NYC Environmental Protection
Michael R. Bloomberg, Mayor
Cas Holloway, Commissioner

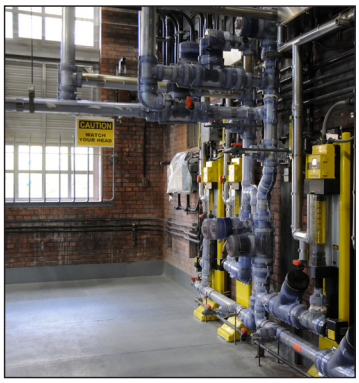
WEEKLY PIPELINE

November 23, 2010

Volume I • Issue 47

Rehabilitating Shafts Are Now a Vertical Reality

As vital as our aqueducts are to supplying the city with high quality drinking water every day, they wouldn't be able to get their job done without the shafts that connect them to the surface. Shafts are vertical tunnels that extend far underground and link our aqueducts and tunnels to infrastructure, such as valves and gates, which allow operational flexibility between reservoirs or water mains that supply this vital resource to communities. In the watershed, these shafts were originally drilled so that workers could get far enough underground to build our city's aqueducts. Now, in the same shafts, the force of gravity propels water up through them, allowing water to flow into reservoirs and the distribution system.



It's very important to maintain these critical pieces of infrastructure. In fact, for over five years, BEDC Project Manager **Pat Sheehan** has been overseeing the reconstruction of shafts 9, 10, and 17 along the Delaware Aqueduct in Putnam and Westchester counties. Much of the equipment in the shafts was

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Spotlight on Safety

Careful Courtesy

One of the many positive things about working for DEP is our friendly and helpful employees, but we must be careful not to let our helpfulness inadvertently jeopardize our security. Many DEP facilities have restricted access requiring an ID, a key, an access code, or other similar control to gain entry. While it may be good manners to hold the door open for the person behind you, remember that restricted access is there for a reason and each of us is responsible for helping to maintain security. When entering a restricted-access facility, remember the following:

- **No "piggybacking":** don't automatically hold open a door for another person or enter immediately behind another employee.
- **Check for a valid ID:** if someone needs assistance holding the door open, be sure to check that the person has a valid ID or access code for the building.
- **Watch over visitors:** don't ever leave a visitor unattended, and be sure to meet and escort your visitors rather than having them wander to find you.
- **Remind one another:** if you notice someone not taking proper precautions, remind them of the security protocols.

Together, we can maintain both secure and friendly facilities.

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

Last week, I returned to the Town of Wawarsing to unveil a design and timeline to repair leaks in the 85-mile Delaware Aqueduct. This feat of civil engineering supplies more than 50% of our drinking water (see some amazing original photos here), and continues to serve the city well. But in certain places where the tunnel passes through limestone—near Roseton in Orange County and Wawarsing in Ulster County—cracks have developed that are allowing water to leak from the tunnel. Limestone is particularly susceptible to the corrosive effects of water, so this is not a surprise; in fact, the original engineers added steel liners in some of these areas for added protection, but 65 years of wear and tear have had an impact.

DEP has invested tens of millions of dollars in research to determine the size and location of the leaks. All the data we've collected shows that the leaks are not getting worse; but they are leaking 15 to 35 million gallons a day, and need to be addressed to ensure the city's water over the long term.

Beginning in 2013, DEP will break ground on a three-mile tunnel that will bypass the leaking section in Roseton. The existing aqueduct will remain in service until 2018, when we expect to shut it down for eight to 12 months to connect the bypass and permanently close-off the leaking section. While the connection is made, a construction team will enter the tunnel further north, near Wawarsing, and pressure grout the inside of the existing tunnel to repair a comparatively small section of cracking there. Once complete, the aqueduct will be reactivated. You can see some conceptual designs here and read a great NY Times overview here.

Many dedicated people in BEDC helped to get the project this far; I'd like to particularly thank Deputy Commissioner **Kathryn Mallon,** Program Manager **Wendy Sperduto** and Project Manager **Jamie Canale** for moving us forward on this very complicated project. I'd also like to thank **Mike Borsykowsky, Burjor Kharivala, Louis Huang, Ted Dowey** and **Jim Mueller** for their hard work.

On the CSO front, I'm thrilled to announce the appointment of **Magdi Farag** as DEP's first-ever Assistant Commissioner for Green Infrastructure. For more than 40 years, Magdi has guided the development of the city's sewer system, from individual catch basins to complex drainage plans. Magdi will draw on his tremendous experience as he implements **Mayor Bloomberg's** Green Infrastructure Plan together with dedicated staff throughout DEP and our agency partners. Magdi will be directly responsible for developing design standards and specifications to guide the installation of $1.5 billion worth of green infrastructure investment over the next 20 years. Best of luck.

I have said it many times: DEP has some of the most highly skilled employees in the city. To honor them, I attended the 27th Employee Recognition Day ceremony with DC37 Executive Director **Lillian Roberts.** To start things off, BCS employee **Lillye Davenport** performed the National Anthem, and, later on, the Drips—DEP's own musical group—performed their song "H2O". Though all of our employees who attend are deserving, I want to point out some of our longest serving colleagues, those with 40 or more years of service: **Carl Ambrose, Hari Bhagtani, Odd Larsen, Patrick Wang, Burjor Kharivala, Abraham Reich, Carmen Ruiz, Gennaro Vasaturo, William Foerst, Stanley Siebenberg, Chung Kuo, Frank Munari, Ann Progler, Elviro Villani, Henry Aurdahl Jr.,** and **Anthony Giannone.**

And Happy Thanksgiving to everyone!

Focus on the Field

Jim graduated from Manhattan College in 1980 with a Bachelor of Science degree in civil engineering and was first introduced to DEP at a college career fair. He was offered a job and began work in 1981 as an Assistant Civil Engineer with the old Bureau of Water Supply. Steadily working his way through the ranks, Jim gradually gained the experience and skills necessary to oversee many of DEP's most complex construction projects. Over the past thirty years, his work has included roadway reconstruction, pipe laying, and wastewater treatment plant construction. Some of his favorite work has been managing complex upstate dam reconstruction projects. But, Jim points out that the most rewarding part of his job is ultimately the sense of accomplishment when a project has finally been completed after years of hard work.

When he's not working upstate, Jim enjoys building and repairing computers, as well as spending time with his wife and daughter on Cape Cod.

To successfully execute a complex engineering project like the Delaware shaft reconstruction, you need a highly qualified manager who can coordinate the work of multiple contractors and bureaus. Enter **Jim Teevan.** As the Executive Construction Manager for Watershed Facilities Construction in the East of Hudson district, Jim is responsible for overseeing 15 different construction projects, of which the Delaware shaft reconstruction is the biggest. Jim has been overseeing this project for the past eight years and enjoys the daily challenges associated with managing the work and schedules of four different contractors.

Event Calendar:

DEP Blood Drive

Lefrak, 6th Floor training room: 12/7-12/9, 8:00 am to 1:30 pm. Please click here to see the memo from Commissioner Holloway.

Beyond New York

Saltwater From Tampa Bay Converted to Drinking Water

Tampa Bay Seawater Desalination Plant uses saltwater from Tampa Bay to produce drinking water.

The Tampa Bay Seawater Desalination Plant is currently the largest operating seawater desalination plant in North America. First, saltwater from Tampa Bay enters the plant and goes through a rigorous pretreatment process. Then, freshwater is separated from the seawater using over 10,000 reverse osmosis membranes.

The plant uses approximately 44 million gallons a day of seawater to produce 25 million gallons a day of high-quality drinking water, which supplies about 10 percent of the area's needs.

Kudos Corner

As part of the Mayor Bloomberg's initiative to plant one million trees over the next decade, a team of DEP employees, including **Geysa L. Gonzalez, Matthew Dominick, Monique Smith, Shrikant Kalantri, Aderemi Ajala, Kimberly Cusumano, Angela Licata, Julie Stein, Oscar Gonzalez, Farah Mahjabeen, Helen Forgione, John McLaughlin, Vlada Kenniff, Bob Will, Ashley Ryan** and **Diane Futrell,** volunteered to join more than three dozen Department of Parks workers to plant nearly 1,000 trees at the Pennsylvania Landfill on the edge of Jamaica Bay in Brooklyn. These new trees will help increase biodiversity and improve the ecology surrounding Jamaica Bay.

Did You Know?

…that Marcellus Shale is named for Marcellus, New York in Onondaga County? Geologists often name rock formations by applying the name of the nearby town where the rock is first described to geologic science. Near the central New York town is a distinctive outcrop of this particular type of shale, or rock, which extends south into Pennsylvania and into West Virginia.

(Rehabilitating Shafts Are Now a Vertical Reality… continued)

more than 50 years old, having been installed in the 1940s and '50s. While it had served its time well, much of this equipment would have cost more to maintain than be replaced.

Among the project work was installation of new sluice gates and motor equipment used to operate them. The gates are large metal panels—sometimes 12 or 15 feet wide—that sit within shafts and are opened or closed to adjust water flow. Other devices to regulate the flow of water from reservoirs into shafts—called incremental valves—were also replaced.

Not only will this work keep the system running more smoothly today, but it will also add to the reliability of our water supply system in advance of the dewatering of the Delaware Aqueduct in 2018. Improvements to them will enhance our operational ability to draw water from the West Branch Reservoir, which is south of the dewatered section, helping supplement the city's water supply during the nearly year-long connection of the tunnel bypass.

In addition to the operational benefits, the new equipment also improves overall safety for DEP staff that work at these sites. The old sluice gates and operating equipment contained oils with mercury and PCBs—standard practice at the time of installation—but the new ones eliminate potential exposure to these legacy substances. As BWS Eastern Operations Chief **Mark Donecker** said, "the reconstruction of shafts 9, 10, and 17 will improve our operations, and the remediation work will also make sure that we're working in the safest conditions that we can be."

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