TESTIMONY OF JERRY N. JOHNSON
GENERAL MANAGER/CEO
WASHINGTON SUBURBAN SANITARY COMMISSION
SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
SUBCOMMITTEE ON WATER AND WILDLIFE
TUESDAY FEBRUARY 28, 2012

Good Morning. My name is Jerry Johnson; I am the General Manager and Chief Executive Officer of the Washington Suburban Sanitary Commission. We provide water and wastewater services to the 1.8 million residents of Prince George's and Montgomery counties in Maryland which border our nation's capital. WSSC has a combined operating and capital budget for Fiscal Year 2012 of $1.2 billion.

It is an honor to be here, and thank you for inviting me to join you on this relatively balmy morning in February. We're all enjoying this warm weather, but it has particular significance for utility operators -- these warmer temperatures have meant fewer water main breaks that affect WSSC's customers, employees and our bottom line. Water main breaks in our service area can also affect the many federal facilities we serve and even the region's economy.

We had **only** 366 breaks and leaks in January. And in all of last year, our customers endured **only** about 1,600 breaks and leaks. But that is counter to the long-term upward trend. Our yearly average is over 17-hundred. Our fear is that if we don't act quickly enough, that one day in the not-too-distant future, the number of breaks will reach a tipping point where we are unable to keep up with repairs.

You may have heard about the study released yesterday by the American Water Works Association. It estimates that nationwide, to replace our aging underground water infrastructure, as well as to add new pipes for a growing population, the cost will be one **trillion** dollars over the next 25 years.

Sitting in the national capital area, WSSC represents a microcosm of that report. WSSC has nearly 56-hundred miles of underground water pipes, fed by two water filtration plants...one on the Potomac River, the other on the Patuxent. Approximately 15-hundred miles of those pipes...26 per cent...are over 50 years old.

Several years ago we embarked on a plan to address this issue by increasing the replacement rate. It doesn't happen overnight. Plans must be developed, designs drawn, permits issued and contracts issued; but most of all, you need money.

During the current fiscal year, we plan to replace 41 miles of pipe. By FY'15, the number will top-out at 55 miles of water pipe per year that we hope to be able to afford.

In today's dollars, the cost to replace a mile of pipe is approximately $1.4 million. Over the next six years of our Capital Improvements Program, the cost of replacing underground water pipes will cost WSSC ratepayers an estimated three-quarters of a billion dollars...and we need to keep up that pace **forever**.

Our biggest challenge is funding. Ninety-five per cent of our revenue comes from our customers. For six years WSSC had no rate increases, followed by three years of increases below the inflation rate. For the last five years, even with a troubled economy, our county councils have recognized the pressing issues we are striving to address and approved rate increases of between six (6) and nine (9) percent.

Unfortunately, more increases will be needed even though our recent increases are lower than those in many parts of the country (I would also guess that the water bill each of us pays is still probably the smallest of our utility bills.)

So, what is WSSC doing about these challenges?

- WSSC has undertaken a comprehensive, multi-year **Asset Management Plan**. When complete, it will provide a road map of the optimum schedule to either repair, refurbish or replace every single WSSC asset, including pipes—our goal is to make maximum use of every customers' dollar.

- WSSC has chartered an **Infrastructure Funding Working Group** made-up of WSSC and county stakeholders to study various ways to fund infrastructure replacement. We expect to receive this year meaningful recommendations on potential sources of non-rate payer revenue, but our customers will continue to face a substantial burden.

- We look at every avenue to **control and reduce costs**. For example, energy is among our largest annual operating expenditures. Four years ago we began the direct purchase of wind power from a wind farm in Pennsylvania. Now, **wind power** provides approximately one-third of all of our electric power needs, saving our customers an estimated $800-thousand.

- So far, wind energy is providing the added environmental benefit of **greenhouse gas reductions** that are equivalent to taking about 20-thousand cars off the Washington Beltway each year.

- With the help of a federal grant, we are studying the potential to use **anaerobic digestion** - a more efficient technology to handle a part of the

wastewater treatment process that also produces and allows us to use methane gas to provide for our energy needs.

WSSC is also:

- Extending the life of our large transmission pipes - those between 36 and 96-inches in diameter - by installing acoustic fiber optics, or A-F-O. This system of cables and microphones installed in the pipes allows us to listen for the potential snapping of support wires embedded in the concrete walls of the pipe, allowing us to monitor conditions with computers 24/7. Along with an inspection regime, A-F-O will help prevent another incident like the near-tragedy that occurred on River Road in Bethesda just before Christmas in 2008.

But at this point I have really only given you half the story; the drinking water side of the story.

WSSC also has 54-hundred miles of underground sewer pipes and six wastewater treatment plants. Like many urban communities in this country, including DC and Baltimore, we are under a consent decree to repair and improve the sewage collection system.

We and our customers are also contributing $18.5 million annually to the Maryland State Fund used to help clean-up the Chesapeake Bay.

But there are other costs our customers must bare, as well:

- Add, for example, another three-quarters of a **billion** dollars for sewer pipe maintenance and replacement over the next six years as projected in our CIP. Again, that number will continue forever.

- We are in the process of adding Enhanced Nutrient Removal to our five largest wastewater treatment plants as part of the Bay clean-up program. By the time those projects are completed in 2015, the total projected construction costs for these five projects is $61.4 million. WSSC expects to receive approximately $56 mmillion in construction grants for these projects from the Bay Restoration Fund...also known as the Flush Tax, which is levied by the State of Maryland and collected by WSSC and other wastewater utilities.

    - As you are probably aware, Governor O'Malley and the State Legislature are considering raising that fee from the current $2.50 per month, per account. That is additional pressure on our customers. WSSC customers are already the single largest contributors to the fund. One way or another, they pay.

- WSSC ratepayers must also fund nearly 46% of the cost of the ENR upgrade at the Blue Plains Wastewater Treatment plant in the District of Columbia. The estimated construction cost for WSSC's portion of this regional project is $311 million. WSSC expects to receive approximately $227 Million in construction grants from the Bay Restoration Fund for this project (This project must be completed by January 2015.)

Along with the practical problem of rebuilding this massive infrastructure, we face another challenge. Unlike roads, bridges and even railroads, we are out of sight and out of mind. By-and-large we deliver 24/7, 365-days a year. You turn the handle and the water flows. You press the button and the water flushes. Most of our customers only think of us when the bill arrives.

These functions, water and wastewater, are not optional, and they rely on a system of national infrastructure no less critical than the roads, bridges, airports and rails. They are absolutely necessary for the health and well-being of our citizens here and all across the country. These systems prevent disease, provide fire protection and are absolutely essential for economic growth in the United States.

We are out of sight and out of mind, even though:

- We have projects that are shovel ready;
- We are providing jobs for workers across a range of skill levels, and we can provide more...and do it quickly;
- We have customers who continue to carry the major part of this burden and who need relief, and most of all;

With the exception of some policymakers like those of you here today, underground infrastructure is a relatively low priority. The levels of federal funding for this critical national infrastructure have been falling for a number of years, and water infrastructure should be a larger part of the on-going national conversation because these challenges are not unique to WSSC.

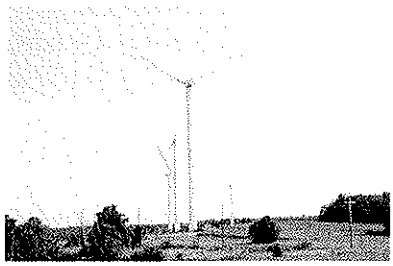
I hope this thumbnail sketch of the challenges we face as a local utility has been helpful, and I again want to thank you for the opportunity to appear before you today.

And let's hope that we make it through the month of March with more unseasonably warm weather!

Washington Suburban Sanitary Commission

Power Up!

Contact: Kirk Wineland
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The Washington Suburban Sanitary Commission (WSSC) powered up with wind in the spring of 2008. According to the U.S. Environmental Protection Agency, WSSC is ranked at #13 in the Top 20 Local Government users of green power.

Wind power now accounts for 28% of WSSC's total electric consumption. The Commission receives 85% of the energy generated from a wind farm in southwestern Pennsylvania, or approximately 70,000-megawatt hours of power a year.

While the use of wind power is growing more common, WSSC's wind power purchase is anything but common. Instead of buying renewable energy certificates or RECs, WSSC has opted to purchase green power directly from a wind farm. This not only means a tremendous savings for our customers, but also demonstrates our commitment to improve air quality by reducing greenhouse gas emissions.

WSSC is paying a fixed price for 85% of the wind farm's output over a 10 year period. To really understand the financial benefit, think about your own electric bill. As energy prices continue to skyrocket, imagine if you could lock in a reasonable rate for your electric bill and then pay that fixed price for the next decade. That's exactly what WSSC has done. We expect to save millions of dollars in energy costs over the length of our contract.

The Commission is also committed to protecting the environment for generations to come. By using direct wind power, WSSC is reducing greenhouse gases released into the Washington area by 38,000 tons/year. That is the equivalent of taking 100,000 cars off the Capital Beltway.

"Direct wind-power purchasing was a win-win-win for WSSC, its customers and the environment," says Rob Taylor, WSSC's Energy Manager. "It provides the opportunity to reduce the Commission's energy prices by providing a long-term hedge against rising generation costs, help clean the air we breathe, and to reduce our carbon footprint."

Washington Suburban Sanitary Commission

WSSC

Facts At-A-Glance

Contact: Kirk Wineland
301.206.8222

- Established in 1918 by the Maryland General Assembly to provide water and wastewater services for Maryland's Montgomery and Prince George's Counties
- WSSC's drinking water has always met or exceeded federal standards.
- 1,000 square miles service area
- Approximately 1.8 million residents
- 437,534 residential customer accounts
- 29,995 commercial and government accounts
- 1,600 employees
- $565, 922 million FY'12 Capital Budget
- $626,145 million FY'12 Operating Budget
- More than 5,500 miles drinking water pipelines
- Nearly 5,400 miles sewer pipelines
- 40,789 fire hydrants
- Average daily water production in FY11 – 175 million gallons per day
- Average daily wastewater treated in FY11 – 214.5 million gallons per day
- Raw water reservoir storage – 14 billion gallons of normal storage
- 2 water filtration plants
- 2 raw water pumping stations
- 7 wastewater treatment plants
- 3 water storage reservoirs with total capacity of 14 billion gallons
- 56 water storage tanks
- 17 treated (finished) water pumping stations
- 46 wastewater pumping stations
- CCT - 4 maintenance depots
- WSSC is governed by six Commissioners, three from Montgomery County and three from Prince George's County. Commissioners are appointed by their respective county executives and approved by their county councils. They serve four-year terms.
- The Commissioners hire the General Manager/CEO who manages the day-to-day operations

General Infrastructure (Calendar Years)

- 2,096 water main breaks and leaks in 2010; 1,489 breaks and leaks in 2011.
- December 2010 – record for most water main breaks and leaks in a single month: 647
- The 10 year water main break average is 1,715. (2000 – 2009)
- The one-year record is 2,126 set in 2007.
- 2007 – 2011: 9,217 breaks and leaks recorded.
- Age of pipes - **26 percent of all water mains are more than 50-years old**

OVER 50 YEARS	1,452.89 miles
25-50 YEARS	2,517.81 miles
UNDER 25 Yrs	1,619.61 miles
Total Miles of Water Main	5,590.31

Water Main Replacement Totals/Planned

FY	Miles/year
2005	21.5 miles
2006	17.2 miles
2007	16.1 miles
2008	24.98 miles
2009	34.41 miles
2010	38.94 miles
2011	44.34 miles
2012 – 41 miles planned	
2013 - 46 miles planned	
2014 - 51 miles planned	
2015 - 55 miles planned	

Pres-Stressed Concrete Cylinder Pipe (PCCP) /Acoustic Fiber Optics (AFO)/ General Infrastructure Information

- WSSC has approximately: 350 miles of "large mains" 16" and larger

- 145 miles 36" and larger
- 77 miles 48" and larger
- 59 miles 54" and larger

- In FY'09 10.2 miles of large mains were inspected and equipped with acoustic fiber optic (AFO) monitoring.

- In FY'10 13.3 miles of large mains were inspected with AFO installed.

- In FY'11 13.5 miles of large mains are being inspected and 11 miles of AFO installed.

- To date, about 55 of the 77 miles of large mains have been equipped with AFO.

- We expect all large mains (48" and greater) to be equipped with AFO by end of FY 2013.

- For one mile of PCCP, it costs about $225,000 to internally inspect and leave AFO (acoustical fiber optics) monitoring equipment behind.

- It costs an additional $13,000 a year to monitor each.

- The optimum inspection interval for large diameter mains is 5-7 years.

- In FY'09, WSSC's inspection mileage was increased from 6 miles to 12 miles a year. At 12 miles per year, these pipelines will be inspected at an interval rate of approximately 6.5 years.

- The targeted pipeline diameter was also decreased from 54" to 48".

- WSSC is using a combination of visual inspections and three types of state-of-the-art technology to inspect our large transmission mains.

- WSSC is the largest water utility in the nation using this technology.

- In November 2009, Trenchless Technology Magazine, a trade magazine in our industry, honored WSSC with its 2009 Project of the Year for Rehabilitation. We were honored for our "innovative approach and use of technology to cost-effectively craft a repair program."

- WSSC has contracted Pure Technologies to conduct "SmartBall" inspections and overall condition assessments of our large mains. The "SmartBall" is a high-tech "microphone" placed inside a foam shell that is compressed and inserted into the pipeline while it is in service (while water is flowing through the main).

- The "SmartBall" moves along the pipe "listening" for leaks as it flows through the pipe, passing through valves and other obstacles. It is then retrieved and the data is downloaded for analysis.

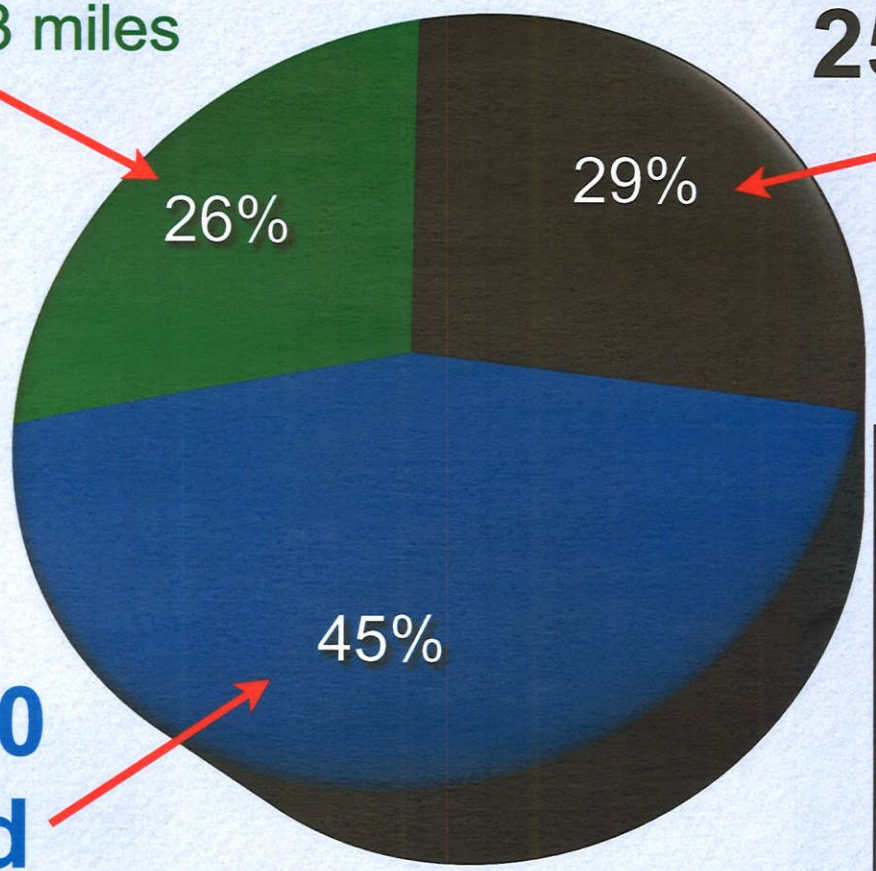
- The main is then dewatered for visual inspection and "P-Wave" electromagnetic inspection. "P-Wave" equipment is placed in the pipe to find and estimate existing wire breaks along individual pipe sections. Wire breaks are a key indicator that the pipe is weakening and at risk for failure.

- Finally, following the inspection of a pipe, WSSC (through Pure Technologies) installs acoustical fiber optic monitoring, or AFO, to continuously monitor the mains 24/7 to detect wire breaks.

WSSC's Water Mains

Pipe Over 50 Years Old
1,453 miles

Pipe Under 25 Years Old
1,620 miles



Pipe 25-50 Years Old
2,518 miles

Total Amount of Pipe
5,591 miles

WSSC

Washington Suburban Sanitary Commission

FY'13 Proposed Capital and Operating Budgets

	FY'12 Approved	FY'13 Proposed	FY'13 Over / (Under) FY'12	% Change
Capital Funds				
Water Supply	$198,844,000	$240,107,000	$41,263,000	20.8%
Sewage Disposal	332,424,000	536,771,000	204,347,000	61.5%
General Construction	34,654,000	19,984,000	(14,670,000)	(42.3%)
Total Capital	565,922,000	796,862,000	230,940,000	40.8%
Operating Funds				
Water Operating	251,595,000	269,337,000	17,742,000	7.1%
Sewer Operating	323,390,000	350,271,000	26,881,000	8.3%
General Bond Debt Service	51,160,000	41,455,000	(9,705,000)	(19.0%)
Total Operating	626,145,000	661,063,000	34,918,000	5.6%
GRAND TOTAL	$1,192,067,000	$1,457,925,000	$265,858,000	22.3%

The FY'13 Proposed Capital Budget of $796.9 million represents an increase of $230.9 million (40.8%) from the FY'12 Approved Budget. The significant increase is attributable to several major projects scheduled to move forward or to ramp up construction work in FY'13 including both the Blue Plains Wastewater Treatment Plant Digester and Enhanced Nutrient Removal projects, the Broad Creek Wastewater Pumping Station Augmentation, the Patuxent Water Filtration Plant Expansion, the Large Diameter Water Pipe Rehabilitation Program and both the small diameter Sewer Reconstruction Program and large diameter Trunk Sewer Reconstruction Program.

In summary, the FY'13 estimated expenditures for all operating and capital funds total $1.5 billion or $265.9 million (22.3%) more than the FY'12 Approved Budget. The FY'13 Proposed Operating Budget of $661.1 million represents an increase of $34.9 million (5.6%) from the FY'12 Approved Operating Budget. The primary driver of this increase is debt service associated with the increased Capital Budget, with costs expected to exceed FY'12 budgeted debt service by $25.4 million. Other drivers include cost increases at regional sewage disposal facilities, Sanitary Sewer Overflow Consent Decree Compliance including expansion of the Large Diameter Sewer Main Inspection Program, an increase in the operating reserve, and 12 new workyears in direct support of operations and maintenance of the water and sewer systems.