South River Dam No. 23 - Augusta County, Virginia

Augusta County, Virginia's second largest agricultural county, is nestled in the foothills of the Blue Ridge Mountains. Sixteen flood control dams protect residents from the threat of serious flooding. When the state dam safety agency notified the county that they had to upgrade eight dams to meet state dam safety regulations, the county turned to NRCS for technical and financial help.

Federal, state, and local partners joined together to rehabilitate the first dam in 2007. South River Dam No. 23 protects 72 homes, three businesses, 13 roads and three bridges. If the dam failed the lives of 360 residents and an infrastructure valued at 2.5 million dollars would be at risk.

Rehabilitating the dam has greatly reduced the threat to loss of life, and secured access to critical transportation routes for medical and emergency services for local residents. In addition, the dam rehabilitation project helps protect water quality downstream and some valuable wetlands.

The $1.4 million dollar project was planned in 2005, designed in 2006, and constructed in 2007. Funding came from multiple sources including the City of Waynesboro, Augusta County, the Virginia Department of Conservation and Recreation, and NRCS. Augusta County administered the construction contract. The Headwaters Soil & Water Conservation District facilitated public meetings, collected data and provided staff assistance. NRCS engineers and inspectors provided the on-site engineering assistance and inspections. When the county's engineer, liaison to the project, was deployed to Iraq, NRCS employees were able to work directly with Augusta County's contracting department and the project was constructed without any problems or delays.

This project demonstrates what can be accomplished when there is a high level of cooperation from partners and federal funds to leverage local resources. As a result of this project, residents are now protected from the threat of devastating floods for another 50 years.

Yellow River Watershed Dam No. 14, Gwinnett County, Georgia.

This dam was built in 1968 as a significant hazard dam under the Resources Conservation and Development Program (RC&D). The significant classification was based upon the fact that two state highways were downstream from the dam. Since 1968 the population of the county has increased from 73,000 to 625,000 and urban development has occurred both upstream and downstream from the dam.

There are 45 homes in the dam breach zone and this prompted the Georgia Environmental Protection Division to identify the dam as a high hazard dam. The dam was approved for rehabilitation by NRCS and the project has been completed. A roller compacted concrete spillway was constructed over the top and down the back slope of the dam. Construction cost was $1.8 million and the public benefits associated with the project are $3.7 million annually. The life span of the dam was extended for another 100 years.

White Tanks Dam No. 3, Maricopa County, Arizona

Floods in 1951 affected farm property including reduced crop yield and damage to irrigation pumping facilities and conveyance structures. This dam, constructed in 1954, is 1.5 miles long and presently protects 800 structures, 6,000 people and 4,400 acres of cropland. Average annual benefits total over $1.7 million dollars and an estimated $50 to $60 million dollars in damage would result from a catastrophic breach of the dam. Projected growth by 2050 is more than 293,000 residents.

The project is being built in four phases. Completion is scheduled for summer of 2010. To bring the structure into compliance with current dam safety standards and criteria requires the following modifications:

- Raise height of the dam to restore loss of four feet of effective dam height due to land subsidence and to accommodate future subsidence.
- Soil cement embankment center core and 33 foot depth cutoff walls to mitigate the potential for earth fissures.
- Upstream filter and structural fill to address embankment cracking and foundation issues.
- Construction of new principal outlets, riser and stilling basin to replace existing CMP outlets.
- Construction of a concrete sill emergency spillway to prevent erosion and rapid loss of the impoundment in a large flood event.

U. S. Department of Agriculture

NRCS Natural Resources Conservation Service

Watershed Rehabilitation Progress Report - 2008

Much progress has been made in a very short time in the rehabilitation of aging flood control dams. This comes as a result of the initiative of watershed project sponsors and the excellent partnership between the Natural Resources Conservation Service, state conservation agencies, and state dam safety officials.

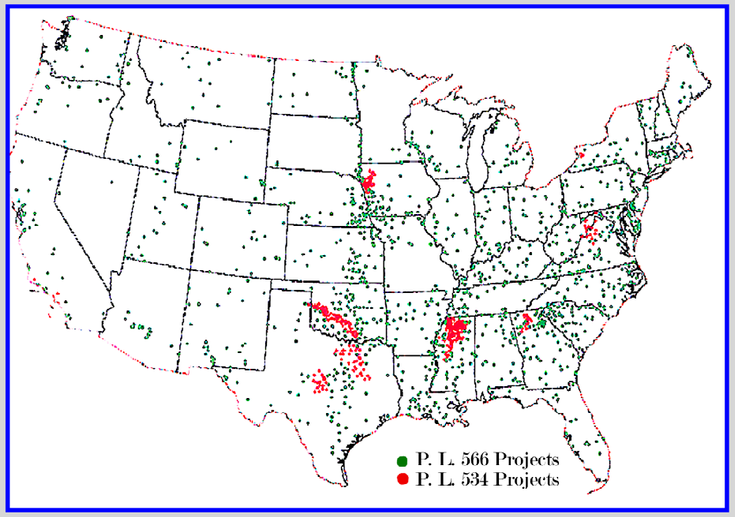
NRCS looks forward to continuing to work with communities to identify and rehabilitate dams that could become a threat to public health and safety. Rehabilitation will not only ensure that these flood control dams remain safe and protect the lives of people in the community, but that they will continue to provide flood control, recreation and wildlife habitat for another 50 to 100 years.

This progress report provides background information on watershed rehabilitation, outlines the progress made to date and makes projections for anticipated requests for assistance in the future.

Watershed Program Has Provided Multiple Benefits to Communities for Over 50 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 has assisted watershed project sponsors in the construction of 11,000 flood control dams in 2,000 watersheds in 47 states since 1948.

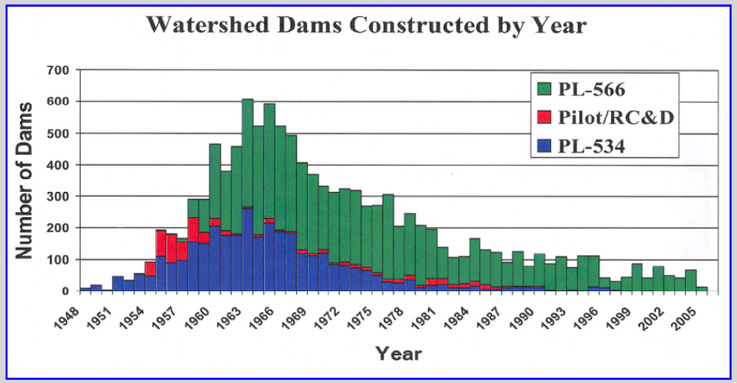
These projects provide an estimated $1.5 billion in annual benefits in reduced flooding and erosion damages, recreation, water supplies, and wildlife habitat.



Eleven thousand flood control dams have been built in 2,000 watershed projects in 47 states and Puerto Rico since 1948.

Time Has Taken Its Toll on Dams

Many dams today are in a far different setting than when they were constructed. Population has grown; 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 structures 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.



Most watershed dams were designed for a 50-year life span and some have already reached or exceeded that time. This chart shows the number of dams built each year and provides an indication of future rehabilitation work load.

Watershed Rehabilitation Amendments of 2000 and 2008

Congress passed the Watershed Rehabilitation Amendments of 2000 which 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.

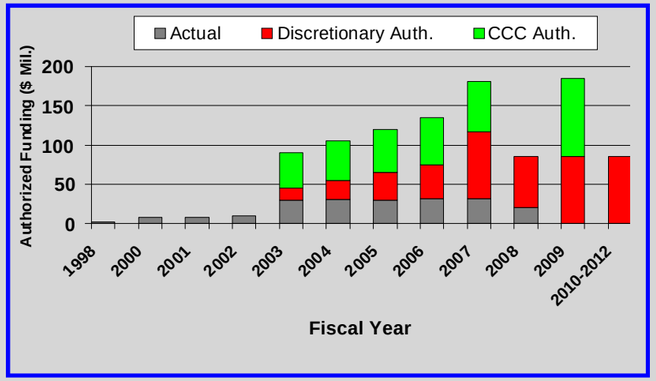
The purpose of rehabilitation is to extend the service life of the dams and bring them into compliance with applicable safety and performance standards or to decommission the dams so they no longer pose a threat to life and property.

The 2008 Farm Bill provides that the Secretary of Agriculture shall make available $100 million through the Commodity Credit Corporation for fiscal year 2009. The Farm Bill also amended the Watershed Protection and Flood Prevention Act by authorizing to be appropriated (discretionary authorization) $85 million for each of fiscal years 2008 through 2012.

Projected Requests for Assistance (FY 2009-2012)

- Assessment of 400 dams to determine their condition and the need for rehabilitation.
- Processing of 250 sponsor applications for federal assistance.
- Development of 200 rehabilitation plans and associated environmental review documents.
- Completion of 170 designs for implementation of rehabilitation plans.
- Completion of 120 rehabilitation projects.

Watershed Rehabilitation Funding Authorization / History



Prior to 2002, funds were made available through special appropriations for pilot projects. Fiscal year 2002 was the first year funds were appropriated using the Watershed Rehabilitation Authorizations.

Local Sources of Cost-Share Funds

Local watershed project sponsors provide thirty-five percent of the cost of a rehabilitation project. The source of these funds varies from state to state.

Some of the methods that are being utilized in states include:

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

Watershed Rehabilitation Projects Funded for Fiscal Year 2008

The FY 2008 appropriations bill included $19,860,000 for watershed rehabilitation. This allowed for continued or new construction of 37 dam rehabilitation projects in 12 states. Appropriations were not available to fund requests to begin construction to rehabilitate five dams, to complete 36 previously funded designs or project plans, or to begin planning for 45 dam rehabilitation projects.

Watershed Rehabilitation Funding Requests for Fiscal Year 2009

State conservationists requested $42 million for 95 projects in 28 states for fiscal year 2009. The requests included initiating 37 new projects not previously funded. The requests included assessments of 102 dams.

For additional information about the watershed program or rehabilitation of aging dams visit the Natural Resources Conservation Service web site: www.nrcs.usda.gov, click on Programs and then on Watershed Protection and Flood Prevention or Watershed Rehabilitation.

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Rehabilitation Projects Are Addressing a Variety of Issues Facing Watershed Project Sponsors.

Piedra Liza Dam, Sandoval County, New Mexico

The Piedra Liza Dam in the Sandia Mountain Tributaries Watershed was built in the late 1950s to protect agricultural and urban areas after a devastating flood in 1949 destroyed a 100-year old convent in Bernalillo, New Mexico, just north of Albuquerque.

Since the dam was constructed, Sandoval County has increased almost sevenfold in population. As a result, the project area, which contains readily developable land located immediately adjacent to Interstate 25 and the rapidly growing Placitas area upstream of the dam, has also experienced dramatic growth.

More than 1,700 people live within the floodplain downstream of the dam and would have been adversely affected by removal or failure of the dam. The dam also protects motorists on Interstate 25, which carries over 43,000 vehicles per day. Over the years the dam has been well maintained by the local sponsors, the Coronado Soil & Water Conservation District and Town of Bernalillo.

But analysis based upon current design standards indicated a number of weaknesses in the structure. Deficiencies in the existing dam included outdated components on the principal spillway, and an undersized, potentially erosion-prone, earthen auxiliary spillway. The principal spillway conduit was a 24-inch concrete pipe that passed through the dam to safely release waters that built up behind the earthen structure in the event of a flood. While the conduit was adequate, the outlet suffered erosion problems and needed repair.

Because the auxiliary spillway could erode, a major component of the rehabilitation project was to reshape the auxiliary spillway and armor it with roller compacted concrete so it could safely pass flood waters. Also, the top of dam was raised about one foot.

In 2005, the sponsors applied for assistance from NRCS to rehabilitate their dam. To help with their cost share requirements, the sponsors included Sandoval County as a cosponsor for the project and secured funding support through the New Mexico Office of the State Engineer, Dam Safety Bureau.

The design for necessary rehabilitation work was completed in 2006 and construction of the rehabilitation project took place in the spring and summer of 2007. The project corrected all of the deficiencies of the existing structure, and helps assure the dam will continue to provide flood protection for downstream users for another 100 years.

Martinez Creek Dam No. 5, Bexar County, Texas

Martinez Creek Dam No. 5 was built in 1964 for flood control and protection of rural agricultural land. Now there are 99 residential, 4 public, and 3 commercial properties located downstream within the breach area. A failure of the dam would put all these properties and an estimated 500 people in danger as well as anyone traveling on Kitty Hawk road.

The lake formed by the dam is an important resource in the community as an integral part of the City of Live Oak's city park. Over 15,000 people visit the park each year, with an estimated 1,350 utilizing the lake for fishing, picnicking, migratory bird watching and other water-based activities.

The dam was functioning as designed, however, it was constructed as a low hazard dam and now has been reclassified as high hazard due to urban development downstream and the potential for loss of life if the dam should fail.

The dam was rehabilitated to meet current dam safety standards and extend its life span for another 100 years. The height of the dam was raised and a roller compacted concrete spillway, new inlet tower and principal spillway pipe was installed.