

T&E COMMITTEE #1
April 8, 2013

Briefing

MEMORANDUM

April 4, 2013

TO: Transportation, Infrastructure, Energy & Environment Committee

FROM:  Keith Levchenko, Senior Legislative Analyst

SUBJECT: **Briefing** – Washington Suburban Sanitary Commission (WSSC) – Chevy Chase Lake Water Main Break

On April 8, 2013, WSSC will provide a briefing to the T&E Committee on the March 18 water main break at the intersection of Connecticut Avenue and Chevy Chase Lake Drive in Chevy Chase. WSSC's briefing materials were not available in time for inclusion in this memorandum but will be provided to Councilmembers as soon as they are available.

Officials from WSSC expected to participate in this briefing include:

- WSSC Commissioner Gene Counihan
- WSSC Commissioner Adrienne Mandel
- Jerry Johnson, General Manager/Chief Executive Officer
- Gary Gumm, Chief of Engineering and Construction
- James Price, Chief of Plant Operations
- Derrick Phillips, Acting Chief of Customer Care
- Karen Wright, Systems Control Group Leader

Chevy Chase Lake Water Main Break Incident Summary

On Monday, March 18 at approximately 8:00 PM, a 60-inch Pre-Cast Concrete Cylinder Pipe (PCCP) water transmission main broke at the intersection of Connecticut Avenue and Chevy Chase Lake Drive in Chevy Chase. The main was put in service in 1980 and was last inspected, and acoustic fiber optic monitoring equipment installed, in 2010.

Fortunately, there were no reported injuries or major property damage resulting from the break. About 200 homes temporarily lost water service but were restored by Tuesday afternoon. The break resulted in the loss of approximately 60 million gallons of water. As a result of this break, and other lines being out of service as a result of previously scheduled maintenance of

other transmission mains in the system, WSSC put in place mandatory water restrictions to reduce water demand and ensure sufficient water pressure for fire suppression needs and to help restore water storage capacity. These restrictions were lifted on Saturday, March 23, when the pipe was put back in service.

Connecticut Avenue was also closed in both directions Monday night between Jones Bridge Road and Dunlop Street. By the Tuesday afternoon (March 19) rush hour, all southbound lanes and all but one northbound lane had been reopened. On Wednesday night (March 20), WSSC began its replacement of a 20 foot section of the 60-inch pipe. Some northbound lane closures on Connecticut Avenue were required during this repair. The repair was completed on Thursday, March 21, and the pipe was put back in service on Saturday, March 23.

For the T&E briefing, WSSC has been asked to provide a detailed summary of the incident, including a timeline of any initial calls from the public received before the break¹ as well as any other indications WSSC may have had that there were issues in the vicinity of the eventual water main break. WSSC will also speak to its emergency response and its coordination with other utilities (Pepeco and Washington Gas) and governmental departments (such as Fire and Rescue and DOT).

WSSC will do a forensic analysis of the damaged pipe and review all aspects of the incident in order to identify the cause (or causes) of the pipe failure. This work will take a number of weeks.

PCCP Large Diameter Pipe Inventory and Ongoing Work

PCCP type pipes are the highest priority for inspection, monitoring, repair, and replacement because (unlike pipes made out of iron or steel) PCCP pipe can fail in a catastrophic manner. Both Montgomery and Prince George's Counties have experienced large diameter PCCP failures in recent years.²

WSSC has approximately 960 miles of large diameter water main (mains ranging in size from 16 inches to 96 inches in diameter), of which 350 miles are PCCP. Of these, 145 miles are 36 inches in diameter or greater and 77 miles of these pipes are 48 inches or greater. WSSC

¹ For instance, one nearby resident has stated that he called WSSC to report water bubbling up in the area about 5 hours before the break. On March 25, WSSC responded to a call from another resident about a leak in a pipe connected to the pipe that broke (located about 1.2 miles from the site of the March 18 break). Repair work is underway to fix that pipe.

²In January 2011, a 54-inch PCCP broke in Prince George's County near the inner loop of the Capital Beltway between Central Avenue and Richie Marlboro Road. Two major breaks have occurred in Montgomery County in recent years. On June 15, 2008, a 48-inch diameter section of PCCP broke on parkland near the intersection of Muncaster Mill Road and Meadows Lane. On December 23, 2008, a 66-inch PCCP broke near the 8500 block of River Road in Bethesda.

expects to complete its initial inspections, urgent repairs, and acoustic fiber optic (AFO) monitoring work on the 77 miles of largest pipe during FY13. WSSC is beginning to expand this program to pipes smaller than 48-inch diameter as well, and is also inspecting 3.3 miles of 42-inch diameter PCCP mains in FY13 using new robotic technology.

WSSC has a CIP project: Large Diameter Pipe Rehabilitation Program to fund the replacement of transmission mains (pipes greater than 16 inches in diameter) in lengths of 100 feet or greater. For the current approved FY13-18 CIP, WSSC has six-year funding of \$156 million, with \$23.7 million in FY13.

While the large section repairs are funded out of the CIP, the inspection, fiber optic monitoring, and smaller repairs are in the Operating Budget. The FY13 budget includes approximately \$4.6 million for 12 miles of large diameter PCCP pipe inspection, installation of acoustic fiber optic (AFO) monitoring for 8.5 miles, and AFO monitoring of all 77 miles of large diameter (48-inch or greater) PCCP pipe.

Given that the section of pipe that broke on March 18 had been inspected relatively recently (2010) and had been equipped with AFP monitoring, it is important for the Council to better understand the limitations of this program in terms of providing an early warning of a potential pipe failure.

Another issue of concern is that WSSC issued mandatory water restrictions, because of concerns about water supply as a result of the pipe break and because of other large transmission lines being out of service for scheduled maintenance. Both the Montgomery and Prince George's Councils have been fully supportive of WSSC's large diameter pipe inspection, AFO monitoring, and maintenance efforts. However, given the results of this break, perhaps WSSC needs to review the number of miles of work that can be done while maintaining sufficient system redundancy.

One other related issue has been WSSC's consideration of increasing building setback requirements for new developments near large diameter PCCP transmission lines. At the requests of the two counties, a bi-County group, including staff and officials from both counties and WSSC, as well as representatives from municipalities, the building industry, and community organizations, has been formed to review this issue. An initial briefing for group members is scheduled for April 23.

Attachments

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