

**FOR IMMEDIATE RELEASE:** July 23, 2015

## **DEPARTMENT OF ENVIRONMENTAL PROTECTION BEGINS REPAIRS TO END TURBID FLOW BELOW CANNONSVILLE DAM**

The New York City Department of Environmental Protection (DEP) today provided the following update on the ongoing monitoring and repair efforts related to a turbid discharge below Cannonsville Dam.

Last week, DEP worked with consulting engineers, the Federal Energy Regulatory Commission (FERC), and geotechnical experts to design a repair that will stop the transport of sediment from the rock embankment below the dam. Work on the repair will begin Thursday.

The repair involves two steps. First, contractors will drill a series of relief wells downstream of the dam, but upstream of the original bore holes that created the turbid flow. These relief wells – which will be cased and screened – will end the turbid discharge by providing an alternate path for the groundwater that is under natural pressure. Clear water from these wells will be pumped to the surface. Second, workers will seal off the original bore holes by using a technique known as compaction grouting. This involves injecting high-pressure grout around the circumference of the original bore holes until they are completely sealed off from the underlying ground water. Engineers believe this work will take several weeks and could be finished by the end of August.

In the meantime, DEP continues to closely monitor conditions at the site 24 hours a day. DEP's testing and monitoring have examined the flow of seepage from the rock embankment, the size of particles creating the turbidity, and the pressure inside the dam as recorded by 28 piezometers. All have remained within normal ranges since the turbid condition was first noticed on July 8. These conditions do not post an imminent risk to dam safety.

In addition, DEP has continued to meet with the public throughout the Delaware River Valley to share information about the turbid condition, the ongoing monitoring, and the plans for repair. DEP has hosted meetings in Deposit, Hancock and Narrowsburg in New York, along with Matamoras and Easton in Pennsylvania. A second meeting in Deposit is scheduled for Thursday night at 8 p.m. at the State Theater on Front Street. DEP is also providing daily updates on reservoir conditions on its website, along with periodic updates on its [watershed Facebook page](#).

As of Wednesday, Cannonsville Reservoir had been drawn down to roughly 88 percent of capacity. Through increased drinking water diversions and downstream releases, DEP has been removing about 1.2 billion gallons of water from the reservoir each day. That rate of drawdown is expected to continue until the repairs are finished, at which time DEP will consult with FERC before changing its operations at the reservoir.

## Background

DEP last week increased drinking water diversions and downstream releases from Cannonsville Reservoir to facilitate necessary repairs in response to an ongoing turbid discharge from a rock embankment below Cannonsville Dam.

DEP, its regulators, and consulting experts do not believe the turbid flow represents any imminent threat to the safety of the dam. DEP began drawing down the reservoir out of an abundance of caution to prioritize public safety while the condition is repaired. Reducing reservoir storage at Cannonsville does not pose a risk to the city's water supply.

The turbid flow below the dam was discovered when workers were drilling borings in preparation for design and construction of a hydroelectric facility that is planned to be built there. All drilling work ceased when the workers noticed the flow of turbid water coming from a rock embankment near the release chamber.

A preliminary investigation indicated that the drilling released ground water under natural pressure, known as an artesian condition, several dozen feet below surface level. This caused an upward flow of water and sediment that is reaching the West Branch Delaware River. Since then, DEP has taken several steps to minimize any potential risks. These include 24-hour monitoring by employees at the site, regular analysis of dam-safety instrumentation, and testing of the turbid sediment to identify and understand its origin. Federal, state, county and local officials – including officials from New Jersey and Pennsylvania – have been regularly updated since the condition at Cannonsville Dam was first discovered.

Placed into service in 1964, Cannonsville Reservoir was the last of New York City's 19 reservoirs to be built. Water diverted from Cannonsville Reservoir for drinking water enters the West Delaware Tunnel and travels 44 miles to the upper end of Rondout Reservoir. From there, it is carried in the 85-mile-long Delaware Aqueduct. Water is released downstream from Cannonsville Reservoir under the terms of the 1954 U.S. Supreme Court Decree, and a flow program, known as the Flexible Flow Management Program, agreed upon by New York City and the states of Delaware, New Jersey, New York and Pennsylvania. All other reservoirs in the city's Delaware System have continued to meet their downstream release requirements under the Flexible Flow Management Program while the condition at Cannonsville is repaired.

DEP manages New York City's water supply, providing more than one billion gallons of high quality water each day to more than 9 million New Yorkers. This includes more than 70 upstate communities and institutions in Ulster, Orange, Putnam and Westchester counties who consume an average of 110 million total gallons of drinking water daily from New York City's water supply system. This water comes from the Catskill, Delaware, and Croton watersheds that extend more than 125 miles from the City, and the system comprises 19 reservoirs, three controlled lakes, and numerous tunnels and aqueducts. DEP has nearly 6,000 employees, including almost 1,000 scientists, engineers, surveyors, watershed maintainers and other professionals in the upstate watershed. In addition to its \$70 million payroll and \$157 million in annual taxes paid in upstate counties, DEP has invested more than \$1.7 billion in watershed protection programs—including partnership organizations such as the Catskill Watershed

Corporation and the Watershed Agricultural Council—that support sustainable farming practices, environmentally sensitive economic development, and local economic opportunity. In addition, DEP has a robust capital program with nearly \$14 billion in investments planned over the next 10 years that will create up to 3,000 construction-related jobs per year. For more information, visit [nyc.gov/dep](http://nyc.gov/dep), like us on Facebook at [facebook.com/nycwater](https://facebook.com/nycwater), or follow us on Twitter at [twitter.com/nycwater](https://twitter.com/nycwater).

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