

SWOSU

Southwestern Oklahoma State University

Rehabilitation of Crowder Lake Dam

Plans are underway to rehabilitate the dam forming Crowder Lake. This page is dedicated to providing factual information and current status of the project.

What is Rehabilitation?

Rehabilitation is making improvements or changes to the dam and its components to upgrade the structure to meet current dam safety requirements and ensure it remains safe.

When Will Work Begin?

Not before the fall of 2007.

Who is Funding the Project?

The USDA Natural Resources Conservation Service (NRCS) is providing technical assistance (engineering planning and design) and 65 percent of the cost of the project that is estimated to be \$3-\$4 million. Local watershed project sponsors will provide the other 35 percent of the funds and work to obtain any needed easements and permits.

The project sponsors are Southwestern Oklahoma State University and the Deer Creek Conservation District. The Oklahoma State legislature has provided funds to assist in other state rehabilitation projects and the local sponsors have made a request for this project.

Why is the Dam Being Rehabilitated?

The USDA Soil Conservation Service (now NRCS) built Cobb Creek Watershed Dam No. 1 in 1959 as one of three watershed dams in the Cobb Creek Watershed project. The dams were constructed to provide flood control for agricultural lands. The dam was designed for a 50-year lifespan and as a low-hazard dam because at the time it was built there was no major threat of loss of lives or homes downstream if the dam were to fail.

Today several permanent and mobile homes are located downstream, that has caused the dam to be reclassified as a high hazard dam.

Dams, just like other infrastructures, like highways, deteriorate over time and eventually components like concrete and metal need replacement. While there is no immediate danger of the dam failing, it needs rehabilitating to meet current dam safety requirements.

What Kinds of Work Will be Done?

The principal spillway (concrete tower in front of the dam connected to a pipe through the dam) will be replaced and the auxiliary earthen spillway will be reconfigured and hardened with concrete.

Background of Crowder Lake:

Crowder Lake was built in 1959 for the purpose of flood control and was developed for recreational use by the Oklahoma Department of Tourism and Recreation in 1983. Management of the area was turned over to Southwestern Oklahoma State University in

1997, and in 2003 the lake was transferred to SWOSU and has become known as Crowder Lake University Park.

How Will the Recreation Areas and Fish Habitat be Affected During Construction?

Due to the importance of the fish population and recreational uses of the lake, work will be scheduled to maintain the maximum possible water level during construction. Construction is planned for the fall of the year to minimize impacts on fish, fish spawning success, and fish recruitment. Oxygen levels will be monitored and aerators will be used if oxygen levels drop below a critical level. Cofferdams, dikes, silt curtains and other erosion control methods will be used to prevent sediment-laden runoff from entering the lake.

Current Status of the Rehabilitation Project:

The USDA Natural Resources Conservation Service has entered into a contract with Schnabel Engineering located in North Carolina to produce the rehabilitation design for Crowder Lake. The design is currently 60 percent complete and NRCS has just completed a review of the 60% submittal. The next submittal from the consultant will be a check print review of the design, currently anticipated in April 2007. The design will be submitted to the sponsors and NRCS for a formal review process that will take approximately 6 weeks. Comments from the review phase will be addressed and a final design is anticipated in July 2007.

Background of the USDA Watershed Program

Oklahoma has more watershed dams than any other state with 2,105. These dams are located in 121 watersheds in 62 counties. The dams were built under Public Law 78-534 (Flood Control Act of 1944) and Public Law 83-566 Watershed Protection and Flood Prevention Act 1954). Local people organize and plan the projects. A local unit of government serves as the project sponsor, which in many cases is the local conservation district. Projects usually consist of a series of flood control dams in a watershed to control flooding, along with conservation practices to control erosion and sediment.

The USDA Natural Resources Conservation Service provides technical assistance and funds for construction of the dams. Local sponsors operate and maintain the dams after construction. These 2,105 dams make up a \$1.5 billion infrastructure that provides over \$71 million in annual benefits. While built primarily for flood control, most dams also provide fish and wildlife habitat, fishing and recreational areas, and irrigation and livestock water. Many are also used for municipal water supplies or recreational areas.

Background of the Rehabilitation Program:

Over 11,000 watershed dams have been built in the nation since 1948. Many dams today are in a far different setting than when they were constructed. Population has increased; residential and commercial development has occurred upstream and downstream from the dams; land uses have changed; sediment pools have filled; and concrete and metal components have deteriorated.

Many dams do not meet current state dam safety regulations that have been enacted and revised with more stringent requirements than when the dams were built. Many of these dams are also nearing the end of their planned life span of 50 years. Some dams need rehabilitating to ensure they remain safe and continue to function as designed.

Watershed Rehabilitation Amendments of 2000

Congress passed the Watershed Rehabilitation Amendments of 2000 that amended the Watershed Protection and Flood Prevention Act (Public Law 83-566) and authorized the Natural Resources Conservation Service to provide technical and financial assistance to watershed project sponsors in rehabilitating their aging dams.

The purpose of rehabilitation is to extend the service life of the dams and bring them into compliance with applicable safety and performance standards or to decommission the dams so they no longer pose a threat to life and property.

The 2002 Farm Bill amended the Act of 2000 to authorize \$600 million in funding for rehabilitation for years 2003 through 2007. The federal government may provide up to 65 percent of funding for rehabilitation projects and project sponsors provide 35 percent.