

## Pressure Maintenance Helps to “Break” Water Main Record

**D**EP is the largest municipal water utility in the nation, delivering more than one billion gallons of high quality tap water to more than 8.4 million New Yorkers throughout the five boroughs every day. The nearly 7,000 miles of water mains that deliver the water to residential and commercial properties run under almost every street in the city—and when there is a break or a leak, residential life can be disrupted, transportation networks are hampered, and local businesses are affected. While breaks in water mains are inevitable, driving the number of breaks down is essential to ensuring that New York City remains a desirable place to live and do business. To that end, over the last several years



BWSO has employed cutting edge technology along with increased preventive maintenance, and 2012 saw the lowest number of water main breaks during the last decade.

(Continued on reverse side)

## Spotlight on Safety

### Don't get stuck in the cubicle trap!

Many employees spend significant time doing tasks that are sedentary in nature. These tasks are characterized by work activities for which energy expenditure is low, such as prolonged sitting at desks.

A number of peer reviewed research studies suggest that prolonged sitting time can contribute to increased health risks. People who spend more than four hours per day sitting, regardless of how much moderate to vigorous exercise they regularly get, are at risk for higher blood levels of sugar and certain fats, larger waistlines, higher Body Mass Index and other chronic health conditions.

In addition to getting regular exercise, it is recommended that office workers and those involved in sedentary work for prolonged periods of time engage in any of the following simple steps:

- Take meetings on the go—brainstorm or solve problems while

walking. Walk down the hall to speak with a colleague, instead of calling or e-mailing them.

- Plan for alternative work activities during the course of the workday to avoid prolonged sitting time. Every 2 hours take an alternative 15 minute work break that requires a task that involves physical activity.
- Even standing versus sitting utilizes other muscles. It is important to note that alternative work activities are work tasks that are more likely to involve standing or walking (e.g filing, walking to the printer, walking to a meeting location rather than a conference call, standing/stretching at your desk when you talk on the phone, etc).

It's a great time to start fresh with a few new work habits. For more information visit [www.cdc.gov](http://www.cdc.gov) and search on “sedentary work.”

## Commissioner's Corner

As we begin a new year I'd like to take a moment to look back at some of the tremendous accomplishments the agency has achieved during the last 12 months and how they can inform our thoughts and priorities in 2013. Two years ago we unveiled a four year strategic plan that established 29 goals and 100 specific strategies and initiatives to help us achieve them. These clear goals allow us to measure our performance and ensure that we are accountable to our ratepayers and all New Yorkers, who also demand the cost-efficient delivery of services. With those thoughts in mind, I'd like to highlight a few initiatives that will help us meet our overall goal of becoming the most effective water and wastewater utility in the nation.

In May the Water Board adopted a 7% rate increase, the lowest in seven years. This was made possible in part by our work to reduce mandates through regulatory reform and thereby gain control over our capital budget. We have also been vigilant with our operational budget and have strategically funded new needs through internal cost reductions. At the same time, we reminded our ratepayers and local officials of the critical importance of water, which has no substitute and is necessary for life itself, and that unlike almost any other item in New York City, costs about average compared to other major cities' cost for water.

In June we released the initial report under our OpX initiative, which has already achieved \$7.2 million in recurring savings to our operational budget, while starting the process of integrating cost-consciousness throughout the agency. The hard work is just beginning as we reconsider our operations with the goal of even more efficient delivery of critical services.

We also signed an amended consent order with New York State that, for the first time ever, allows green infrastructure to count towards CSO reduction goals. A key component of this agreement was an adaptive management approach which maintains flexibility for the city to prioritize green investments in areas that will benefit most from the reduction in CSOs.

Our first ever State of the Sewers Report found that the rigorous inspection, analysis, and cleaning program we have established has produced tangible improvements to the level of sewer service city-wide. Advanced analytics and a risk-management based approach have helped us target our resources at specific problematic locations to not only fix problems now, but to proactively address the underlying condition and prevent future problems. Over the last five years we have increased the miles of sewer line cleaned by more than 116 percent, sewer backup complaints have dropped by 36 percent, and defective catch basin complaints have decreased by more than 32 percent.

The last 12 months also saw the fewest number of water main breaks during the last decade. In 2012 there were 347 breaks in the city's network of nearly 7,000 miles of water mains, down from a high of 632 in 2003. This past year saw an average of less than six breaks per 100 miles of pipe, well below the accepted industry average of roughly 23-25 breaks per 100 miles annually.

We also substantially completed installation of AMR units on properties across the city. This investment has allowed us to issue more than 31,600 alerts to property owners when their water consumption appears to be much higher than normal, saving them an estimated \$26 million.

Finally, while Hurricane Sandy affected every part of the department, our substantial investments in upgrading our wastewater treatment plants allowed service to be restored within a matter of days and the soon to be completed Catskill/Delaware UV Treatment Plant helped ensure that we were able to provide an uninterrupted supply of high quality tap water.

Our goal has always been to use data and analysis to guide the investment of ratepayer dollars as well as the work we do every day. These examples demonstrate just how effective this strategy can be, not only in the delivery of better service but in documenting our successes for the public. I look forward to working with all of you to achieve even more impressive results in the coming year.

## Focus on the Field

In the 30 years that Plant Superintendent **Steve Askew** has been at DEP, he has found it to be a rewarding journey. Askew attended City College, then adjusted his electrical engineering pursuits to work in the US Navy's Nuclear Power Program for six years. The son of a former DEP employee, Steve recalls how unstable it was working in the nuclear field after the Three Mile Island incident. "I needed a job and followed in my father's footsteps by joining DEP." Askew started as a mechanic, installing and repairing major equipment like pumps and engine generators, and worked his way up to shift operator, shift supervisor, assistant plant superintendent, and ultimately plant superintendent at the North River Wastewater Treatment Plant in 1996.

Askew thrives with the pace and variety of tasks at the plant. As he puts it, "There is never a dull moment. It is very exciting, and the last few years have been particularly challenging. On the upgrade side, we have finished \$100 million worth of odor control and process improvements and are now embarking on a \$200 million Co-Generation energy project." Then, there are the unforeseen challenges. Last year, a fire at the plant resulted in a brief shutdown and major repair work. On the heels of that post fire-related



work, the surge from Hurricane Sandy flooded key equipment, requiring Askew and his team to work through the night and the following day to make repairs. "The North River facility is extremely complex, and operating it is demanding even on a good day," said Deputy Commissioner **Vincent Sapienza**. "Steve has valiantly handled fire, flood, and blackout, and is truly owed a debt of gratitude by all New Yorkers."

Acknowledgement of Askew's work goes beyond DEP and includes being honored by an organization called the Select Society of Sanitary Sludge Shovelers—the 5 S's. Founded in Arizona in October 1940, it was conceived to recognize members who contribute in some outstanding measure to the wastewater treatment field.

## Kudos Corner



Photo courtesy of Mitch Waxman

**A "SUPER" GUY:** To recognize his outstanding service to the Greenpoint Community, Newtown Creek Plant Superintendent **Jim Pynn** was recently honored by Assembly Member **Joe Lentol**, Council Member **Steve Levin**, and members of the Newtown Creek Monitoring Committee. The event took place at a meeting of the Monitoring Committee, where Pynn was presented with a medal of achievement and a proclamation.

## Blood Drive Results

DEP employees donated a total of 586 pints during the December blood drive. In 2012, DEP employees donated more than 2,000 pints of blood—a new record high for DEP blood collections in a single year. Thank you to everyone who participated in this worthy and lifesaving cause.

(Pressure Maintenance Helps to "Break" Water Main Record... continued)



In 2012, there were 20 percent fewer water main breaks than the previous year. And, since the inception of a program to improve maintenance in the pressure zones within the water distribution system in 2007, water main breaks are down by more than 40 percent.

Pressure in the water distribution system is largely supplied by gravity. Downward pressure from Hillview Reservoir in Yonkers, which is roughly 300 feet above sea level, forces water through tunnels and into a network of water mains throughout the five boroughs. Pressure in the water distribution system is then controlled by a series of regulators and valves that are designed to supply and maintain reliable pressure throughout the city. In 2007, BWSO began a program to reassess the system's different pressure zones in an effort to prevent sudden spikes in pressure that can cause water mains to leak or break.

In 2010, BWSO also reorganized its Valve and Regulator Repair unit to more proactively inspect equipment and make repairs, which has helped minimize unintended spikes in water pressure and resulted in fewer water main breaks. This year, BWSO performed more than 5,300 preventative maintenance inspections on the city's roughly 500 water pressure regulators and rebuilt almost 90 of them.

"Maintaining proper water pressure in a defined area, with minimal fluctuations, is essential, so we have significantly increased the frequency with which we pro-

actively inspect our pressure regulators because an item as simple as a clogged filter can cause it to malfunction," said BWSO's Director of Distribution Operations **Mike Farnan**. "In addition, we are rebuilding the regulators to ensure that they continue to adjust the water pressure as is necessary to maintain a stable level of pressure."

Last year, the network of remote sensors that monitor pressure at water tunnel shafts and key regulators was expanded so that every pressure zone in the city is now monitored. The sensors send a cellular signal to DEP headquarters, which allows engineers to identify potential problems and make repairs before the water distribution system can be damaged.

In 2012 there were 347 breaks in the city's network of nearly 7,000 miles of water mains, down from a high of 632 in 2003. The average of less than six breaks per 100 miles of pipe is well below the accepted industry average of roughly 23-25 breaks per 100 miles annually.

"Public health and safety is contingent on a reliable supply of high quality water, which is why reducing the number of water main breaks is a key goal in DEP's strategic plan," said BWSO's Deputy Commissioner **James Roberts**. "By having the engineers who know the distribution system best focus on the equipment that is critical to maintaining a reliable and consistent level of pressure, we have made great strides toward this important goal."

**We welcome your feedback! To submit an announcement or suggestion, please email us at: [newsletter@dep.nyc.gov](mailto:newsletter@dep.nyc.gov).**