NYC Environmental Protection
Michael R. Bloomberg, Mayor
Carter Strickland, Commissioner

WEEKLY PIPELINE

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The History of Meters: A Very Long En-Gauge-ment

Located upstate and downstate, few pieces of technology owned by DEP have been deployed as far and wide as the water meter. The role of a meter is straightforward: to measure the volume of water that flows through a pipe. Meter technology initially took take shape in the late 19th century and is still evolving to this day. Water meters range in size, type and technology, but not in purpose. They are an essential part of maintaining the water system that nine million New Yorkers rely on.

Water meters provide DEP with the ultimate commodity: information. Just under a million meters throughout the city and upstate watersheds provide water consumption data for everything from reservoirs to residences. In the years ahead of the repairs to the Delaware Aqueduct, water meters have begun to play a crucial role in identifying opportunities for cost effective conservation. DEP's Automated Meter Reading (AMR) network has meant that more information is available now than ever before. The use of cutting edge AMR technology ensures that DEP's billing and system-wide consumption data are more accurate and efficient.

It is hard to fathom a time when most properties were not metered and large leaks across the city could potentially go unnoticed for years. Without meters, customers paid a flat charge, which in many cases, was worlds apart from what they actually consumed. That distant past was only 30-plus years ago. Not surprisingly, it was a time that coincided with unsustainable, record high levels of water consumption. The installation of

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Spotlight on Safety

Nominate Someone – Recognize EHS Excellence

The month of June 2012 has been designated for a special Employee of the Month (EOM) award – the EHS EOM Award. As June is recognized by the National Safety Council (NSC) as Safety Month, this year DEP will honor employees whose extraordinary actions and contributions in the area of environmental protection, safety and health make DEP, its employees, contractors, the public, and environment in which we work safer.

Nominate someone who performs EHS work in an outstanding manner. Employees can be nominated by their co-workers, supervisors, or management.

For additional information, or to nominate someone, visit the Pipeline Office of Environmental, Health and Safety homepage, complete the nomination form, and submit to Herb Roth, Deputy Director of Human Resources.

The deadline to submit nominations is May 18, 2012. Any questions can be directed to Herb Roth.

At DEP, everyone is responsible for safety. If you or anyone on your team is concerned about your working conditions, it's okay to ask your supervisor or your bureau's EHS liaison how they can help. If you've still got questions, you can call the EHS Employee Concerns Hotline. It's DEP's responsibility to acknowledge and fix unsafe situations, procedures, and practices. With your help, we'll not only get the job done, we'll make it safer for ourselves, our coworkers, our families, and our city.

CALL (800) 897-9677 OR SEND A MESSAGE THROUGH PIPELINE. HELP IS ON THE WAY.

Commissioner's Corner

Over the past three years, we have conducted three successive rounds of budget-tightening measures that have cut our operating costs by more than 15% in total. That has helped keep costs down while allowing us to fund new needs, such as staffing for multi-billion dollar facilities like the Croton Water Filtration Plant and the Catskill/Delaware Ultraviolet Disinfection Facility. The work to keep costs down while maintaining critical services was evidenced last week, when **Mayor Bloomberg** released the Executive Budget for FY13. The Executive Budget includes an $800 million increase in capital-spending, a major facet of the Mayor's long-term plan to rebuild critical infrastructure. DEP has the largest capital budget of any city agency, and we have honored that responsibility by instituting major improvements in our oversight, including the Project Controls Division and our Capital Management Information System.

On Friday, the New York City Water Board adopted the FY13 water rate. Before approving the rate increase, the Board considered the testimony at the hearings held over the previous week in each of the five boroughs. The 7.0% FY13 rate increase is the lowest increase in seven years, and is 25% lower than the increase projected at this time last year. The lower than expected rate increase demonstrates our commitment to keeping rates low while delivering the renowned service that New Yorkers deserve.

Our collections help fund programs that keep our waterways clean, and at the time of the rate adoption I stopped by the Hunt's Point plant with Deputy Commissioner **Vincent Sapienza** to thank our staff in the field who work on some of New York City's most critical operations. The Hunt's Point Wastewater Treatment Plant has a wet weather capacity to treat 200 million gallons of wastewater per day and serves more than 680,000 New Yorkers. Plant Superintendent **Bill Schroder** and Deputy Superintendents **Maria Duran-Waller** and **Samy Phlamon** showed us the new electrical substation and emergency generator facilities, which provide the extra electricity needed for the plant's new nitrogen removal technology. Nitrogen removal is a key component of improving waterbody health, as added nitrogen can promote algae growth, reduce dissolved oxygen levels, and damage ecosystems. We also observed the rehabilitation work being done on the digesters, as well as the plant's upgraded control room, where Bill explained how the plant's distributed-control computer system allows plant operators to monitor critical equipment in real time. We also walked through the new Central Residuals Handling building, which processes grit, grease, and screenings within an odor-controlled enclosure.

Our capital investments also help maintain our renowned high-quality drinking water, and it is important for the public to understand that connection. On Sunday, I and ten volunteers helped thousands of thirsty bikers in the annual Five Boro Bike Tour fill up their water bottles with great-tasting NYC Water. This year, more than 32,000 bikers cruised through the five boroughs on traffic-free roads. At seven locations along the way, water stations equipped with fast-filling coolers provided riders with refreshing tap water, along with NYC Water bottles for them to take and refill. The station at Brooklyn Bridge Park was more than halfway through the 40 mile trip, and Department of Transportation Commissioner **Janette Sadik-Khan** stopped by on her bike to refill and help promote NYC Water and NYC Water bottles. DOT also used our logo on their blog and Twitter accounts of the tour. I thank BCIA's **Eileen Alter** for helping coordinate the availability of NYC water at the rest stops and water stations, and congratulations to all the bikers on a successful event.

Focus on the Field

Paul Puglia started at DEP more than 13 years ago as a water use inspector trainee, working his way up to water use inspector. Paul's base is DEP's Meter Test Facility (MTF), a division that provides support services for all Bureau of Customer Services' (BCS) borough offices by performing some of the more difficult meter replacements, performing meter accuracy tests in customer homes/buildings, and acting as the BCS storehouse. Water meters are mechanical or electronic devices that have an "inner chamber" that measures the amount of water that goes through the meter. In one-, two-, and three-family homes, the meters record water in cubic feet. A cubic foot of water is about 7-1/2 gallons of water. If a customer thinks that his water meter is recording incorrectly, he can request a "meter accuracy test" for a $180.00 service fee. That is when Paul and his colleagues make their field visits.

Hearing Paul discuss the types of meters—like the turbine, displacement, compound, single-jet, and magnetic—leaves no doubt of his expertise. He looks forward to his field work in the five boroughs and meeting DEP's customers. There is no typical day for Paul in handling a variety of assignments. In one instance, he may find himself in a tight crawl space under a house, or in another less-than-ideal situation in order to repair and replace a meter. At other times he could be running 150 feet of fire hose to complete an accuracy test.

Paul is especially proud of the recent work in coordinating his colleagues and movers to relocate the old meter test facility in Brooklyn. It took less than two months and was completed weeks ahead of schedule.

When Paul is not spending time with his family, he enjoys working on his muscle car, a 1979 Firebird, and riding four wheelers and snowmobiles at his upstate family farm while staying clear of its 25 black angus cows.

Milestones

Congratulations to the following employees on their years of service: **Karl Stayna,** BEDC, 40 years; **Carmen L. Rodriguez,** OIT, 38 years; **Jerry Mistretta,** BWT, 34 years; **Dan Chin,** OIT, 31 years; **Dennis Marchese,** BWSO, 31 years; **Emil Pulicicchio,** OIT, 31 years; **Kuntie Ghansiam,** BCS, 30 year.

Word of the Week

Bulking – Clouds of billowing sludge that appear in secondary sedimentation tanks when sludge becomes too light to settle to the bottom of the tank.

Event Calendar

VISITOR CENTER AT NEWTOWN CREEK SPRING SPEAKER SERIES: Tuesday, May 15, 6:30 pm; Digesting the Design Behind Newtown Creek. For more information, please click here.

The New York City Department of Citywide Administrative Services has announced the **2012 E. Virgil Conway College Scholar Awards.** Employees may apply online for the College Scholar Awards by accessing the following link.

For more information.

Kodak Moment

HONORING SERVICE: During World War One, the First Provisional Regiment of the New York Guard was organized to protect the Croton and newly constructed Catskill Aqueduct against sabotage from enemy agents. This unique military unit was made up of more than 1,200 volunteers who performed an extraordinary job in protecting the aqueduct, gatehouses and dams. The Bureau of Water Supply Police helped the regiment formulate patrol procedures and worked alongside them to protect the water supply system. After the armistice went into effect on November 11, 1918 the regiment was demobilized and its members went home. Each year since 1919, the New York Guard conducts a memorial ceremony on the first Sunday of May at a monument erected at Sleepy Hollow Cemetery to honor all of the members of the First Provisional Regiment and where a bronze plaque bears the names of all 40 members who died while serving.

This year, after a brief ceremony at the Bureau of Police and Security's 6th Precinct at Eastview where a flag terrace is dedicated to the First Provisional Regiment, members of the bureau attended the New York Guard ceremony. Chief **Peter Fusco** gave a short speech heralding the dedication of the regiment and all who serve today. During the ceremony, he and Assistant Chief **Mark Benedetto** laid a wreath from DEP. Members of the DEP Police and the DEP Police Honor Guard joined with the Honor Guards of the Veterans Corp of Artillery and the 56th Brigade of the New York Guard, while DEP Police Sergeant **David Dorio** joined with the bugler of the 89th New York Guard band in playing echo taps.

(The History of Meters: A Very Long En-Gauge-ment… continued)

meters throughout the city was a crucial reason behind today's historically low consumption levels. Most people understand the importance of tracking how much water is used; far less know exactly how they work.

Water meters perform a simple but essential task: the measurement of water through a pipe. This is done in one of two ways. Meters either have what is essentially an internal measuring cup that moves a dial each time it is filled, or a propeller that measures the speed of the water passing through it. The meter then converts speed into volume.

The smallest of these meters fits on a 5/8 inch pipe while the largest are more than 10 inches. Large meters must be able to accurately record and endure an enormous amount of volume and pressure. It takes less than an hour and a half for a 10-inch waterline to fill up an Olympic size swimming pool. That's more than half a million gallons.

That kind of volume means a lot of wear and tear on meters. Meters were not always as low maintenance as they are today. As **Warren Liebold,** BCS's Director of Universal Metering describes them, "repairing a meter half a century ago was similar to repairing a car. Both relied on gears and pistons." By the time DEP began installing meters for residents as a part of its Universal Metering Program towards the turn of the century, meters used magnetism to count and transmit meter readings, avoiding the need for as many moving parts.

Even as the technology that surrounds water meters continues to change, their value to utilities across the nation will not. To little acclaim, water meters are without a doubt one of the backbones of DEP.

We welcome your feedback! To submit an announcement or suggestion, please email us at: newsletter@dep.nyc.gov.