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Department of Environmental Protection Announces Start of Construction for Release Works At Schoharie Reservoir

\$142 million release structure will improve dam safety, facilitate maintenance and provide capability to support downstream ecology of Schoharie Creek

Diagrams, renderings and photos are available on <u>DEP's</u> <u>Flickr page</u>

New York City Department of Environmental Protection (DEP) Commissioner Emily Lloyd today announced that construction will begin this month on a \$142 million project to build release works at Schoharie Reservoir. The project – which is expected to be complete in the year 2020 – includes construction of an intake structure at the bottom of Schoharie Reservoir, more than 2,000 feet of subsurface tunnels, and a valve chamber along Schoharie Creek. Once completed, the tunnel and valves will provide DEP with the capability to release water from the reservoir into Schoharie Creek to facilitate dam maintenance, respond to potential emergencies, mitigate flood risk for downstream communities, and enhance downstream habitat for fish and wildlife.

The release works are part of a larger \$400 million program aimed at strengthening the 88-year-old Gilboa Dam and ensuring that Schoharie Reservoir continues to provide reliable, high-quality drinking water to New York City for many decades to come. The program began with the full-scale rehabilitation of Gilboa Dam, a \$138 million project that finished in 2014. It will also include upgrades to the Shandaken Tunnel Intake Chamber and site restoration work.

More Information

NYC Department of Environmental Protection Public Affairs

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"Building this release tunnel is part of a comprehensive program to improve and strengthen our critical infrastructure at Schoharie Reservoir," **DEP**

Commissioner Emily Lloyd said. "The release works will allow DEP to draw down the reservoir for dam maintenance and in case of emergency, while also mitigating flood risk for our downstream neighbors. New Yorkers have depended upon Schoharie Reservoir for 15 percent of their daily drinking water, and these projects are essential to keeping the city's supply reliable and secure for generations to come."

The release works comprise several facilities, including an intake structure, a valve chamber, and two sections of tunnel that will total 2,118 feet long and run as deep as 185 feet below the surface. The 9-foot-diameter tunnel will be drilled by a micro-tunnel boring machine. The first leg of the tunnel will stretch 1,188 feet from a future gate shaft on the east side of Route 990V in Gilboa to a valve chamber on the eastern bank of Schoharie Creek. The valve chamber will be located about 1,000 feet downstream of Gilboa Dam. A second leg of the tunnel, stretching 930 feet, will run from the gate shaft to an intake structure at the bottom of Schoharie Reservoir, several hundred feet south of the dam. Once workers bore into the bottom of the reservoir, a specialized dive team will remove the micro-tunnel boring machine from the 135-foot-deep water and install the intake structure. Roughly 10,000 cubic yards of sediment will also be dredged from around the intake.

The valve chamber – which acts as the portal that releases water into the creek – will include two valves capable of releasing about 65-1550 million gallons of water each day. A third, smaller valve will be capable of smaller releases up to 65 million gallons per day.

Releasing water from Schoharie Reservoir will provide DEP with the capability to support multiple goals related to reservoir operations, public safety and conservation. The release works will provide DEP with the capability to draw down the reservoir for periodic maintenance and in response to potential emergencies. The release tunnel will help mitigate flood risk for downstream communities by releasing water to counterbalance snowpack in the Schoharie watershed. Currently, through the use of temporary siphons that will be removed when the release works are complete, DEP releases water equivalent to 50 percent of the amount contained in the snowpack throughout the reservoir's watershed, creating room in the reservoir for inflow during the spring melt. In the future, the release chamber may also be used to provide a conservation release downstream of Gilboa Dam to support fish, bird and other natural habitats by providing a baseline flow in Schoharie Creek. In December 2014, DEP submitted a study to the New York State Department of Environmental Conservation (DEC) that examined the potential for a conservation release and a revamped program of flood mitigation releases. The study was a requirement of the state permit that allowed DEP to rebuild Gilboa Dam. A decision on conservation and flood mitigation releases is pending DEC's review of the study.

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 11 miles before entering Ashokan Reservoir. From Ashokan Reservoir, the water flows south through the Catskill Aqueduct to New York City.

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, like us on Facebook, or follow us on Twitter.

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