

WHAT'S ON TAP



NEWS FOR DC WATER CUSTOMERS • VOLUME 17 ISSUE 2



LUCY DIGS FAST

DC Water's third giant tunnel boring machine (TBM), named Lucy, finished her tunnel segment, completing a 2,700 foot long, 20.5-foot diameter tunnel called the First Street Tunnel. She mined under First Street, NW (about 100 feet underground) from Channing Street to Rhode Island Avenue, and had to cut her way through 500 million pounds of sand, silt and clay.

Once put in service, the First Street Tunnel should greatly reduce flooding from undersized sewers in the Bloomingdale and LeDroit Park neighborhoods. It is part of the larger DC Clean Rivers Project to reduce combined sewer overflows to District waterways, thereby improving the health of our waters.

"We are pleased to reach this important milestone in the project and are grateful for the continued patience of the impacted community," said DC Water CEO and General Manager George S. Hawkins. "We will continue to work with the neighborhood to complete this essential project as soon as possible to provide flood relief for residents."

This tunnel segment will ultimately connect to the five-mile-long Northeast Boundary

Tunnel in 2022. Until then, the First Street Tunnel will store and then pump combined sewage up into the existing sewer system during and after rainstorms to keep it off of streets and out of basements.

Lucy was christened in an April 2015 ceremony and began her dig that summer. TBMs are traditionally named for a woman, much like boats in the nautical world. Lucy was named in honor of Lucy Diggs Slowe (1895-1937), a District local and the first Dean of Women at Howard University in 1922, who established a women's campus. Among many accomplishments, she was also inducted into the 26th annual Maryland Women's Hall of Fame. In addition, she was a decorated athlete, winning the American Tennis Association's first tournament in 1919, making her the first African-American woman to win a major sports title.

Now Lucy the TBM will be dismantled and 99 percent of her parts will be recycled, while the tunnel she dug is prepared for use. Work also continues to connect the existing sewers along First Street, NW to the new tunnel. For more information on the project, please visit: dcwater.com/firststreettunnel.

GENERAL MANAGER'S MESSAGE

It could have been worse. That was my reaction to the 2016 Report Card for D.C.'s Infrastructure the local chapter of the American Society of Engineers (ASCE) issued in January. D.C.'s overall score was a C- which covered everything from bridges, roads and transit to levees, parks and schools. Drinking water and Wastewater infrastructure scored matching C+ grades.



DC Water provided a great deal of information to the report's authors, and while we don't necessarily agree with all of their conclusions or the final grades, there's no denying that water and sewer infrastructure in the District is aging and there is a serious need to upgrade and maintain our systems.

At the same time, we are making great progress that has us on track for a better grade in the future. With your support, we are investing heavily to replace old water pipes, some of which date back to the 1800's. We're actively remedying combined sewer overflows to help clean up DC's rivers, and we have some of the best engineers in the world implementing innovative technology at our wastewater treatment plant.

It is worth noting that our marks are well above the national D grades for drinking water and wastewater ASCE issued in its 2013 Report Card for America's Infrastructure. While aging infrastructure is a challenge testing cities across the U.S., we are ahead of the curve thanks to your investments in our system.

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"Spring cleaning" for your pipes to begin



Starting on Monday March 7, 2016 and ending on Monday May 2, 2016, the disinfectant used for drinking water treatment will temporarily switch from chloramine (chlorine + ammonia) to chlorine. During this time, customers may notice a slight change

in the taste and smell of drinking water. This standard switch in disinfection is part of an annual program to clean water pipes and maintain water quality throughout the year.

If you notice a stronger chlorine taste and odor:

- Run the cold water tap for two minutes.
- Refrigerate a pitcher of cold tap water to minimize the chlorine taste and odor.
- Use a pitcher-style or faucet-mount filter to remove chlorine.

Individuals and business owners who take special precautions to remove chloramine from tap water, such as dialysis centers, medical facilities and aquatic pet owners, should continue to take the same precautions during the temporary switch to chlorine. Most methods for removing chloramine from tap water are effective in removing chlorine.

The Washington Aqueduct, operated by the Army Corps of Engineers, is responsible for treating drinking water in the District. DC Water works closely with the Aqueduct to monitor drinking water throughout the city to ensure chlorine levels meet safe levels. To view monthly chlorine levels, visit dcwater.com/testresults. For more information, contact the Drinking Water Division at (202) 612-3440.

Water main breaks: Which comes first?

Often in colder months, DC Water crews are faced with many water main breaks at once. In a recent winter, for instance, there were more than 30 breaks at one time. Even with extra crews and contractors on stand-by, all of these main breaks can't be addressed simultaneously. DC Water's investigators prioritize repairs based on the severity of the break, starting with those breaks that cause the most customers to be without water. Other factors that make a repair a higher priority are those that affect traffic or cause street flooding, those that cause property damage and those that could harm the environment.



If you see water bubbling up from the street or sidewalk, it may be a water main break. Please report it to DC Water by calling (202) 612-3400, reporting it online at dcwater.com/report_problem/ or tweeting @dcwater with a picture, if possible.

DC Water protects equipment with new tools

Water and sewer machinery can be complex and expensive to replace. So keeping equipment on a maintenance schedule and servicing it before a problem arises are keys to keeping costs down. This is known as "asset management." It used to consist mainly of a visual inspection by a technician, but today asset management incorporates faster, safer and better methods and technologies.

Four advances in technology include infrared technology, ultrasound, vibration analysis and oil (or lubrication) testing.



An **infrared camera** shows differences in temperature, which can help the technician more quickly identify problems before they worsen. These

cameras can also detect potential hazards from a greater distance, making inspections safer for technicians.



Another method is to listen to the soundwaves, or the "hum," of certain pieces of equipment. That soundwave is actually an acoustical frequency and changes in it can indicate a problem. This is called **ultrasound analysis**.



Vibration analysis uses sensors to monitor vibrations. For example, a technician might place a sensor on a piece of equipment. Vibrations can

tell a story about what's going on with the equipment. It can also be more specific about the problem if there are certain points that are vibrating more than the rest. Already, DC Water is pilot testing a portable version of this technology including wifi-enabled sensors that send emails letting technicians know which parts are in danger of failing.



Lubrication analysis tests the oil in a piece of equipment. There is much to learn from the oil, such as when metal particles are present. This would

indicate metal deterioration somewhere in the machinery—an expensive problem, if not corrected. This can also show breakdowns in the chemical makeup, viscosity, and contamination of the oil.

The bottom line is that better asset management has the potential to keep costs down and equipment running, which ultimately benefits ratepayers, whose rates fund operations.



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