

Barnitz Creek Watershed Dam No. 5 Rehabilitation Project Dewey County, Oklahoma

Fact Sheet
January 2018

History of the Dam:

Barnitz Creek Watershed Dam No. 5 is located four miles southeast of Leedey, Oklahoma. The dam was constructed in 1954 by the Dewey County Conservation District with the assistance of the Oklahoma Conservation Commission and the USDA Natural Resources Conservation Service (NRCS) Watershed Program.

The dam is one of 76 flood control dams constructed in the Barnitz Creek watershed for flood control of agricultural lands. Drainage from the watershed flows into the Washita River.



The height of the dam embankment was raised 6.3 feet during rehabilitation. A new inlet tower and principal spillway conduit was also installed.

Why Rehabilitate the Dam?

The dam was originally designed and constructed as a low hazard dam to protect agricultural lands from flooding. It was designed with a 50-year design life and was over 60 years old when it was rehabilitated.

The dam was reclassified to a high hazard dam in 2008 due to a state highway and four county roads downstream and changes in state dam safety criteria.

High hazard classification means there would be a risk of loss of life and property if the dam failed. The dam was rehabilitated to bring it up to high hazard classification safety criteria and to extend its benefits for another 100 years.

Rehabilitation Details:

The project consisted of removing the existing 14-inch principal spillway conduit and replacing it with a 30-inch reinforced concrete conduit with a new concrete inlet. The top of the dam was raised 6.3 feet. The auxiliary earthen spillway crest elevation was raised 4.9 feet and flows on both sides of the embankment. One spillway is 130 feet and the other 60 feet. A riprap plunge basin was installed to dissipate energy at the outlet of the conduit.

Project Cost:

The NRCS provided technical assistance and 65 percent of the construction cost. Project sponsors provided easements and land rights for the project and 35 percent of the cost.

The total construction cost of the rehabilitation project was \$1,749,772.57. \$1,137,352.17 in federal funds were provided through the NRCS Small Watershed Program Rehabilitation Program. Local project sponsors provided \$612,420.40 part of which was appropriated by the Oklahoma Legislature to the Oklahoma Conservation Commission.

Benefits:

Rehabilitation of the dam brought it up to current State dam safety criteria and extended its life and its benefits for another 100 years.

The dam currently provides flood protection for four county roads, a state highway and agricultural lands.

Partners:

Dewey County Conservation District
Oklahoma Conservation Commission
USDA Natural Resources Conservation Service

For More Information Contact:

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