

Upper Salt Creek Watershed Dam No. 3-A Lancaster County, Nebraska

Upper Salt Creek Watershed Dam No. 3-A was constructed in 1955 by local watershed project sponsors with the assistance of the Natural Resources Conservation Service (NRCS) Watershed Program. It is one of 40 dams in the Upper Salt Creek Watershed Project constructed primarily for flood control.

The dam was originally designed and constructed as a low hazard dam and was rehabilitated to bring it up to current "High Hazard" standards to provide better flood protection downstream.



A new principal spillway was constructed through the dam.

The project raised the height and increased the width of the dam; increased the width of the auxiliary spillway; increased the flood pool storage; constructed a new inlet structure; installed a larger principal spillway pipe, and installed a plunge pool impact basin to slow down peak discharge flows.

NRCS provided technical assistance in the planning and design of the project and 65% of the construction cost. Local sponsors provided the other 35% of the cost and the land rights and easements. Rehabilitation of the dam costs \$1.8 million.

Rehabilitation will extend the life and benefits of the dam for another 100 years and provide flood protection in the Sprague, NE area including agricultural land, county roads, highways and homes downstream.

Project Partners:

- Lower Platte South Natural Resources District
- USDA NRCS
- Lancaster County, NE

Upper Elk Creek Watershed Dam No. 23D Beckham County, Oklahoma

The Upper Elk Creek Watershed Dam No. 23D was constructed in 1976 as a significant hazard dam. The dam was reclassified as a high hazard dam due to development downstream. A breach of the dam could result in loss of lives and property.

The dam is one of 35 flood control dams in the Upper Elk Creek Watershed Project in Washita, Beckham and Kiowa Counties. The dam was originally constructed by the North Fork of Red River Conservation District with the assistance of the NRCS Watershed Program.



A new concrete pipe was installed using a "jack and bore" technique.

Rehabilitation will reduce the potential of a dam breach and subsequent potential damage to downstream properties and infrastructure and will reduce the risk of loss of life.

The project will raise the top of dam elevation by 4.4 feet. The height of a county road is being raised as well. A new 30-inch reinforced concrete pipe is being installed using a technique known as "jack and bore." Articulated concrete blocks (ACBs) are being added to the exit channel of the spillway to provide erosion protection and prevent head cutting. Rehabilitation will extend the life and benefits of the dam for another 100 years.

The NRCS is providing technical assistance in planning and design and 65 percent of the construction cost. Federal funding is provided through the NRCS Watershed Rehabilitation Program. The Oklahoma Conservation Commission is providing 35 percent of the cost on behalf of the North Fork of Red River Conservation District.

Watershed Rehabilitation Progress Report April 2022

The Watershed Program: Providing Multiple Benefits to Communities for 78 Years

Congress established the Watershed Program by enacting the Flood Control Act of 1944 (Public Law 78-534) and the Watershed Protection and Flood Prevention Act of 1954 (Public Law 83-566).

Under these authorizations, the USDA Natural Resources Conservation Service (NRCS) has assisted watershed project sponsors in the construction of more than 11,845 flood control dams in 1,271 watersheds in 47 States since 1948.

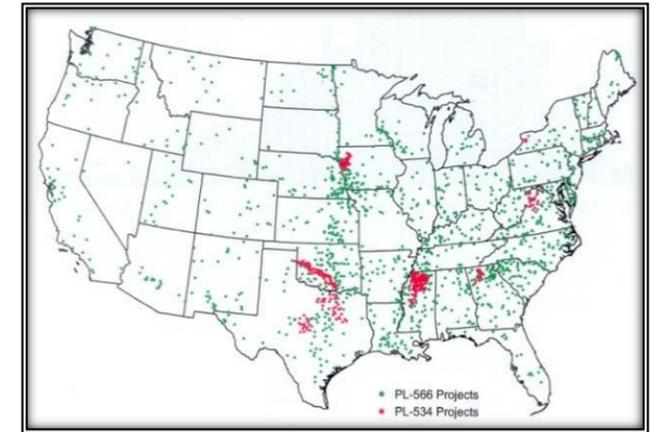
These projects provide an estimated \$2.2 billion in annual benefits in reduced flooding and erosion damages, recreation, water supplies and wildlife habitat.

Time Has Taken Its Toll on Dams

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 standards that have more stringent requirements than when the dams were built.

Many of these dams are also nearing the end of their planned service life of 50 years. Some of these dams need rehabilitating to ensure they remain safe, continue to function as designed and continue providing benefits. In some cases, additional new benefits such as adding water supply storage and recreation areas are a part of rehabilitation projects.



Flood control dams have been constructed in 1,271 watersheds in 47 States.

Status of Rehabilitation Projects

As of April 2022, there are 266 approved rehabilitation projects in 27 States. One hundred and seventy-four of these projects in 23 States have been completed; 58 projects in 15 States are being implemented (either in design or construction phase) and 134 projects in 28 States are in the planning stage.



Watershed Rehabilitation Amendments of 2000

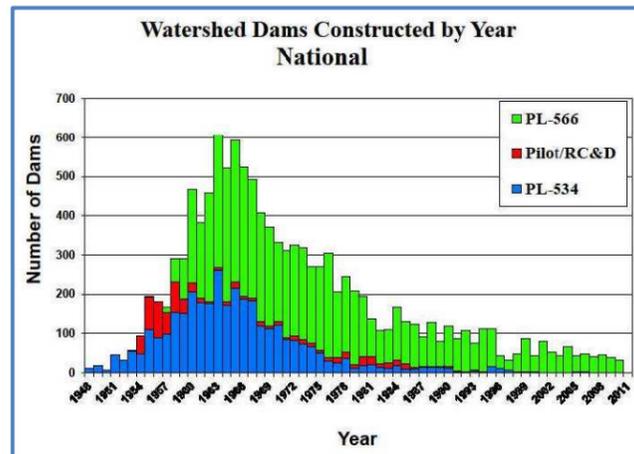
Congress passed the Watershed Rehabilitation Amendments of 2000 which amended the Watershed Protection and Flood Prevention Act (Public Law 83-566) to authorize the NRCS to provide technical and financial assistance to watershed project sponsors in rehabilitating their aging dams.

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.

NRCS provides technical assistance and 65 percent cost share on approved rehabilitation projects. Funding for projects comes from Congressional appropriations.

Funds for rehabilitation are authorized in the Farm Bills and are appropriated annually by Congress. Discretionary and Commodity Credit Corporation (CCC) funding has been authorized. The 2014 Farm Bill authorized \$250 million in CCC funds.

Congress appropriated \$10 million in discretionary funding for fiscal year 2021 and \$21.45 million in Farm Bill funding was made available for the Watershed Rehabilitation Program.



Many of the 11,845 flood control dams were built in the 1960s-70s and now are 50 to 60 plus years old. Most were designed for a 50-year service life.

Local Sources of Cost-Share Funds

Local watershed project sponsors provide 35 percent of the cost of a rehabilitation project and obtain needed land rights and permits. The source of these funds varies from state to state.

Some of the methods that states utilized to obtain funding for rehabilitation include:

- Bonds,
- County budgets
- State park division
- State appropriations
- Municipal taxing authority
- Watershed taxing authority
- In-kind technical services

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Included in this publication are examples of rehabilitation projects in four states. Fact sheets with more details on these and other rehabilitation projects are available on the National Watershed Coalition website: www.watershedcoalition.org

Buckeye Flood Retarding Structure No. 1 Maricopa County, Arizona

The Buckeye No. 1 Flood Retarding Structure (FRS) was originally constructed by local watershed project sponsors with the assistance of the USDA Natural Resources Conservation Service (NRCS) Watershed Program in 1975. It is currently operated and maintained by the Flood Control District of Maricopa County.



Phase 2A requires the rehabilitation of five miles of an embankment dam located just north of Interstate 10 in Buckeye, AZ.

The project includes raising the dam height, construction of a reinforced concrete auxiliary spillway, installation of a central filter and a concrete riser for the principal spillway. In addition new ramps and maintenance roads will be constructed for future maintenance. Rehabilitation of the dam will cost an estimated \$47.6 million.

The NRCS is providing technical assistance in the planning and design of the project and 65 percent of the construction cost. Federal funding is provided through the NRCS Watershed Rehabilitation Program.

- **Project Partners:**
- Flood Control District of Maricopa County
- Agua Fria-New River Natural Resource Conservation District
- Buckeye Valley Natural Resource Conservation District
- USDA NRCS

Noonday Watershed Dam No. 17 Cobb County, Georgia

Noonday Watershed Dam No. 17 is an earthen embankment located on Tate Creek, a tributary of Noonday Creek in Cobb County, Georgia.

The dam was constructed by the Cobb County Soil and Water Conservation District in 1956 with the assistance of the USDA Natural Resources Conservation Service (NRCS) Watershed Program.



Before

After

Significant urban development has occurred upstream of the dam, resulting in increased runoff and reduced time of concentration. Similar development downstream has resulted in many structures within the breach zone.

Development downstream of the dam resulted in the reclassification of the dam from a low hazard dam to a high hazard dam and it did not meet current NRCS or Georgia Safe Dams Program performance criteria for a high hazard potential dam.

Rehabilitation will bring the dam up to current dam safety criteria and extend its life for another 100 years. The project involves upgrades to the existing earthen dam including, construction of a roller compacted concrete (RCC) chute spillway, reinforced concrete stilling basin, cutoff wall, and training walls with under drains. It also includes construction of subsurface drainage systems, rock excavation and on-site earth fill.

Rehabilitation of this dam will provide flood protection for 156 downstream residents, 13 homes, two stables, a neighborhood recreation facility, one local road, Interstate 575, and many public utilities and infrastructure.