

Upper North River Watershed Dam No. 10 Rehabilitation Project Augusta County, Virginia

Fact Sheet
April 2016

History of the Dam:

The Upper North River Watershed Dam No. 10, known locally as Todd Lake, is located in Augusta County about 26 miles from Verona, Virginia in the George Washington National Forest. The 20-acre recreation area around the lake offers a variety of outdoor activities, including swimming, camping, hiking and picnicking.

The Shenandoah Valley Soil Conservation District constructed the dam in 1963 for flood control with the assistance of the Soil Conservation Service (now the Natural Resources Conservation Service - NRCS). The Headwaters Soil and Water Conservation District, created in 1975, assumed responsibility for the operation and maintenance of the dam as a service to Augusta County.

Approximately 440 people live in the dam's breach inundation zone, which includes businesses, churches and several roads on which an estimated 1,000 vehicles travel daily.



The concrete principal spillway inlet tower and gates were replaced.



The control and outlet sections of the auxiliary spillway were covered with articulated concrete blocks to prevent surface erosion. The spillway was then covered with soil and seeded to hide the concrete blocks.

Why Rehabilitate the Dam?

The dam was constructed as a significant hazard dam, but reclassified to a high hazard dam in 2008 due to downstream development and an increased threat for loss of life if the dam failed. It was rehabilitated to meet the more stringent safety criteria for a high hazard dam.

Rehabilitation Details:

The top of the dam was raised 2.7 feet with earth fill and reseeded. The auxiliary spillway was widened from 200 to 300 feet. The concrete principal spillway riser and gates were replaced with new materials.

An 11.2 foot high concrete cutoff wall was installed at the end of the control section of the auxiliary spillway to prevent a dam breach. The control section and constructed outlet sections were covered with articulated concrete blocks to prevent surface erosion in the auxiliary spillway. The blocks were cabled together and completely covered with soil and grass so they are not visible. A rock toe drain was installed on the downstream toe of the dam.

The training dikes on the embankment-side of the auxiliary spillway were extended upstream and downstream to direct runoff away from the dam.

Project Cost:

The NRCS provided technical assistance and 65 percent of the project cost which totaled \$3,240,025. Local project sponsors provided 35 percent of the funding.

Benefits:

Rehabilitation of the dam extends the life of the dam for another 50 years and ensures that it will remain safe and continue to provide flood protection, recreational benefits and fish and wildlife habitat.

Partners:

- Headwaters Soil and Water Conservation District
- Augusta County Board of Supervisors
- Natural Resources Conservation Service

For More Information Contact:

R. Wade Biddix, Watershed Program Specialist
Richmond, VA
Phone: 804-287-1675
email: wade.biddix@va.usda.gov

