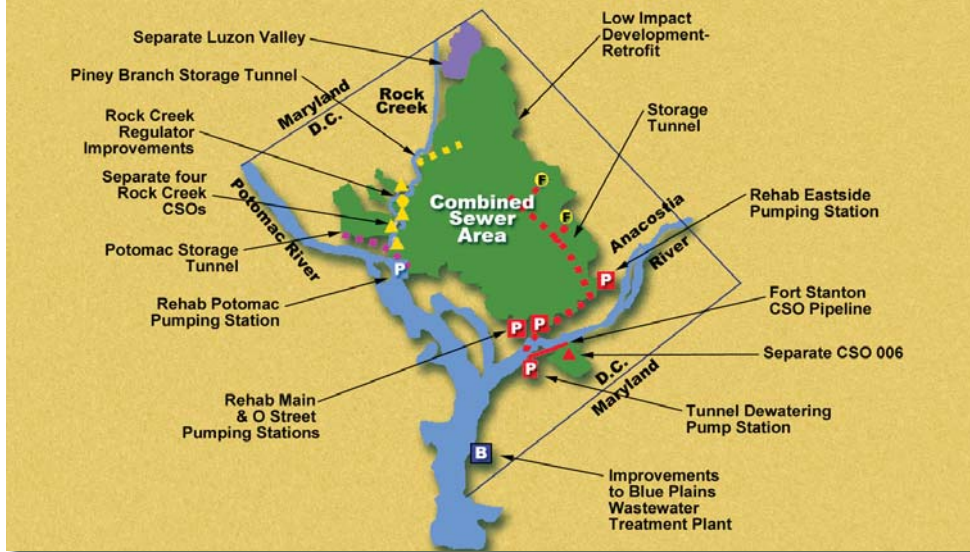
Also, WASA will provide advance notice of drilling schedules on its Web site, by mail, and with door hangers in the neighborhoods along tunnel routes. On-line and mail notices will be provided several weeks in advance and door hangers will be placed the week before, as well as two days in advance of the scheduled work.

As the CSO studies, designs, and work progress, the public will be kept informed of the progress in planning and design.



The underground tunnels, for which the soil samples are being taken, will be approximately 25-feet in diameter—about the size of a Metro subway tunnel.

Long-Term CSO Control Plan (LTCP)



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.

FAQs About CSO's *continued*

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) and WASA has an intensive maintenance and inspection program to prevent DWOs from occurring. If you see a CSO outfall discharging during dry weather, call WASA at (202) 612-3400.

What is WASA Doing About CSOs?

WASA has projects underway that will reduce CSOs by 40% by 2008. WASA also has a long-term plan for reducing CSOs even further. This plan is called the Long-Term Control Plan (LTCP) and involves constructing storage tunnels to capture CSOs during

rain events. The LTCP will provide a 98% reduction in CSO to the Anacostia River, and a 96% reduction in CSO overall. The LTCP will be implemented over a 20-year period. Details on the plan can be found on WASA's Web site.

What Can You Do to Help?

Don't litter or use catch basins as trash receptacles, properly dispose of hazardous materials such as oil and paint.



A trash-clogged combined sewer system can cause sewer backups and local flooding.

Where Can I Get More Information?

To obtain more information visit WASA's Web site at www.dcwasa.com, or contact WASA Public Affairs at (202) 787-2200.

Keeping District Rivers Clean

WASA Launches Campaign to Protect Waterways

Educating the public about how to protect our waterways has been an ongoing effort for WASA. This spring, as part of a public education campaign, WASA will run a series of radio ads to encourage listeners not to put oil, litter and other trash and debris in the storm drains or catch basins. Watersheds like the Anacostia are polluted during rainstorms when litter and other

contaminants are washed from storm drains into the river. Using trash receptacles, not pouring chemicals like gas and paint down storm drains, and cleaning leaves and other debris from catch basins are all steps that you can take to improve the District's waterways.

WASA Skimmer Boats Are Collecting Trash From The Rivers

The Floatable Debris Removal Program is one

of the most publicly visible efforts made by WASA to clean the rivers. Since August 1992, 6,000 tons of floating debris have been removed from the Anacostia and Potomac rivers. The program utilizes two skimmer boats and three support boats to remove trash before it accumulates on the river banks and in mud flats at low tides. From 400 to 500 tons of trash is collected each year, primarily from the Anacostia River.

*SERVING THE PUBLIC * PROTECTING THE ENVIRONMENT*

www.dcwasa.com

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Water and Sewer Authority

District of Columbia



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COMBINED SEWER OVERFLOW (CSO) CONTROL ACTIVITIES



Update



District of Columbia
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