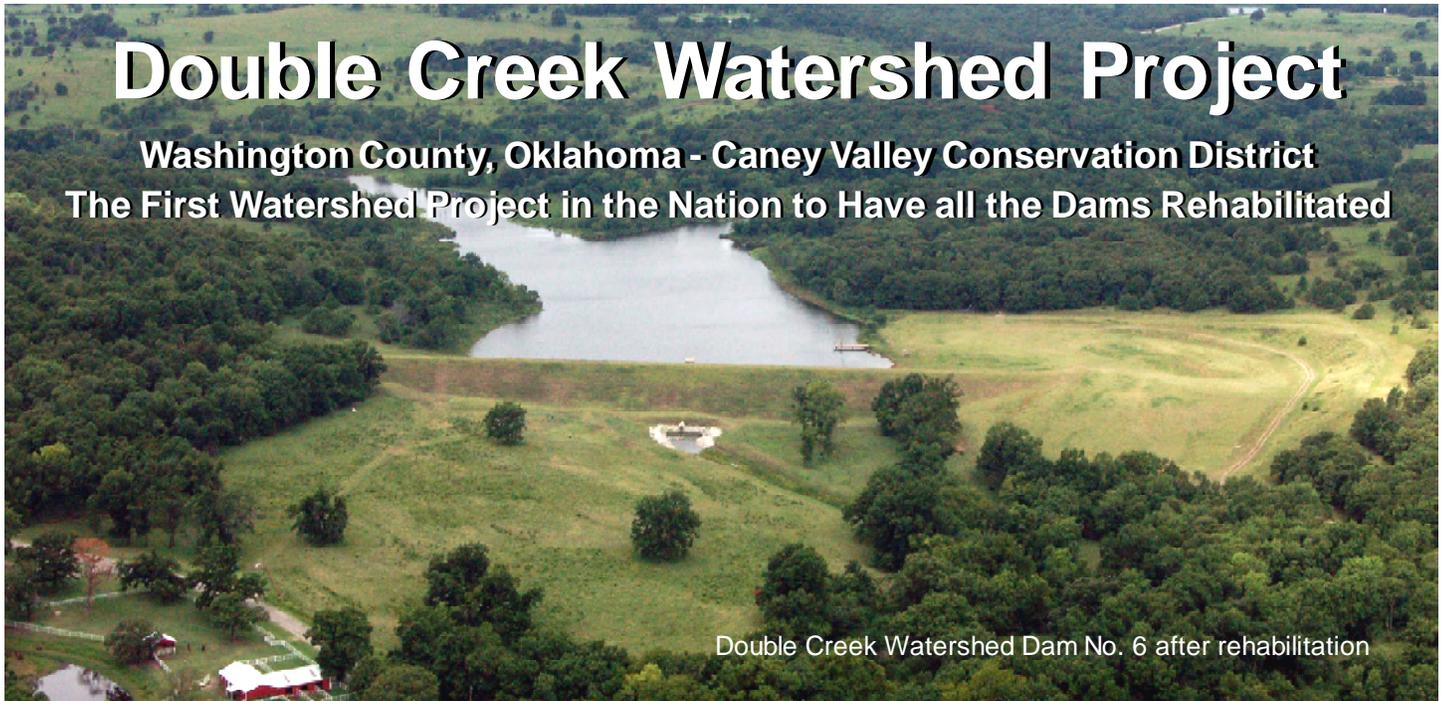


Double Creek Watershed Project

Washington County, Oklahoma - Caney Valley Conservation District

The First Watershed Project in the Nation to Have all the Dams Rehabilitated



Double Creek Watershed Dam No. 6 after rehabilitation

The Double Creek Watershed Project is unique in two ways. First it was originally funded in 1954 as a pilot project under Public Law-46, unlike all the other watershed projects in Oklahoma, which were funded through Public Law 78-534 and Public Law 83-566 USDA Watershed Programs. Second it is the first watershed project in the nation to have all dams in the project rehabilitated.

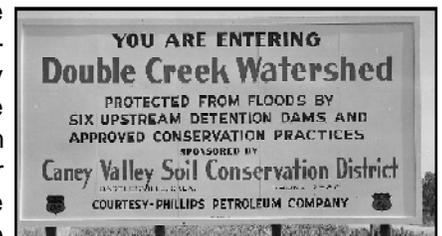
Watershed Project Statistics:

- ◆ The watershed covers 38,000 acres in Washington and Osage Counties, Oklahoma.
- ◆ The primary purpose of the project is to control flooding and sedimentation, and reduce erosion. U. S. Highway 75, a major transportation route between Tulsa and Bartlesville, runs through the watershed and is protected by the six flood control dams. The town of Ramona is also protected by the dams.
- ◆ The dams were constructed as low-hazard dams to protect rural agricultural land. Landowners took advantage of protected areas downstream from the dams as flooding was controlled and built houses and other structures that raised the risk for loss of lives if the dams were to fail. The dams were reclassified as high hazard, which along with their age and condition made them eligible for rehabilitation assistance from the Natural Resources Conservation Service (NRCS).
- ◆ All six dams were rehabilitated between 2004 and 2009.

History of the Watershed Project

The Double Creek Watershed Project is one of 62 pilot watershed projects in the nation for which Congress appropriated funds under Public Law 46 in 1954 to demonstrate combined conservation land treatment and flood prevention. It is the only pilot watershed project in Oklahoma.

Prior to 1956 Double Creek and its tributaries had a long history of frequent and severe flooding. Between 1917-1936, 36 major floods covered more than 50 percent of the floodplain's 3,800 acres and there were 43 lesser floods. Construction of the dams and installation of conservation practices in the watershed greatly reduced the flooding after 1956.



The dams were constructed between 1954 and 1955 by the Caney Valley Conservation District with assistance from the USDA Soil Conservation Service (now the Natural Resources Conservation Service).

Watershed Project Benefits:

The dams and associated conservation practices provide the following annual benefits:

- ◆ \$268,160 average annual monetary benefits from reduced flooding and erosion
- ◆ Protection for 3,800 acres of floodplain
- ◆ Protection for bridges, county roads, U. S. Highway 75, and a major railroad track
- ◆ Protection for 60 farms and ranches
- ◆ Protection for public facilities, businesses, homes and the school in Ramona
- ◆ Reduced risks of flooding for people living downstream from the dams
- ◆ Impounded water that has created fish and wildlife habitat, waterfowl nesting areas, and livestock water

Rehabilitation of Double Creek Watershed Dams

The Double Creek Watershed rehabilitation plan was the first one in the nation to be authorized under the rehabilitation amendments of 2000 to the Watershed Protection and Flood Prevention Act (P. L. 83-566). These amendments authorize the NRCS to provide technical and financial assistance to local project sponsors in rehabilitating aging flood control dams.

The six dams in the watershed range in height from 28 to 44 feet with a drainage area from 1.6 to 12.6 square miles. They were constructed to provide flood protection, sediment reduction and erosion control. The dams provide flood protection by trapping water from high rainfall events and storing it for several days while slowly releasing water through an inlet tower connected to a pipe through the dam.

The dams were designed for a 50-year life span and all had exceeded that life. Because of their age, sediment-filled flood storage pools, deteriorated structure components, and the development that had occurred downstream in the floodplain it became necessary to rehabilitate the dams to bring them up to current dam safety standards and ensure they remain safe.

The project sponsor, the Caney Valley Conservation District, requested assistance from the NRCS in rehabilitating the dams. The NRCS provided technical assistance for planning, design and construction for the project and 65 percent of the project costs. The conservation district obtained needed land rights and provided 35 percent of the cost with help from the Oklahoma Conservation Commission and the Oklahoma Legislature.

The dams were rehabilitated by removing and replacing the principal spillway conduits, raising the height of the embankments, and widening the auxiliary (earthen) spillways.

Rehabilitation of the dams extended their life span another 100 years.

Double Creek Watershed Dam No. 1 Before, During and After Rehabilitation



The Double Creek Watershed is one of 129 watershed projects in 64 counties in Oklahoma. There are 2,105 flood control dams and thousands of conservation practices such as terraces, waterways, ponds, grade stabilization structures, and grassland plantings in these watersheds. The projects make up a \$2 billion infrastructure that provides over \$75 million in average annual benefits. Information about watershed projects can be obtained from local conservation district and NRCS offices or from the Oklahoma Conservation Commission webpage: www.conservation.ok.gov

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