

Commissioner's Corner

Last week, DEP marked a major milestone that will help ensure New Yorkers have healthy drinking water for decades to come, and will protect us against drought, more frequent storms that can cause turbidity, and other effects of climate change. Last Thursday, DEP activated the Croton Filtration Plant and water from the Croton water supply system was reintroduced into the city's distribution network for the first time since 2008. Built beneath Van Cortlandt Park in the Bronx, preparatory site work and excavation for the 400,000 square foot facility began in 2004. Construction commenced in 2007 and, at the height of the work, roughly 1,300 laborers were on-site. In addition to building the plant, the 33-mile long New Croton Aqueduct was rehabilitated and three new water tunnels were constructed to bring water to the plant, and then from the plant back to the distribution system. With the capacity to filter up to 290 million

gallons of water a day, the state of the art facility can provide roughly 30 percent of the city's current daily water needs.

New York City has three upstate water supply systems—Croton, Catskill and Delaware. Located up to 125 miles northwest of the city, the reservoirs of the Catskill and Delaware systems are surrounded, and protected, by large swaths of City-owned land. The Croton System, located primarily in Westchester and Putnam Counties, is the oldest of the three systems and is composed of 12 reservoirs and three controlled lakes. For more than 150 years it provided a safe supply of high quality water to the City. However, as population density increased around the watershed, the quality of the water diminished and DEP did not supply Croton water during several summers over the 1990's. With the ability to provide up to 30 percent of the city's daily water needs, the Croton system provides



critical flexibility and redundancy to the overall water supply system and, in the 1990's, DEP, federal and state regulators agreed that a filtration plant must be built.

Before construction could begin, more than 1 million cubic yards of rock and soil were excavated from the site, which now reaches a depth of roughly 100 feet below grade. Construction of the 830-foot long by 555-foot wide facility began in 2007 and work included laying nearly 250,000 cubic yards of concrete and 27,000 tons of re-enforced steel, the addition of 160,000 feet of pipe and over 200 pumps, and the installation of more than 10 million feet of low and high-voltage wire, nearly 2 million pounds of duct work and 20 ultra-violet light disinfection units. In 2010, the final roof slab was laid in place and it was covered with dirt and reseeded. The Mosholu Golf Course driving range is now taking shape on top of the facility.

The New Croton Aqueduct was originally placed into service in 1890 and is a 33-mile-long, 13-foot-diameter, brick-lined tunnel that was engineered to convey drinking water by gravity from the New Croton Reservoir in Westchester County to Jerome Park Reservoir in the Bronx. When DEP stopped using Croton Water for in-city distribution and began planning the construction of the filtration plant, the Aqueduct was drained of water and an extensive inspection of the tunnel took place. Rehabilitation work included re-grouting the brick lining of the tunnel, upgrading 34 shaft site connections that allow crews to access the tunnel from ground level, and repairing valves and pumps that allow certain Westchester communities

to pull water from the Aqueduct. In addition, a 58-foot-long and 12-foot-wide concrete plug was built inside the Aqueduct beneath Jerome Park Reservoir in to divert water to the Croton Filtration Plant.

In order to divert the water from the New Croton Aqueduct to the Filtration Plant, DEP drilled and blasted a 12-foot diameter, 880 foot long tunnel. To view a video of a blast [click here](#). In addition, two new water tunnels were excavated by a tunnel boring machine to bring the filtered water back to the existing distribution network. These two tunnels are 9-feet in diameter and together stretch for more than a mile.

Once the water arrives at the filtration plant it undergoes several processes to remove impurities. It also is aerated, passes through a sand medium and is exposed to ultra-violet light to protect against potentially harmful micro-organisms. A state of the art laboratory tests the water as it enters the facility, before it leaves, and at every step throughout the filtration process to ensure it meets or exceeds all state and federal guidelines.

The activation of the Croton Filtration Plant marks a significant moment in the history of New York City. The plant will help to ensure the city has a safe and reliable supply of drinking water in the event of a future drought, provide critical flexibility as we deal with the effects of a changing climate and allow us to make needed repairs to other parts of the water supply system.

Additional photos of the project and maps are available on [DEP's Flickr Page](#).

Spotlight on Safety

OSHA's National Safety Stand-Down

This year from May 4th-15th OSHA is holding its second National Safety Stand-Down for Fall Prevention in Construction. We are currently in the second week of the stand down. A Safety Stand-Down is a voluntary event for employers to talk directly to employees about safety. This Stand-Down focuses on "Fall Hazards" and reinforcing the importance of "fall prevention." Falls continue to be the number one cause of construction fatalities, accounting for nearly 300 of the construction deaths recorded in 2012. Additionally, fall prevention safety standards were among the top 10 most frequently cited OSHA standards, during fiscal year 2014.

In honor of Safety Stand-Down

week, DEP's Bureau of Design and Construction (BEDC) has been communicating with employees about fall hazards and reinforcing the importance of fall prevention. Several BEDC contractors have also been having events at participating sites. OSHA's website contains further information including a certificate of participation OSHA issues to participating sites. Last year most BEDC sites received the certificate and this year all Administrative Managers are urged to work with contractors to participate and receive the certificate.

To learn more about National Safety Stand-Down week, visit [OSHA's website](#).

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.

Van Cortlandt Park Pedestrian Bridge



Last week, DEP joined the Parks Department, Department of Design and Construction, elected officials, and community leaders to announce plans for a \$12 million pedestrian bridge that will span the Major Deegan Expressway and improve community access to Van Cortlandt Park by connecting the Croton Woods and the Allen Shandler Recreation areas in the northeast section of the park. DEP and Parks will each invest \$4 million to construct the bridge, and the remaining \$4 million will be paid for with state funds secured by State Assembly Speaker Carl Heastie, Assembly Member Jeffrey Dinowitz, and the Assembly Bronx Delegation, as well as State Senator Jeffrey Klein. DDC will manage the design and construction of the bridge, which is expected to be completed in 2019.

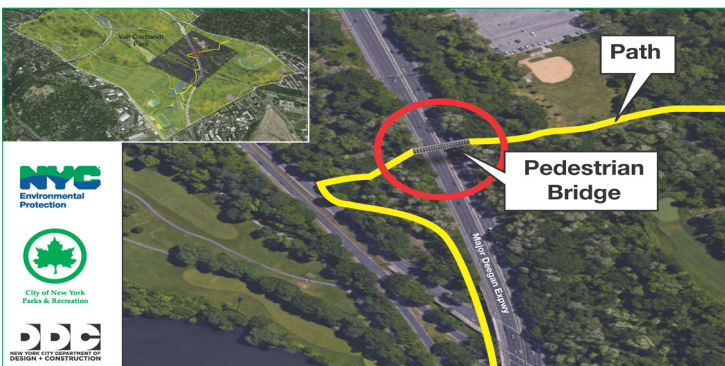
When Frederick Law Olmsted mapped the streets of the Bronx in 1876, he proposed that New York City buy the Van Cortlandt family estate because he believed the property was already as beautiful as Central Park. New York City purchased the land and constructed the nation's first municipal golf course but made no comprehensive plan for the park. Then, from the 1930s to the 1950s, the construction of three major

highways fragmented the park and limited community access to its hills, forests, fields and wetlands.

In 2008, as a mitigation project associated with the construction of the Croton Water Filtration Plant, which was built underneath the Park and was put into service last week, DEP conducted a feasibility study to develop and evaluate alternatives to connect the Croton Woods and Allen Shandler Recreation Area with a pedestrian access bridge. The new pedestrian bridge, along with a new trail on the south side of the Expressway, will connect existing walking paths on either side of the Expressway that follow the Old Croton Aqueduct Trail. The bridge is part of the 2014 Van Cortlandt Park Master Plan—a comprehensive plan to knit the park back together and restore the natural beauty identified by Olmsted.

Plans for the new bridge were developed with extensive input from the Van Cortlandt Park Conservancy, Community Boards 7, 8, and 12, Friends of Van Cortlandt Park, the Croton Filtration Monitoring Committee, and local elected officials.

To view more photos from the event, [click here](#).



NYC Water to the Rescue



Last week, several brush fires and forest fires ignited in and around the watershed that provides drinking water to New York City. DEP provided assistance to emergency responders battling the fire on Hunter Mountain in Lanesville. A specialized airplane was used to draw water from Schoharie Reservoir to douse that fire. The airplane was inspected by DEP, and it was disinfected by steam cleaning before it was used on the reservoir. Steam cleaning ensured that no invasive species or contaminants would be carried by the airplane into the reservoir.

To see photos, [click here](#). To view a video of the plan landing on the reservoir, [click here](#).

Welcome Aboard!



Yesterday, 11 new employees attended orientation and received an overview of the department from First Deputy Commissioner **Steve Lawitts** and Director of Planning and Recruitment **Grace Pigott**. We hope everyone will join us in welcoming them to DEP!

Matthew Altonji, **Dudley Dacruz**, **Jeffrey Davis**, **Frank Hollman** and **Tony Pellizzi** with BWSO; **John Brock** with BEDC; **Tarlisha Coleman** with HR; **Thomas George** with OIT; **Howard Hughes** with BWT; **William Mirror** with BLA; and **Jason Tse** with Sustainability.

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