

## Commissioner's Corner



Last Friday, I joined Deputy Commissioner **Paul Rush**, local, state and federal officials, dozens of construction personnel, and upstate residents to celebrate the completed full-scale rehabilitation of Gilboa Dam in Schoharie County—the northernmost point in New York City's water supply system. The \$138 million dam

reconstruction—believed to be the largest public works project in the Catskills—was completed two years ahead of schedule and included the addition of approximately 234 million pounds of concrete, molded and dyed to resemble the original bluestone face of the dam, more than 500 massive spillway slabs, and upgrades to the abutment walls that support the dam.

Gilboa Dam is 2,024 feet long, 155 feet high, and more than 150 feet wide at its base. Several new features were added during the rehabilitation, including an inspection gallery inside the dam that is equipped with instruments to constantly measure stress on the dam. The gallery also allows engineers to visually inspect the inside and outside of the dam on a regular basis. The dam is built with steps that dissipate the energy of water as it spills from the reservoir and the east and west

abutment walls that support the dam were strengthened through the installation of 40 post-tensioned anchors that pull them tight to the bedrock.

The rehabilitation of Gilboa Dam was completed ahead of schedule despite a nine-month setback in the wake of Hurricane Irene. The powerful storm sent roughly 8 feet of water over the spillway, destroyed much of the staging area for construction, along with access roads and work platforms. The project also adapted to limitations on some construction work after a pair of bald eagles built two nests near the dam's west support wall.

DEP began a thorough investigation of the integrity of Gilboa Dam after the flood of 1996, which overtopped the spillway by 6.7 feet, a record at the time. An initial investigation found that the Dam would require a comprehensive rehabilitation and upgrade because it likely did not meet modern standards for dam safety. Additional engineering work in 2005 found that Gilboa Dam had a marginal factor of safety for flood conditions similar to 1996, and that the dam could potentially fail under the pressure of a larger flood.

Following that report, DEP moved immediately to make repairs to the dam to protect the 8,000 residents who lived downstream. In 2006, a 220-foot-long by 5.5-foot-deep notch was cut from the top of the dam to control water spilling from Schoharie Reservoir and allow for the installation of

80 anchoring cables into the top and outer face of the dam. The anchors significantly improved the safety of the dam by pulling it tighter to the bedrock below. Temporary siphons were also installed to remove water from Schoharie Reservoir, over the dam's spillway and into the creek below, providing DEP with more control over the level of water storage in the reservoir.

While work on the dam is complete, construction at the site will continue until 2020. Overall, the \$400 million project will also build and improve other facilities near the dam, including a permanent release tunnel that will replace the temporary siphons. The remaining projects also include site restoration, rehabilitation work on the Shandaken Tunnel Intake Chamber, and the construction of a public information kiosk off Route 990V.

I would like to thank Deputy Commissioner **Paul Rush**, Operations Director **Tina Johnstone**, Chief of Western Operations **John Vickers**, Regional Manager **Carl Davis**, Deputy Chief **Jeff Helmuth**, Dam Safety Engineer **Tom DeJohn**, Deputy Commissioner **Gerry Cox**, Assistant Commissioner **Mike Borsykowsky**, Portfolio Manager **Sean McAndrew**, Accountable Manager **Emory Chase**, Accountable Manager **Paul Costa** and the hundreds of others who made this project a success.

To view more photos from Friday's ceremony, [click here](#).

## Spotlight on Safety

### Seasonal Flu

The seasonal flu can cause mild to severe illness and can result in hospitalization or even death. Some people, such as older individuals, young children, and people with certain health conditions, are at high risk for serious complications. The best way to prevent the flu is by getting vaccinated each year. Flu shots are available at many pharmacies, as well as at your doctor's office. Here are some helpful tips to help stop the spread of germs, especially in the workplace:

- get plenty of sleep, exercise, manage your stress, and drink plenty of fluids
- if you are sick with a flu-like illness, stay home for at least 24 hours after your fever has subsided
- cover your nose and mouth when you cough or sneeze
- use disinfectant wipes/spray to keep office surfaces clean

For additional information, visit the Centers for Disease Control and Prevention's [website](#).

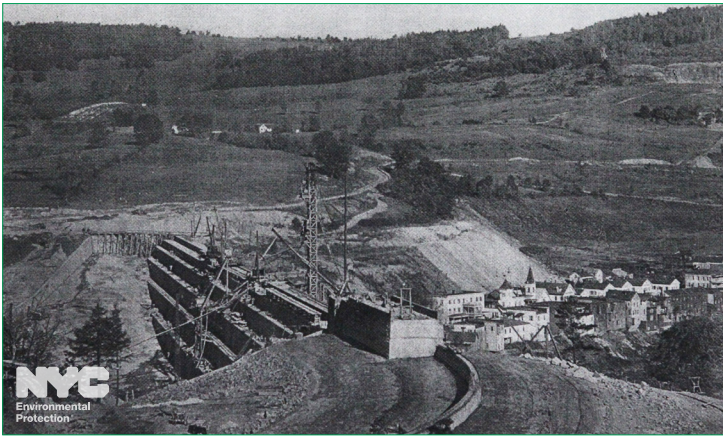
- wash your hands often with soap and warm water

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.

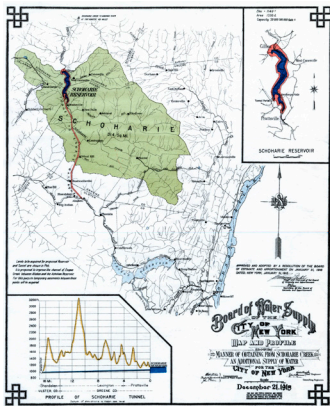




## Nearly a Century of Service



Gilboa Dam was built from 1919 to 1927 and impounds Schoharie Reservoir, the northernmost reservoir in the City's water supply system. The original Gilboa Dam cost \$7.8 million to build by the time it was put into service in 1927.



Schoharie Reservoir can store up to 19.6 billion gallons of water, and it accounts for roughly 15 percent of the drinking water delivered to New York City each day. Schoharie Reservoir collects water from a 314-square-mile watershed. It diverts that water through the 18-mile Shandaken Tunnel, which discharges into the Esopus Creek where it travels another five miles before entering Ashokan Reservoir. From Ashokan Reservoir, the water flows south through the Catskill Aqueduct to New York City.

## Cheers!

The American Water Works Association's New York Section will be holding a kick-off social tomorrow, Thursday, November 6, 6:30pm, at Local West Café. This is a terrific opportunity for networking and professional development and all DEP employees are welcome to attend. [Click here](#) for more information.

**We welcome your feedback! To submit an announcement or suggestion, please email us at: [newsletter@dep.nyc.gov](mailto:newsletter@dep.nyc.gov).**

## First Spill



During [Friday's ceremony at Gilboa Dam](#) Schoharie Reservoir water was poured onto the finished dam for the first time to celebrate its recommissioning. The video is also available on [YouTube](#).

## Here's What They Said

"Today is an important day for the residents of the Schoharie and Mohawk Valleys," **U.S. Sen. Charles E. Schumer** said. "The rehabilitation of the Gilboa Dam should alleviate the fears that were commonplace a decade ago when the dam was found to be deficient. I applaud the City of New York and specifically the DEP for giving the dam the earnest attention the situation demanded, and hope that folks downstream can sleep a little easier now, knowing that this most essential structure is secure."

"The completed renovation of the Gilboa Dam will critically improve New York State's water supply system and improve public safety," **U.S. Sen. Kirsten Gillibrand** said. "This broad rehabilitative effort will ensure that the dam remains functioning and secure for generations to come."

"Rebuilding for the long-term, and with full engineered resiliency, is critical when we are addressing dam safety and assuring that high quality drinking water continues to flow to 9.4 million residents in New York City and Westchester," said **New York State Department of Environmental Conservation Commissioner Joe Martens**. "I congratulate New York City on its successful multi-year reconstruction of the massive Gilboa Dam—this achievement will benefit New York City and the Schoharie Valley for many decades to come."

"Congratulations to Commissioner Lloyd, DEP staff, and the men and women who labored to carry out this impressive project through often difficult weather conditions and the wreckage caused by Hurricane Irene," **U.S. Congressman Chris Gibson** said. "These upgrades will help protect thousands of downstream residents and properties, strengthening the dam and improving our flood control capabilities. I want to thank the many stakeholders of this project, from Schoharie County to Albany to New York City, for their good stewardship and willingness to work together."

"The Gilboa Dam rehabilitation project answers the public's essential need for safety and peace of mind," **New York State Sen. James L. Seward** said. "This project was not an option but a necessity, and I congratulate the DEP for moving ahead at a swift pace commensurate with the job's considerable significance."

"I'm very pleased with the progress the City has made to strengthen and improve the Gilboa Dam," **New York State Assemblyman Peter Lopez** said. "For those of us living downstream, insuring the safety of the dam remains a high priority. All of us look forward to the completion of the release works and the development of an agreement with the City that would allow the dam to help control flooding in the Schoharie Valley."

"It is a great day for the town of Gilboa and Schoharie County," **Schoharie County Board of Supervisors Chairman Anthony Van Glad** said. "Our residents can sleep better knowing the Gilboa Dam has a high factor of safety with the completion of this project. The NYCDEP has lived up to being a good neighbor. My thanks and gratitude go to all involved in this undertaking."