

Home

Customer Services

» Ways to Pay Your Bill

» 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

» Economic Development Unit

» Doing Business with DEP

» Asbestos Abatement

» Construction, Demolition & Abatement

About DEP

» Inside DEP

» News

DEP Featured In...

Stories from DEP

Press Releases

Public Notices

Testimony & Public Comments



FOR IMMEDIATE RELEASE 14-88
October 31, 2014

CONTACT:
depressoffice@dep.nyc.gov, (845) 334-7868

Department of Environmental Protection Joins Public Officials, Construction Workers and Upstate Residents to Celebrate Completed Rehabilitation of Gilboa Dam

\$138 million public safety and water supply project completed two years ahead of schedule

Photos of the rehabilitation of Gilboa Dam as well as maps and historic shots can be found on [DEP's Flickr page](#)

New York City Department of Environmental Protection (DEP) Commissioner Emily Lloyd today joined local, state and federal officials, dozens of construction personnel, and upstate residents to celebrate the completed full-scale rehabilitation of Gilboa Dam. The \$138 million dam reconstruction – believed to be the largest public works project in the Catskills – was completed two years ahead of schedule. The project 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. Dignitaries who attended Friday's ceremony poured Schoharie Reservoir water onto the finished dam for the first time to celebrate its recommissioning.

"The completion of Gilboa Dam is an important milestone for DEP and the residents of Schoharie Valley," said **DEP Commissioner Emily Lloyd**. "We promised downstream communities that the City would move quickly with

More Information

NYC Department of Environmental Protection Public Affairs

59-17 Junction Boulevard
19th Floor
Flushing, NY 11373
(718) 595-6600

» [Capital Projects](#)


» [Careers at DEP](#)

» [Environmental Reviews](#)

» [Interagency MOUs](#)

» [A to Z Index](#)

» [Contact Us](#)



emergency repairs and a complete rehabilitation of the dam and, through the skill of our engineers and construction laborers, we have been able to deliver on that promise two years ahead of schedule. DEP hopes that the quick and professional work at Gilboa Dam assures downstream residents that we take their safety as seriously as our mission to deliver high-quality water to 9.4 million New Yorkers every day."

"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."

"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."

"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."

Gilboa Dam is 2,024 feet long, 155 feet high, and more than 150 feet wide at its base. Several new features were added to the dam during its rehabilitation, including an inspection gallery inside the dam that runs its entire length. The gallery – which also includes instruments to constantly measure stress on the dam – will allow engineers to visually inspect the inside and outside of the dam on a regular basis. The dam was also designed with 3-, 6- and 12-foot steps that dissipate the energy of water as it spills from the reservoir. The east and west abutment walls that support Gilboa Dam were also strengthened through the installation of 40 post-tensioned anchors, or steel cables that pull them tight to the bedrock. The project employed as many as 180 tradesmen from in and

around the watershed through an agreement with local unions.

The rehabilitation was completed ahead of schedule despite a nine-month setback in the wake of Hurricane Irene, which inflicted historic damage upon the Catskills and the City's water supply. The powerful storm sent roughly 8 feet of water over the dam's 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 was required to curtail some construction work during the eagles' breeding season, along with monitoring the eagles and their hatchlings, which are protected by federal law.

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, completed in 2003, found that Gilboa 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 emergency repairs to the dam and 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 westernmost portion 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. These post-tensioned 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 Gilboa Dam is complete, construction at the site will continue until approximately 2020. The rehabilitation of Gilboa Dam is part of a \$400 million program to build and improve other facilities near the dam. This includes a permanent release tunnel that will replace the temporary siphons, giving DEP the ability to release water from Schoharie Reservoir around the Dam and into Schoharie Creek below. 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.

Gilboa Dam was built from 1919 to 1927 and impounds Schoharie Reservoir, the northernmost reservoir in the City's water supply system. 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 5 miles before entering Ashokan Reservoir. From Ashokan Reservoir, the water flows south through the Catskill Aqueduct to New York City. The original Gilboa Dam cost \$7.8 million to build by the time it was put into service in 1927.

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 others 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, like us on Facebook at facebook.com/nycwater, or follow us on Twitter at twitter.com/nycwater.

For more information, visit nyc.gov/dep, like us on Facebook at facebook.com/nycwater, or follow us on Twitter at twitter.com/nycwater.

 [All Press Releases](#)

