



**Environmental  
Protection**

Michael R. Bloomberg, Mayor  
Carter Strickland, Commissioner

*WEEKLY*

# PIPELINE

February 5, 2013

Volume IV • Issue 161

## High Pressure Takes Heat Off Fire

**W**hen fire swept through Coney Island on November 1, 1903, firefighters were frustrated by the lack of water at the hydrants. The fire wiped out fourteen blocks. According to the Department of Water Supply, Gas and Electricity (DWSGE) it wasn't that Brooklyn lacked for water, the problem was the inability of the distribution system to deliver water at a sustained and concentrated pressure. Then within a matter of months, on February 7 and 8, 1904, fire destroyed Baltimore's waterfront and business district, raising the discussion of big city fire protection to a national level. In direct response to these events, DWSGE moved swiftly to develop a plan to protect the city's high value manufacturing, storehouse and office building districts. The solution would be a High Pressure Fire Service (HPFS) system with pumping stations, water distribution pipes and fire hydrants dedicated exclusively for firefighting in high risk districts.

The areas to be protected were identified with help from the Fire Department, and in Brooklyn included Coney Island, the East



Credit DEP Archive

River waterfront and the downtown business district. In Manhattan the system extended from Chambers to 23<sup>rd</sup> Street. Planned and built between 1904 and 1908, the principal designer of New York's HPFS was I.M. De Varona, chief engineer for Brooklyn. Pumping stations raised the water pressure with motor driven pumps. Manhattan had two, one on Gansevoort Street and the other on Oliver Street. In Brooklyn, the main pumping station was located at the foot of Joralemon Street near the river with a reserve station on Willoughby Street. Coney

*(Continued on reverse side)*

## Spotlight on Safety

### Safe Driving Tips for Parking Garages

Did you know that the Lefrak parking garage is considered an extension of the roadway and the same driving rules apply? Help make the garage safer for yourself and others by following these simple tips:

- Slow down and follow the posted speed limit of 5 miles per hour.
- Be aware of cars backing out of parking spaces and be prepared to stop if necessary.

- Use your vehicle's turn signals and stay in your lane.
- Use your vehicle's headlights to see and be seen by others.

Remember to stay alert. It is illegal and unsafe to use (non-hands free) communications devices while driving.

If you regularly drive a DEP vehicle, consult your supervisor or your Fleet Coordinator if you have additional questions regarding safe driving practices.

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



Delivering water to nine million New Yorkers is a 24/7 operation and we got a good reminder of that on Friday morning when a nearly century old, 36-inch water main broke at 24th Street and 5th Avenue in Manhattan. Crews worked around the clock over the weekend to make repairs and we expect to have the streets reopened and things back to normal later this week. Fortunately, through improved maintenance and training in BWSO, last year saw the fewest water main breaks in any year since **Mayor Bloomberg** took office in 2002. Since DEP began a program to improve maintenance in the pressure zones within the city's water distribution system in 2007, water main breaks are down by more than 40 percent.

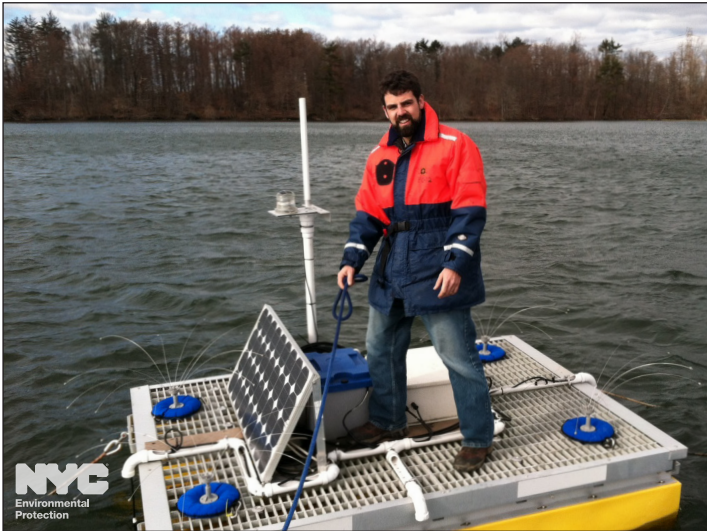
The nearly century old water main in Manhattan reminds us about the feats of engineering it takes to deliver clean drinking water nearly 125 miles from our pristine reservoirs to the city's taps. Last week we launched a great program to help educate the youngest New Yorkers about our water supply and wastewater treatment systems. The 27th annual *Water Resources Art and Poetry Contest* will allow second through twelfth grade students in New York City and in the East and West of Hudson Watersheds to create original art and compose poetry that reflects an appreciation for our shared water resources. Last year, more than

700 New York City and Watershed students from more than 50 schools submitted artwork and poems about NYC Water. Last June, the students were honored at an awards ceremony at Citi Field where their artwork and poems were displayed on the stadium's large outfield screens as well as on monitors throughout the stadium. We are working on an exciting location for this year's awards ceremony and I invite all DEP employees with second through twelfth grade children to participate in the contest. You can register on our website or contact DEP's Deputy Director for Education and Outreach **Kim Estes-Fradis** for more information.

Celebrating our shared resources has been a central theme behind DEP's efforts to expand recreational access to the land around the city's reservoirs. Last week, a study released by the Catskill Center for Conservation and Development, Catskill Mountainkeeper, and Catskill Heritage Alliance estimated that outdoor recreational activities that rely on public and protected lands attracted a total of 1,717,927 visitors annually generating an economic impact on the region's economy of \$46,207,000 and supporting 980 local jobs. We should all be proud that our efforts to encourage recreation throughout the watershed have strengthened the tourism economy that has been a hallmark of the Catskills for decades.



## Focus on the Field



Among the hundreds of DEP employees who protect New York City's drinking water every day, **Kurt Gabel** leads an especially important team. Gabel and his crew of 12 water-quality experts are the last people to test water from upstate reservoirs before it enters the city's delivery system.

Gabel, who works as the east-of-Hudson field director, is the leader of DEP's last line of defense against pathogens, turbidity, and other factors that might affect water quality. His team in Westchester County tests roughly 4,200 samples each month from the 13 reservoirs, three controlled lakes and 32 streams and reservoir releases that collect water in the Croton system. They also sample Kensico and Hillview reservoirs, which are the last collection points for drinking water before it's delivered to the city.

Growing up in Williamstown, Vermont, Gabel was an Eagle Scout who enjoyed the woods and streams of his rural home and his early exposure to nature influenced his career path.



"When I went to college, I said I wanted a job where I could still be outside in the streams," Gabel said. "Water is so important, how could you not want to study it?"

Gabel's duties at DEP regularly keep him outdoors. Last week, for example, he ventured onto Kensico Reservoir to examine several buoys that contain automated water testing equipment. He measured one for a new battery and checked another for safety and to ensure the proper orientation of its solar panels.

Gabel initially joined DEP in 1999 as a water ecologist, maintaining weather stations and monitoring stream gauges, among other duties. He left in 2006 and earned his master's degree in ecology and systematics from Fordham University, and returned in 2009 in his current role. His bachelor's degree is from the University of New Hampshire.

"The monitoring conducted by Kurt's east-of-Hudson field group serves a variety of compliance, operational, and research objectives, and his close attention to detail is key to ensuring that these critical water quality objectives are met," DEP Water Quality Director **Steve Schindler** said.

Gabel lives in Beacon, N.Y. with his wife and 1-year-old daughter. He is an avid skier and mountain biker. He once lived on an organic farm in Katonah, N.Y., and he still helps friends set up their own organic plots. He also keeps bees, and his hives can produce as much as 5 gallons of honey in a year.

(High Pressure Takes Heat Off Fire... continued)



Credit DEP Archive

Island was served by a single station on Neptune Avenue. The stations were designed to use fresh water from the municipal systems or water drawn from the river, and connections along the waterfront allowed fire boats to use their diesel pumps to pressurize the system in the event the pump stations failed. A gridiron network of cast iron pipes distributed the water to special high pressure fire hydrants with connections for four hoses.

A private telephone network simultaneously connected the pumping stations to the Fire Department and to telephone boxes on the street. When an alarm was received the pumps were able to send water into the system at pressures up to 300 pounds per square inch in under a minute, well before the Fire Department reached the fire. At the scene, the Fire Depart-

ment could telephone in orders to increase, decrease or shut off the pressure.

In 1953, with the full force of the Catskill and Delaware systems available, the Brooklyn and Manhattan pump stations were decommissioned and parts of the cast iron pipe system were integrated into the municipal distribution system. Vestiges of the system remain around the city today including HPFS manhole covers, the main pumping station on Joralemon Street in Brooklyn Heights and the former repair headquarters at 226 West Broadway in SoHo. Built in 1912, the repair headquarters is decorated with representations of pipes and valves that reflect the purpose of its work, a striking reminder of the important role the HPFS had in fostering the growth of New York City.

## In Memoriam



Credit New York City Municipal Archives

Last Friday, former three-term **Mayor Edward I. Koch** passed away. Above is a photo of Mayor Koch providing an update on the construction of City Water Tunnel No. 3 in 1979, along with Representatives Ray Roberts and Geraldine Ferraro. In addition, click [here](#) for an amusing New York Times story on Mayor Koch's efforts to end a drought in 1985.

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