Environmental Protection

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#### A Home

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## **Customer Services**

- Pay Online
- » Ways to Pay Your Bill
- eBilling
- Account Information
- Customer Assistance
- Service Line Protection Program
- Water Rates
- Property Managers & Trade Professionals

## Water Utilities

- Drinking Water
- Wastewater
- Stormwater
- Harbor Water
- Long Term Control Plan

#### The Watershed

- Watershed Protection
- Watershed Recreation

### **Citywide Initiatives**

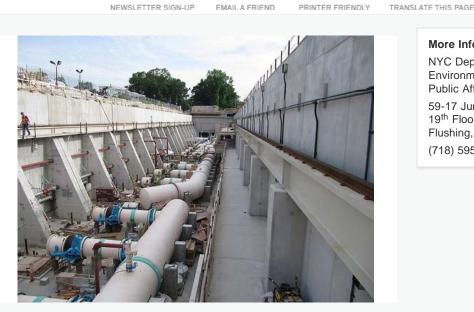
- Regulatory Reform
- Environmental Education
- Conservation Programs
- Air Pollution Control
- Noise Codes & Complaints

#### Business and Professionals

- Forms & Permits
- Support for Businesses
- Doing Business with DEP
- Asbestos Abatement
- Construction, Demolition & Abatement

#### About DEP

- Inside DEP
- News
- DEP Featured In... Stories from DEP Press Releases



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# Croton Water Filtration Plant Activated

Largest Underground Filtration Plant in the United States has the Capacity to Filter up to 290 Million Gallons of Drinking Water Each Day; Will Protect the City against the Possibility of Drought and the Effects of Climate Change

# Photos of the Project and Maps are available on <u>DEP's</u> Flickr Page

New York City Department of Environmental Protection (DEP) Commissioner Emily Lloyd today announced that the \$3.2 billion Croton Filtration Plant was recently activated and water from the Croton water supply system has been 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.

"The activation of the Croton Filtration Plant marks a significant moment in the history of New York City," said DEP Commissioner Lloyd. "The Filtration 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. All New Yorkers should raise a glass of New York City tap water today and recognize the thousands of workers who have contributed to the completion of this critical facility."

#### Croton Water Filtration Plant Activated

Public Notices Testimony & Public Comments

- Capital Projects
- Careers at DEP
- Environmental Reviews
- Interagency MOUs
- A to Z Index
- Contact Us



"Our vulnerabilities to a changing climate are growing, which makes investments like these so important to New York," said **Daniel Zarrilli, Director of the Mayor's Office of Recovery and Resiliency**. "This project helps New Yorkers by providing vital redundancy to our high-quality water supply and enhances the city's resiliency against the impacts of climate change and other 21st century threats."

"New Yorkers deserve to have the highest quality water possible," said **EPA Regional Administrator Judith A. Enck.** "The EPA required New York City to build a filtration plant to protect people from Giardia and Cryptosporidium, both of which can cause serious illness. The Croton Water Filtration plant will provide millions with a safe source of drinking water, which is essential to protecting public health."

"The construction and operation of the Croton Filtration Plant will help maintain NYC's healthy, high quality water for many decades to come, and we congratulate DEP on this monumental effort," said **Health Department Commissioner Dr. Mary T. Bassett**. "As the weather warms up, there's no better way to stay hydrated than with New York City water, and this will help ensure all New Yorkers have access to an affordable, great tasting, zero-calorie alternative to soda and sports drinks."

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 was 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-inforced 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 order 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 microorganisms. 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.

DEP manages New York City's water supply, providing more than one billion gallons of water each day to more than nine million residents, including eight million in New York City. The water is delivered from a watershed that extends more than 125 miles from the city, comprising 19 reservoirs and three controlled lakes. Approximately 7,000 miles of water mains, tunnels and aqueducts bring water to homes and businesses throughout the five boroughs, and 7,500 miles of sewer lines and 96 pump stations take wastewater to 14 in-city treatment plants. DEP has nearly 6,000 employees, including almost 1,000 in the upstate watershed. In addition, DEP has a robust capital program, with a planned \$14 billion in investments over the next 10 years that will create up to 3,000 construction-related jobs per year. This capital program is responsible for critical projects like City Water Tunnel No. 3; the Staten Island Bluebelt program, an ecologically sound and cost-effective stormwater management system; the city's Watershed Protection Program, which protects sensitive lands upstate near the city's reservoirs in order to maintain their high water quality; and the installation of more than 820,000 Automated Meter Reading devices, which allow customers to track their daily water use, more easily manage their accounts and be alerted to potential leaks on their properties. For more information, visit nyc.gov/dep, like us on Facebook at facebook.com/nycwater, or follow us on Twitter.

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