

Rock Creek Watershed Dams No. 15 & 16 Rehabilitated to Ensure Flood Protection for the Town of Sulphur, Oklahoma

Rock Creek Watershed Dams No. 15 and 16 are located in the Rock Creek Watershed Project that encompasses 170 square miles and includes 17 flood control dams. Fifteen dams are in Murray County, one is in Garvin County and one is in Pontotoc County. The Rock Creek Watershed drains into the Washita River.



Installation of a new principal spillway pipe on Dam No. 16

Dams No. 15 and 16 are being rehabilitated in 2018 to upgrade them to current dam safety standards and to extend their benefits for another 100 years. The dams are located in Murray County and are located upstream and provide flood protection for the City of Sulphur, population of 5,081.

Why Rehabilitate the Dam?

The dams were originally constructed as low hazard dams for flood control in 1961 and 1962. Over time changes in dam safety criteria and development downstream of the dams have resulted in reclassification of the dams to high hazard which means there is the potential for loss of life if the dam should fail.

Structures that could be flooded downstream from Dam No. 15 in the event of a dam breach include: 21 houses, 4 mobile homes, 10 businesses, 8 school buildings, and 1 county road, US Highway 177, and the Chickasaw Turnpike.

Structures that could be flooded downstream from Dam No. 16 in the event of a dam breach include: 12 houses, 2 mobile homes, 6 school structures, 3 businesses, 1 county road, and US Highway 177.

The Murray County Conservation District, as the project sponsor for the dams, requested NRCS assistance to rehabilitate the dams to ensure they meet current safety standards and extend their benefits for another 100 years.

Rehabilitation Details

Dam No. 15: The top of the earthen dam is being raised 4.8 feet; a new 42-inch diameter reinforced concrete principal spillway pipe is being installed with a new concrete inlet; and the auxiliary spillway crest is being raised by 1.2 feet. The auxiliary earthen spillway width is being enlarged from 240 feet wide to 540 feet. Rehabilitation will be completed in the Fall of 2018.

Dam No. 16: Rehabilitation of the dam was completed in June 2018. The top of the earthen dam was raised 3.3 feet; a new 30-inch diameter reinforced concrete principal spillway pipe was installed with a new concrete inlet; and the auxiliary earthen spillway width was enlarged from 100 feet wide to 200 feet.

Project Costs

The construction project is estimated to cost \$4.3 million dollars with NRCS providing \$2.5 million and the local sponsors providing \$1.8 million. All technical assistance for planning, design, and construction is provided by NRCS.

Benefits of Rehabilitation

Rehabilitation of the dams reduces the risk of dam failure and they will provide an estimated \$60,100 of average annual flood damage reduction benefits.

The dams provide flood protection for houses, businesses, schools, roads and agricultural land. They also provide livestock water, fish and wildlife habitat and sediment storage.

Project Partners:

Murray County Conservation District
Oklahoma Conservation Commission
Natural Resources Conservation Service

National Watershed Coalition
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