

How New York Gets Its Water



Revelations about tainted water have sparked worry across the country. The New York Times decided to look at how the nation's largest municipal water supplier delivers what has been called the champagne of drinking water to 9.5 million people. [Click here](#) to read more.

Spotlight On Safety

National Work Zone Awareness Week

This year's theme for National Work Zone Awareness Week is "Don't Be That Driver!," which reinforces the message that motorists should be constantly alert and prepared for dynamic changes in and around traffic work zones (TWZs). Speeding, in-vehicle distractions, and inattentive or aggressive driving near TWZs are costly mistakes that can result in fines, jail time and even the loss of a life.

Another message from this year's campaign is "Work on

Safety. Get Home Safely. Every Day." DEP workers should be alert and pay attention to all safety instructions while driving near a TWZ. Equal concern must be taken when DEP employees create a work zone setup and must follow the procedures listed in [DEP's Traffic Work Zone Safety Policy](#). All efforts from the driver and the TWZ setup crew contribute to safer roadways and saving lives. For more information visit [National Work Zone Awareness Week](#).

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

In 2016, New York City will begin the process of renewing a key permit that allows our Catskill-Delaware system to operate as an unfiltered water supply. The importance of that permit, known as the Filtration Avoidance Determination (FAD), cannot be overstated. And, for that reason, we are dedicating this edition of Pipeline to all the successful work we have done to ensure that we retain the FAD.

For more than 20 years, DEP has worked with local partners in the Catskills to administer an array of successful protection programs that have improved the quality of water in our reservoirs and allowed the City to avoid having to build and operate a costly filtration plant for that portion of our water supply.

New York City operates the largest unfiltered water supply in the United States. Today, roughly 90 percent of the water DEP collects and delivers to 9.5 million customers remains unfiltered.

Science-based programs, key investments and watershed preservation have maintained the outstanding quality of our unfiltered water. Since the City received its



first filtration waiver in the early 1990s, DEP has committed \$1.7 billion toward programs to protect our drinking water at its source, while preserving the economic vitality of watershed communities. With help from its local partners, DEP has preserved more than 100,000 acres of land that feed water into our reservoirs, upgraded wastewater treatment facilities in dozens of upstate communities, and remediated thousands of private septic systems. We've improved the quality of runoff from local farms by installing thousands of best management practices, including covered barnyards and exclusionary fencing around streams. We've worked with watershed communities to plan for floods while restor-

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ing miles and miles of unstable streambanks. And, our regulatory team has reviewed thousands of applications to ensure that development projects are designed in a manner that's consistent with water quality protection. None of this would be possible without the cooperation of key local partners.

The result has been a worldwide model for protecting the quality of water at its source. Over the past several years, visitors from Colombia, India, Singapore, Australia and elsewhere have come

to the watershed to see our work and understand how they might replicate the programs to protect water in their countries.

New York City's current FAD is up for renewal in 2017. In anticipation of work to renew that permit, DEP has issued a [391-page assessment report](#) that looks back at the results of our work thus far. The report underscores the hard work of our employees, and the efforts that have maintained New York City's water supply as one of the best in the world.

Watershed Agricultural Program



Working through the Watershed Agricultural Council (WAC), the City funds development of farm pollution prevention plans, along with structural and non-structural best management practices to prevent runoff from farms. A total of 195 large farm operations in the Catskill-Delaware watersheds have participated in a voluntary program to create plans for their farms. In addition, approximately 7,200 best management practices have been implemented on all participating farms, at a cost of \$57 million. The Conservation Reserve Enhancement Program, which pays farmers to take sensitive stream buffer lands out of active farm use and re-establish a vegetative buffer, has enrolled more than 2,000 acres and it is estimated that 11,000 head of cattle have been excluded from streams. These efforts have led to significant water quality improvements, especially in the Cannonsville Reservoir watershed.

History



Why does New York City need a permit to operate an unfiltered water supply? The historical context dates back to 1989, when the U.S. Environmental Protection Agency (EPA) developed a new rule—known as the Surface Water Treatment Rule—that required surface-water systems to provide filtration or meet certain criteria to avoid that requirement.

To avoid filtration, water suppliers needed to meet three core criteria. Their source water needed to meet specified levels for certain constituents such as coliform and turbidity. The operation of their system needed to provide adequate treatment for Giardia and waterborne viruses. And suppliers also needed to establish and maintain effective watershed control programs to minimize the potential for contamination of source waters by Giardia and viruses.



In January 1993, New York City received its first FAD after submitting a 13-volume application to EPA. The initial waiver was contingent upon the City meeting 66 deadlines for implementing studies to identify potential pollution sources, developing programs to protect the watershed, and addressing existing sources of potential contamination. A second waiver was given at the end of 1993. It included 150 requirements primarily related to enhancing watershed protection and monitoring programs.

The City was unable to move forward with two critical pieces of those watershed protection programs—a land acquisition program and revised watershed regulations—due to objections from watershed communities over the potential impacts those programs might have on community character and economic viability. It was against this backdrop that then Gov. Pataki convened representatives from the City, the State, EPA, watershed communities and residents, and environmental groups to reach an agreement. Two years later, in January 1997, the parties signed the Watershed Memorandum of Agreement, which allowed the City to move ahead with its watershed protection program with approximately \$350 million in additional funding for economic and environmental partnership programs with upstate commu-

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nities, including a water quality investment program and a regional economic development fund. The City received two consecutive 5-year waivers from filtration after that.



In 2006, DEP submitted to EPA rigorous, science-based assess-

ments of water quality in its unfiltered supply, along with a long-term plan for watershed protection efforts. Those reports led to a 10-year FAD that was issued by federal regulators in 2007. Importantly, the decade-long FAD signaled growing confidence of all parties that source water protection had become a sustainable alternative to filtering the City's supply. In 2011, two large storms (Irene and Lee) swept through the Catskills, devastating watershed communities and affecting water quality in some portions of the City's supply system. In the wake of these storms, the current FAD was revised in 2014 to include new programs to promote flood resiliency and minimize water quality impacts from future events.

Water Quality Testing



DEP knows its watershed protection programs are having their intended effect because the results are checked by thousands of samples and millions of tests of our source water and finished drinking water. Using water quality results from the early 1990s as a baseline, DEP is able to examine the effects of FAD programs that have been implemented over the years. Some have resulted in more than 90 percent reduction of phosphorous, which can lead to the growth of algae. Others have yielded measureable declines in coliforms in our source water. Decades of testing continue to show that New York City's source water exceeds the requirements for filtration avoidance and that the case for remaining unfiltered has strengthened.

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

Land Acquisition Program



DEP's Land Acquisition Program seeks to protect sensitive lands through purchases from willing sellers. Properties that are preserved by DEP must fit several criteria—they must be vacant, meet certain size thresholds, and a portion of them must include water features or steep slopes. Across the entire watershed, DEP has preserved more than 136,000 acres in fee simple or conservation easements. Overall, the City and State now protect approximately 38 percent of lands in the Catskill-Delaware watersheds.

Wastewater Programs



Because thousands of people live in the watersheds that surround New York City's reservoirs, proper wastewater collection and treatment is key to protecting drinking water quality. Through the Catskill Watershed Corporation, DEP has funded the remediation of nearly 4,900 septic systems in the watershed. All municipal wastewater treatment plants in the watershed—including those owned and not owned by the City—have been upgraded to the highest level of treatment. New wastewater treatment plants, or other community wastewater solutions, have been implemented in 13 communities, resulting in more than 2,300 septic systems being decommissioned.

Watershed Regulations

Since 1997, DEP has reviewed more than 16,000 applications for projects in the watershed. It has also performed regular compliance inspections at regulated wastewater facilities, and responded to violations of permit standards to enforce corrective actions. DEP works with applicants to ensure development in the watershed happens in a manner that is protective of water supply resources. Overall, more than 99 percent of DEP's regulatory determinations have been project approvals.