PS/T&E COMMITTEE #2
September 9, 2013

Discussion

MEMORANDUM

September 5, 2013

TO: Public Safety Committee
Transportation, Infrastructure, Energy & Environment Committee

FROM: Keith Levchenko, Senior Legislative Analyst
Essie McGuire, Senior Legislative Analyst

SUBJECT: **Discussion** – Washington Suburban Sanitary Commission (WSSC) – Emergency Preparedness

Officials and staff expected to participate in this discussion include:

- Chris Voss, Manager, Office of Emergency Management and Homeland Security
- Fire Chief Steve Lohr

Washington Suburban Sanitary Commission

- Commission Chairman Gene Counihan
- Jerry Johnson, General Manager/Chief Executive Officer
- Gary Gumm, Chief of Engineering and Construction
- JC Langley, Acting Chief of Plant Operations
- Derrick Phillips, Acting Chief of Customer Care
- Dave Burke, Technical Services Group Leader

Chris Voss, Manager of the County's Office of Emergency Management and Homeland Security, regularly works with County Government departments and outside agencies to optimize day-to-day coordination and preparation to ensure maximum readiness and effectiveness when a major incident occurs. Currently, Mr. Voss is working with the County's Chief Administrative Officer (CAO), in concert with Prince George's County staff on emergency coordination issues involving WSSC. A May 17, 2013 letter from the two CAOs to WSSC is attached on ©1-3. A WSSC response letter dated June 28, 2013 is attached on ©4-13.

Mr. Voss will be available at the Joint Committee discussion to summarize these issues and answer questions. Chief Lohr will also be available to elaborate on any specific coordination issues between WSSC and the Fire and Rescue Service.

Background

For both counties, the two most common emergency issues involving WSSC are:

- Loss of electrical power to critical WSSC facilities (such as the Potomac Water Treatment Plant); and
- Large diameter Pre-Stressed Concrete Cylinder Pipe (PCCP) breaks.

Both of these issues are of great concern to Emergency Management officials, since they can result in a local or widespread drop in water pressure necessary for fire suppression and also in the loss of water available for essential public health services (such as hospitals), residential uses (including service to high risk populations in nursing, assisted living facilities, and private homes), and commercial activities (such as food service establishments). Widespread mandatory water restrictions and boil water advisories have resulted from a number of large water main breaks in recent years. The loss of electric power to the Potomac Water Filtration Plant has occurred multiple times in recent years as well (although power restoration has occurred within a sufficient timeframe to avoid major water shortages).

Power Reliability

WSSC has been engaged in a comprehensive analysis of its emergency power capabilities and reliability for both its water treatment and distribution system and its wastewater treatment and collection system. There is an ongoing project in the WSSC CIP ($4.8 million total project cost in the FY15-20 Requested CIP), with most of the funds expected to be spent by the end of the current fiscal year. Council Staff has asked WSSC to provide an update on this study and any initial findings and likely next steps that it anticipates to pursue in the near future. WSSC provided a few slides (see ©14-16) that provide a summary of the study's recommendations regarding work to be done at WSSC's facilities. *Note: WSSC has not completed its analysis of the study and no decisions have been made yet regarding the Study's recommendations.*

WSSC may be able to build cost-effective permanent on-site emergency power generation at some of its facilities. However, for its larger facilities, such as the Potomac Water Filtration Plant, the energy demands are so great that sufficient emergency power generation may not be feasible. Working with Pepco to make the substation and feeder lines that service the Plant more reliable may be another way to improve the Plant's power reliability. Also, as noted earlier, while electrical power has been lost to the Plant on multiple occasions, the Plant is categorized at the highest priority level in Montgomery County for restoration of electrical service, and Pepco and WSSC have been able to restore service to the Plant within hours of a power failure (avoiding major impacts on water transmission).

As with the large diameter PCCP pipe inventory, more communication between WSSC and OEMHS regarding temporary and long-term electricity vulnerabilities would help OEMHS better plan for and coordinate the County's response during emergencies.

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.[1]

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 completed its initial inspections, urgent repairs, and acoustic fiber optic (AFO) monitoring work on the 77 miles of largest pipe by the end of FY13. WSSC is beginning to expand this program to pipes smaller than 48-inch diameter as well, and inspected several 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 FY14-19 CIP, WSSC requested and received substantial increases in funding for this project. WSSC has six-year funding of $209.9 million, with $37 million in FY14.

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 FY14 budget includes $6.1 million for 18 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.

The challenge for WSSC is to manage the inspection and repair of these large diameter pipes while maintaining reliable water service to customers. The 18 miles of inspection work assumed in the FY14 budget reflects a maximum amount of work WSSC feels it can do while still maintaining sufficient system reliability. However, with pipes dewatered for routine inspection and maintenance/repair, pipe failures which otherwise might be manageable without major impact can lead (as occurred in previous pipe breaks) to the need for mandatory water restrictions. Also, as noted on page 4 of WSSC's response letter of June 28 (see ©7), pipe repair schedules can be challenging, as *"There is no way of knowing how many repairs will be*

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[1] On March 18, 2013, a 60-inch water main broke near the intersection of Connecticut Avenue and Chevy Chase Lake Road in Montgomery County. In 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 Meadowside Lane. On December 23, 2008, a 66-inch PCCP broke near the 8500 block of River Road in Bethesda.

necessary or the location of those repairs until well into the execution of the inspection programs."

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, Montgomery County officials have asked WSSC to provide more pro-active communication with regard to short and long-term system vulnerabilities, resulting from pipes and facilities being out of service for scheduled maintenance or repair, so that the County can be better prepared when pipe breaks and/or electrical outages occur.

The July 2013 incident in Prince George's County (in which WSSC had to take a large diameter pipe out of service due to an alarming number of AFO "pings") nearly resulted in the loss of water for several days to 100,000 WSSC customers. Fortunately, WSSC was able to avoid the large scale loss of water by repairing and utilizing a 48 year old water valve. This incident raised some other concerns, including: the status of WSSC's valve exercising program and the timing and content of WSSC's communication with Prince George's County Government officials and the public.

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, the Maryland-National Park and Planning Commission, and WSSC, as well as representatives from municipalities, the building industry, and community organizations, was formed earlier this year to review and come to consensus on addressing this concern. The group is expected to provide a report to WSSC Commissioners by the end of 2013 or in early 2014.

Information Sharing and Communication

Given the public safety, health, and economic criticality of maintaining and/or restoring water service quickly after major emergencies, OEMHS has been working with WSSC (as it does with Pepco and other utilities) to improve regular information sharing and communication. Below is an excerpt from a recent email sent to WSSC from Mr. Voss. These requests are similar to what was requested in the May 17 CAOs letter (see ©1-3), but with some additional detail added (underlined).

First, we ask that WSSC: (1) identify any critical infrastructure (pipes, pumping stations, water storage tanks, <u>valves, fire hydrants</u> or other facilities) that are out of service now or are planned to be out of service during the 2013 Summer; (2) identify geographic areas with any increased risks to residents, businesses, or government agencies associated with each out of service item (e.g., increased risk for loss of water volume or pressure needed for fire suppression, residential, or commercial activities); (3) the steps being taken by WSSC to address any increased risks during the out of service period (e.g., notice to fire departments, mandatory water restrictions, adjustments to water storage tank usage and/or refill schedules, etc.); and (4) the steps being taken by WSSC to ensure that these critical infrastructure items are in service during the peak demand summer months, including a timeline for any necessary inspection, repair, maintenance or construction work.

Second, we ask that WSSC develop a quarterly reporting process for planned inspection, maintenance, and repair of critical infrastructure items. The quarterly report should: (1) identify each critical infrastructure item (including, but not limited to: pipes, pumping stations, water storage tanks, valves, fire hydrants or other facilities) that is out of service or planned for out of service; (2) identify the geographic areas with any increased risks to residents, businesses, or government agencies associated with each out of service item (e.g., increased risk for loss of water volume or pressure needed for fire suppression, residential, or commercial activities); (3) explain the steps being taken to address any increased risks during the out of service period (e.g., notice to fire departments, mandatory water restrictions, adjustments to water storage tank usage and/or refill schedules, etc.); (4) show the original timeline for inspection, maintenance, and repair work; (5) show actual completion dates for inspection, maintenance, and repair work; and (6) explain the cause of any delays.

Mr. Voss and Chief Lohr will be available at the Joint Committee discussion to elaborate on the need for the above information and to update the Committee on progress made to date on these requests with WSSC.

On page 7 of the WSSC response letter (see ©10), the General Manager notes that he has asked staff to develop a reporting format for listing major pipes/facilities out of service that can be updated in "real time", which would be more valuable than static reports.

Attachments
KML:f:\levchenko\wssc\issues\30 year infrastructure plan\water main breaks\wssc emergency preparedness 9 9 13.doc

Isiah Leggett
County Executive

Timothy L. Firestine
Chief Administrative Officer

Rushern L. Baker, III
County Executive

Bradford L. Seamon
Chief Administrative Officer

May 17, 2013

Jerry Johnson, General Manager/CEO
Washington Suburban Sanitary Commission
14501 Sweitzer Lane
Laurel, MD 20720-5902

Re: WSSC – Critical Infrastructure – Emergency Management

Dear Mr. Johnson:

During the past three years, all 1.6 million customers of the Washington Suburban Sanitary Commission (WSSC) in Montgomery County and Prince George's County were placed under Mandatory Water Restrictions on three separate occasions. In each of these instances, the water restrictions were the result of, or prolonged by, maintenance being performed on critical water mains in the WSSC system.

On July 1, 2010, emergency repairs were performed on a 96-inch water main located near Tuckerman Lane and Gainsborough Road in Montgomery County. This type of repair would not normally result in mandatory water restrictions. However, due to other large water mains out of service, including a 66-inch distribution line that services both the Montgomery County and Prince George's County main zones, mandatory water restrictions were necessary.

On June 29, 2012, a large storm (Derecho) rolled through the service area and knocked out power to more than two-thirds of Pepco's service area. This included the Potomac Water Treatment Plant and many of WSSC's supporting pump stations. Even when power was restored to the Potomac Water Treatment Plant, the fact that a 60-inch main supplying the Montgomery County High Zone was out of service for repairs required WSSC to keep water restrictions in place until additional pumping stations used as a bypass were also restored. According to information shared by WSSC, the 60-inch main was originally scheduled to be back in service prior to the Derecho storm.

On March 18, 2013, a 60-inch water main ruptured near the intersection of Connecticut Avenue and Chevy Chase Lake Road in Montgomery County. This would not normally result in mandatory water restrictions. However, due to other large water mains out of service, including a 96-inch distribution line, water restrictions were necessary.

We know that WSSC will continue to experience large water main breaks. Power outages and other disruptions will likely impact other WSSC facilities and infrastructure. These disruptions are exacerbated when water mains, pumping stations, water towers or other critical infrastructure facilities are out of service due to routine or emergency maintenance. At times we have learned about water mains that were out of service long after the original projected end dates for completion of maintenance or repairs. In order to enhance our situational awareness and emergency planning, we want to ensure that WSSC keeps Montgomery County and Prince George's County aware of the status of these repairs year round.

We understand that WSSC's infrastructure system requires regular inspection, maintenance and repairs that impact the availability of water mains to deliver water. However, we strongly believe that regular notification and updates on the status of critical infrastructure is an important WSSC responsibility. We look forward to working with WSSC to ensure that a reporting and notification process is in place and hope to work with you in the coming weeks to address the following three critical areas.

First, we ask that WSSC: (1) identify any critical infrastructure (pipes, pumping stations, water storage tanks or other facilities) that are out of service now or are planned to be out of service during the 2013 Summer; (2) identify geographic areas with any increased risks to residents, businesses, or government agencies associated with each out of service item (e.g., increased risk for loss of water volume or pressure needed for fire suppression, residential, or commercial activities); (3) the steps being taken by WSSC to address any increased risks during the out of service period (e.g., notice to fire departments, mandatory water restrictions, adjustments to water storage tank usage and/or refill schedules, etc.); and (4) the steps being taken by WSSC to ensure that these critical infrastructure items are in service during the peak demand summer months, including a timeline for any necessary inspection, repair, maintenance or construction work.

Second, we ask that WSSC develop a quarterly reporting process for planned inspection, maintenance, and repair of critical infrastructure items. The quarterly report should: (1) identify each critical infrastructure items that is out of service or planned for out of service; (2) identify the geographic areas with any increased risks to residents, businesses, or government agencies associated with each out of service item (e.g., increased risk for loss of water volume or pressure needed for fire suppression, residential, or commercial activities); (3) explain the steps being taken to address any increased risks during the out of service period (e.g., notice to fire departments, mandatory water restrictions, adjustments to water storage tank usage and/or refill schedules, etc.); (4) show the original timeline for inspection, maintenance, and repair work; (5) show actual completion dates for inspection, maintenance, and repair work; and (6) explain the cause of any delays.

Third, in addition to the quarterly report, we ask that WSSC provide timely notice to both counties of any unplanned inspection, maintenance, or repair work associated with critical infrastructure that is initiated in between the quarterly reporting periods. This notice should include the timeline for completion of necessary inspection, maintenance, or repair work.

We strongly believe that both counties need this requested information in order to ensure that our respective governments have the best possible situational awareness relating to potential, emergent and actual emergency situations so that we can work in partnership with WSSC to evaluate and respond to emergency situations, including mitigation of water loss, property damage, and personal injury.

Sincerely,

Timothy L. Firestine
Chief Administrative Officer
Montgomery County

Bradford L. Seamon
Chief Administrative Officer
Prince George's County

TLF/BLS:kb

Washington Suburban Sanitary Commission

14501 Sweitzer Lane • Laurel, Maryland 20707-5901

June 28, 2013

Mr. Timothy L. Firestine
Chief Administrative Officer
Montgomery County
Executive Office Building, 2nd floor
101 Monroe Street
Rockville, MD 20850

Mr. Bradford L. Seamon
Chief Administrative Officer
Prince George's County
County Administration Building, Suite 5032
14741 Governor Oden Bowie Drive
Upper Marlboro, MD 20772

Re: WSSC - Critical Infrastructure - Emergency Management

Dear Messrs. Firestine and Seamon:

Thank you for your joint letter requesting improved notification and information sharing with Montgomery and Prince George's County regarding WSSC's planned and unplanned inspection, maintenance, and repair work for the water supply system. I appreciate your patience while we investigated your concerns and suggestions.

The Washington Suburban Sanitary Commission (WSSC) has been serving the residents of Montgomery and Prince George's counties since 1918. It is our mission to provide safe and reliable water to our customers and return clean water to the environment, all in an ethically and financially responsible manner.

Unfortunately, our nation's infrastructure is aging and beginning to fail. WSSC's water and wastewater systems are no exception. In summer 2008, the Commission released the first phase of a 30-Year Infrastructure Plan that involved a broad examination of the condition and lifespan of all of the Commission's major assets. Among the findings in the report were:

- Renewal of the water system is driven primarily by the physical mortality of the buried piping. It is estimated that by 2025 approximately 50% of the entire water distribution system will reach or exceed its useful life. There are approximately 2,000 miles of cast iron pipe in the distribution system less than 16 inches in diameter and over 85% of this pipe will exceed its useful life by 2025.

- Out of the nearly 5,500 miles of water mains WSSC maintains, almost 1,400 miles are more than 50 years old. Approximately 2,500 miles of our water mains are between 25 and 50 years old.

In March 2011, the Commission completed phase two of the Asset Management Program. Phase two specifically identifies the infrastructure needs over the next 30 years, including investment and resource requirements.

Under the Maryland Public Utilities Code Annotated (Title 23, Subtitle 3), the WSSC is responsible for annually preparing a Six-Year Capital Improvements Program (CIP) for major water and sanitary sewerage facilities. For your review, WSSC's CIP information is readily available on our website at www.wsscwater.com. Specifically, the CIP document includes a discussion of WSSC's legal authority, the CIP planning process, a program overview, and detailed project information.

In Fiscal Year (FY) 2012, WSSC aspired to replace 41 miles of water mains. The Commission surpassed this goal by nearly 19 miles or 46%, replacing a total of 59.5 miles of water mains. WSSC crews planned and replaced 12 miles while the Commission hired contractors replaced the remainder. WSSC crews exceeded their goal by two miles. By FY 2015, WSSC expects to replace 55 miles of water mains annually.

Of the nearly 5,500 miles of water mains, approximately 145 miles are comprised of large Pre-stressed Concrete Cylinder Pipe (PCCP) equal to or greater than 36-inches in diameter. These PCCP mains make up the backbone of WSSC's large diameter water transmission system; therefore, placing a high consequence of failure on these pipelines.

As a result, for several years, the water distribution system's PCCP transmission mains have been a major priority for WSSC. PCCP is manufactured with concrete and reinforced with steel wire bands. Corrosion causes gradual

deterioration of the wires in some PCCP lines. From the 1970's through the 1980's, WSSC experienced several premature PCCP failures; and in 1979, WSSC began efforts to initiate an aggressive inspection program for PCCP pipelines critical to the transmission main network. By 1981, WSSC had performed the first internal PCCP inspections using manned teams in dewatered pipelines, conducting visual and sounding surveys to detect signs of incipient failure.

The WSSC PCCP Inspection Program (Program) uses state-of-the-art inspection, condition assessment, and monitoring techniques. The Program has evolved into one of the most comprehensive and cutting edge in the industry through the use of advanced technologies and engineering techniques for the evaluation, repair, and management of critical pipeline assets.

The Program consists of a five (5) to seven (7) year inspection and condition assessment cycle for each transmission main, with adjustments to the subsequent inspection schedules based on results of the condition assessments and long-term acoustical monitoring. Within 30 days following a pipeline inspection, all repair/replacement recommendations are prioritized based on the individual pipe section likelihood and consequence of pipeline failure.

To more effectively manage its PCCP transmission pipelines, in 2007, WSSC developed a five (5) year PCCP Inspection Plan. Updated annually, the Plan includes a comprehensive pipeline inspection, engineering evaluation, and management program based on the tools and methods developed over the years to identify and react preemptively to prevent or mitigate future failures.

Also in 2007, WSSC added Acoustic Fiber Optics (AFO) to detect the sounds associated with pre-stressed wire breaks in PCCP sections, while the pipelines are in service. Once installed, the AFO system continuously monitors the integrity of the PCCP. If a potential problem is detected in any pipe section, the AFO system notifies trained personnel who evaluate the situation. In late 2008, additional acoustical leak detection methods were employed prior to dewatering the mains for inspection. By the conclusion of FY 2013, all 77 miles of PCCP water transmission mains 48 inches and larger will be equipped with continuous AFO-monitoring technology. Because of the design of the pipe, AFO is effective only for PCCP, not for other types of pipe in the system such as ductile iron or cast iron.

The AFO system was tested and proved to be a viable warning system. Perhaps the most widely known example occurred in late June 2010. The AFO system warned of a cascade of wire break activity that concerned the WSSC staff. This led to the decision to modify the PCCP Inspection Program schedule, then underway, and take the 96-inch pipeline with the wire break activity out of service under emergency conditions. When the sixteen-foot pipeline section was removed over the 4th of July Holiday, the visual signs of incipient failure were obvious. The AFO system worked. WSSC's decision to take the pipeline out of service saved at least an estimated $1.2 million in repair costs and addressed a potentially imminent and very serious risk to public safety.

You cited three instances where WSSC imposed mandatory water restrictions. While true that in each circumstance, the restrictions were necessary because a combination of water mains were out of service, it is not true that these lines were out of service because of repairs occurring long after projected end dates for completion. This implies a planned schedule of repairs that is followed and that is just not the case. There is no way of knowing how many repairs will be necessary or the location of those repairs until well into the execution of the inspection program.

In all three instances cited, the lines referred to as being out of service were either under repair after scheduled inspections or to support Inter-County Connector (ICC) construction by the Maryland State Highway Administration (SHA). After the River Road break in December 2008 both Counties requested that WSSC increase its effort to inspect its PCCP transmission mains and in order to do so increased the next budget beyond what WSSC had requested. WSSC complied by expanding its annual program two to three fold. Ironically the 66-inch line referred to as being down in 2010 when the Tuckerman Lane pipeline was taken out of service was the very same River Road pipeline whose failure in 2008 was the catalyst for expanding the program.

Each year the inspection program begins with dewatering of pipelines for inspection after the conclusion of the high summer water demand period. The goal is to dewater, inspect, analyze the results, decide what repairs are necessary, design the repairs, issue the work to the contractor, conduct the repair, install (or reinstall) the acoustical fiber optic cable for monitoring, and recharge the pipeline – all before the next high summer demand period and all of this for upward of 18 miles of pipeline. This goal is not always achieved. As stated earlier, the extent of necessary repairs is not known until the inspection is concluded and the analysis of the results conducted; so there is no preplanned schedule to adhere to. It is certainly true that the WSSC program is aggressive

but the yearly plans are created and amended as necessary based upon operational limitations. Adjustments are made as operational necessities dictate. These necessities can change at any time resulting in changes to the plan and its activities, and on occasion water restrictions will be necessary. The objective in all that we do is to maintain water service for our customers for not only today but for tomorrow as well.

WSSC makes every effort to return large diameter PCCP water transmission mains to service as soon as possible and typically no later than June 30 of every year, when demand increases. However, there are certain transmission mains that may be out of service through the summer months. These mains have a level of redundancy that would not create an unacceptable risk to the water supply by having them out of service. WSSC staff coordinates across work units and performs detailed modeling to determine when the water distribution system can accommodate a shutdown and for how long; taking into account all of the planned work and other known pipe outages that are scheduled throughout the system. Additionally, the Program reacts to day-to-day activities, such as emergency maintenance, which may force changes to planned inspection schedules. WSSC continues to improve on the current processes and analysis techniques as the size of the Program grows.

During a scheduled shutdown, the WSSC Systems Control Group/Control Center informs the respective jurisdiction if there is an immediate concern for meeting fire flow. Staff provides the Fire Department the anticipated flow compromises or low pressures prior to taking the pipeline out of service. The Control Center Operators modify or change water production at the plants or the water pumping stations to minimize the impact of the outage as much as physically possible. With guidance from the Commission's hydraulic modelers, the Control Center strives to continue meeting customer demand without exceeding the known operating pressure constraints. In this regard, the Control Center Operators are given new temporary operating constraints to increase reliability of the system while a pipeline is out of service.

Reasons for planned outages include relocations required for State and County road work (such as the ICC), plant rehabilitation and improvements, connections for new construction, water distribution system rehabilitation and/or infrastructure replacement, rehabilitation and/or replacement of water storage facilities.

If during a scheduled shutdown another unanticipated water outage occurs that further compromises the delivery of water, the Systems Control Group/Control

Center informs the appropriate jurisdiction and, if necessary, makes recommendations for water restrictions and/or boil water advisories.

When water systems lose pressure, there is an increased risk of contamination from earth and debris pulled into the water mains. Even if there is no indication that the water system is contaminated, as a proactive precautionary public safety measure, WSSC and the Maryland Department of the Environment (MDE) will issue boil water advisories and mandatory water restrictions. The Mandatory Water Restrictions allow the system to replenish and ensure continued water supply for all WSSC customers, to include fire protection and hospital/medical uses.

Please be assured that WSSC is dedicated to preventing unnecessary water loss. Factors that we use to prioritize repairs include traffic conditions, damage to the road, damage to homes and other structures, harm to the environment, the volume of water being discharged, and the pipe diameter. Based on priority, all water main breaks are handled as emergency maintenance and assigned in turn to the first available crew. During a water emergency, initial information is limited while we identify the source of the water loss, assess the damage, and determine the necessary repairs. Unfortunately, until our crews close the water valves to isolate the broken section of pipe, we do not know which customers are affected. Moreover, until the area is excavated, we cannot determine the type of break or estimate how long it will take to complete repairs. Even then, unforeseen circumstances, such as obstructions and the proximity of other utilities, can cause repair delays. In this regard, as details are confirmed; we notify the impacted jurisdictions, issue press releases and post updates on our website at www.wsscwater.com.

In our continuing effort to provide excellent customer service, on November 12, 2008, WSSC launched a new Customer Notification System (CNS) to alert the 1.8 million people we serve in Montgomery and Prince George's Counties about WSSC-related situations – emergencies, water main breaks, traffic backups caused by Commission work – that may affect their service or daily routines. By clicking on the Customer Notification System logo on WSSC's home page at www.wsscwater.com, WSSC customers and other area residents can register and receive e-mail and text message alerts about WSSC-related situations impacting their home, work, school and/or other addresses of interest.

Additionally, the Commission is proud to offer WSSC Mobile. The WSSC Mobile App allows customers to use a Smartphone to pay their water and sewer bills, check on service alerts, report a problem, email us with a question, and more.

Residents can find out if there are any service disruptions in their area by checking their current location or typing in another address; as well as, send a picture and report service problems. As we engage more in social media, we continue to explore the best methods for alerting residents when problems exist in their areas.

As water and wastewater professionals, WSSC holds the safety and health of the public as our highest obligation in the performance of our duties. In doing so, we must take all appropriate steps to protect the water supply; this includes safeguarding information regarding the status of critical infrastructure. Moreover, as we mentioned previously, our inspection, maintenance and repair program reacts to daily activities (both planned and unplanned) that regularly cause changes to inspection, repair and in service schedules. Quarterly, WSSC can provide information regarding water mains that are out of service along with the dates they were taken out of service. However, as mentioned earlier, while we do our very best to project completion times we cannot provide an exact period of time the water main will be out of service because there are several factors that determine the length of time for completing the repairs including unforeseen circumstances beyond our control.

Please be assured that once we identify the cause of the water loss in a critical water main that lacks redundancy, meaning customers would be at risk of being out of service, WSSC does everything necessary, including advising as quickly as possible the affected jurisdiction and utilizing all resources needed to expedite repairs.

I have attached a listing of all PCCP and other major facilities currently out of service in the service area. With respect to quarterly reporting, I have asked staff to develop a format that will accomplish this through an updating process so that there is real time information available rather than generating a series of static reports. I have asked that this be done because the water supply system, as explained earlier, can change day to day or even hour to hour, and after the fact situational awareness may not serve either of you very well. I will follow-up with you on the progress of this effort.

If you have any questions, please do not hesitate to contact me or in my absence Mr. Derrick D. Phillips, Acting Chief of Customer Care, at 301-206-8600 or by e-mail at dphilli@wsscwater.com.

Sincerely,

Jerry N. Johnson
General Manager/ CEO

Attachment

ATTACHMENT

PCCP AND MAJOR WATER SERVICE FACILITIES OUT OF SERVICE

TEMPLE HILLS -SOUTH

The 42" Henson Creek (1.5 miles from Bock Rd to Indian Head Highway) – Not a critical main. CCT is ready to begin recharging, chlorination and flushing operations, but have held off putting main back into service to allow time to work on some PRV valves in the vicinity of the main. We are working to determine the best strategy to do further creek restoration before restoring service.

The 42" Henson Creek (2 miles from Beltway to Rosecroft Race Track) - Not a critical main. Out of service for more than 10 years. This main is currently being evaluated for relocation/rehabilitation.

Hill Road Reservoir #1 – Not a critical facility. Out of Service for next 4-5 months for roof replacement – Not a critical main.

ANACOSTIA-CENTRAL

The 54" Adelphi Line (1.5 miles from Arena Dr to Central Ave PS) - Pipe repair complete. AFO cable has been installed. Pipe is charged. Chlorination/cleaning in progress.

Central Avenue Pumping Station - Will be back on line once above referenced chlorination/cleaning is completed (this week or next pending test results)

Rogers Heights Standpipe – Not critical. Punch list and painting to be completed, and expected to be back in service by end of July

LYTTONSVILLE-WEST

None

GAITHERSBURG-NORTH

The 96" main (total 8 miles including 72", 66" along Tilden La. and 48") - has been out of service since Nov. 17, 2012. (Prior to the dewatering the main, Smart-Ball leak-survey was conducted.) The dewatering took placed from Nov. 17 to Jan. 6, 2013. The internal inspections (visual inspection, electromagnetic inspection, and Ultra-sonic inspection) were performed between Jan 7, 2013 and Jan. 29, 2013. With inspection results, WSSC received final draft report on Mar. 18, 2013 and the scope of work for the repairs was completed on April 15, 2013. Based on the inspection report, it was decided 2 pipe sections needed to be

ATTACHMENT

replaced by excavation and 46 pipe sections needed to be repaired with carbon fiber wraps. To expedite the repair work, WSSC awarded the repair task to two contractors on April 3, 2013. Construction/repair work complete. Pipe is charged.

We are chlorinating/cleaning the line. A sample will be collected for lab testing once the chlorination/cleaning are complete. The line will then be returned to service after test results are reviewed (likely the 2nd week in July).

The 66" main in I-270/Montgomery Ave (.6 miles from Clopper Rd to Rt.355) – Not a critical main. The dewatering (shutdown) was started on Feb 28, 2013 to inspect the main and construct a 54" valve. The 54" valve installation is complete. Repair/replacement of pipe expected completion in late August.

Study Recommendations Summary

Note that the Recommendations from the Study Have Not Been Analyzed and no Decisions as to Action Have Been Made.

	Montgomery County	Prince George's County
# Water Facilities w/ Recommendations	4	2
Total Construction Cost (Water)	$35.7M	$6.2M
# Wastewater Facilities w/ Recommendations	7	9
Total Construction Cost (Wastewater)	$7.7M	$25.9M

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Priority Ratings for Facilities in Montgomery County

Facility	Ranking	Estimated Cost	Scope
Potomac WFP	1	$32.3M	5 ea. 2,725 kW generators
Damascus WWTP	3	$1.3M	1 ea. 1,500 kW generator
Seneca WWTP	5	$6.2M	2 ea. 2,500 kW generator
Wheaton WPS	8	$1.6M	1 ea. 1,250 kW generator
Neelsville WPS	10	$0.3M	1 ea. 350 kW generator
Kings Farm A WWPS	12	$0.1M	1 ea. 125 kW generator
Goshen Road WPS	14	$1.6M	1 ea. 1,250 kW generator
Brookmont WWPS	15	$0.07M	1 ea. 15 kW generator
North Branch WWPS	17	$0.04M	RVSS Starters & Elect. Work
Wexford WWPS	20	$0.01M	Elect. Work
Arcola WWPS	22	$0.03M	RVSS Starters & Elect. Work

Note: RVSS is Reduced Voltage Solid State

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Priority Ratings for Facilities in Prince George's County

Facility	Ranking	Estimated Cost	Scope
Piscataway WWTP	2	$15.7M	2 ea. 2,725 kW generators
Patuxent WFP	4	$4.8M	1 ea. 2,725 kW generator
Hyattsville WWPS	6	$1.4M	1 ea. 1,500 kW generator
Parkway WWTP	7	$2.4M	1 ea. 3,000 kW generator
Western Branch WWTP	9	$6.2M	2 ea. 2,500 kW generator
Hill Road WPS	11	$1.4M	1 ea. 1,000 kW generator
Decatur Street WWPS	13	$0.07M	1 ea. 10 kW generator
Muirkirk B WWPS	16	$0.1M	1 ea. 35 kW generator
Ft Washington Estates WWPS	18	$0.03M	RVSS Starters & Elect. Work
Ft Washington Forest #1 WWPS	19	$0.03M	RVSS Starters & Elect. Work
Muirkirk A WWPS	21	$0.03M	RVSS Starters & Elect. Work

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