

Rock Creek Watershed Dams No. 15 & 16 Rehabilitation Project Murray County, Oklahoma



Rehabilitation of Rock Creek Watershed Dams No. 15 & 16

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.

Dams No. 15 and 16 will be 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 upstream from the City of Sulphur.

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. The NRCS Watershed Rehabilitation Program is providing technical assistance for the rehabilitation planning and design and 65% of the funds for construction.

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.

Dam No. 16: The top of the earthen dam is being raised 3.3 feet; a new 30-inch diameter reinforced concrete principal spillway pipe is being installed with a new concrete inlet; and the auxiliary earthen spillway width is being 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.

For additional information about watershed and rehabilitation projects in the state visit the Oklahoma Conservation Commission website at: <http://conservation.ok.gov> or visit your local conservation district and NRCS office.

Rock Creek Watershed Project

Before the 17 dams were constructed, the Rock Creek Watershed was subject to frequent and severe flooding. There were 109 floods in the watershed between 1924 and 1943. Twenty-two of these floods inundated more than one-half of the flood plain area.

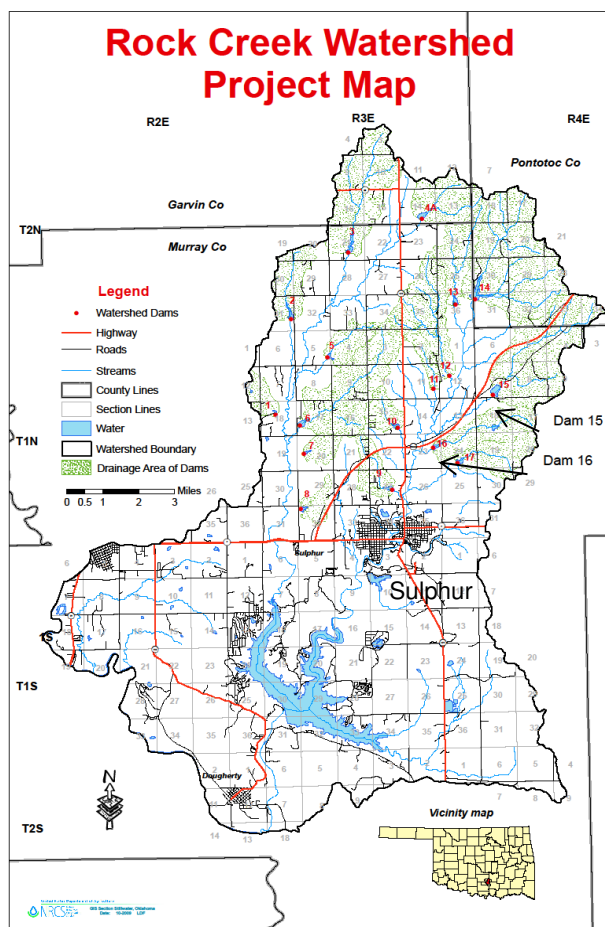
In 1959 the Garvin, Murray County and Pontotoc County Conservation Districts requested assistance from the USDA Soil Conservation Service (Natural Resources Conservation Service) in developing a watershed plan that included the construction of flood control dams and the application of conservation practices to help control the flooding.

The dams were built primarily for flood protection for rural agricultural land, but they also provide fish and wildlife habitat, livestock and irrigation water and sediment retention.

Local project sponsors provided easements and other land rights and NRCS funded the design and construction of the dams.

Rock Creek Watershed Project Benefits Seventeen Dams

- Dams provide \$386,610 in average annual benefits from reduced flood damages
- Provides flood protection for 337 farms and ranches
- Provides flood protection for houses and businesses in the City of Sulphur and for 10 major bridges and many smaller bridges and county roads
- Created or enhanced 259 acres of wetlands
- Reduces sedimentation of streams and rivers by 41,129 tons of soil annually
- Impounded water has created fish and wildlife habitat, waterfowl nesting areas and livestock water
- Dams and associated conservation practices improve the water quality in the Lake of the Arbuckles and provides protection for the Chickasaw National Recreational Area



The Rock Creek Watershed Project is one of 129 projects in Oklahoma that have been planned and implemented by local people with assistance from the USDA Natural Resources Conservation Service.

2,107 flood control dams have been constructed in 61 Oklahoma counties. The watershed projects that also include thousands of conservation practices provide over \$90 million in average annual benefits.

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