

Overview

Rehabilitation of Aging Dams

Dams Dot the Landscape

Local communities have constructed more than 10,000 small flood control dams with assistance from the Natural Resources Conservation Service (NRCS) since 1948. Dams are part of our Nation's aging infrastructure that includes highways, bridges, and storm sewers. Local watershed projects represent a \$14 billion national infrastructure investment.

Small watershed projects provide flood control, municipal and irrigation water supply, recreation, erosion control, water quality improvement, wetland development, and wildlife habitat enhancement on more than 130 million acres across the country. Each year, the Small Watershed Program yields benefits of nearly \$1 billion. Local projects are federally assisted, not federally owned projects. Local sponsors own the dams and are responsible for their operation and maintenance.

These dams—located in every state except Alaska, Delaware, and Rhode Island—may be eligible for rehabilitation assistance. The Small Watershed Rehabilitation Amendments of 2000 (Section 313, PL 106-472) authorize assistance for dams constructed under the Small Watershed Program, Pilot Watershed Program, and Resource Conservation and Development Program.

Time Takes Its Toll

The majority of the dams were planned and designed with a 50-year life span. Many of these dams are approaching the end of their designed life—35 already are beyond the end, 450 will reach their end within the next 5 years, and 1,800 will be there within the next 10 years.

As dams get older, deterioration increases and construction costs rise. Some common problems of older dams are:

- Deteriorating metal pipes and structural components—after 50 years, metal rusts and fails.
- Sediment-filled reservoirs—sediment displaces storage of floodwaters. Some sediment may have contaminants from chemicals in runoff from upstream areas.
- Subdivisions and businesses built upstream—roofs and concrete streets and sidewalks increase the volume of runoff to the dam.

Today, many dams are in a far different setting than when they originally were constructed. Most of the dams were built in rural areas to protect agricultural land downstream. Over the years, population growth and urban sprawl have occurred both upstream and downstream from the dams, and land use changes have taken place. Many dams do not meet current state dam safety requirements because of the dramatic changes in the face of the landscape and the land use of the surrounding area.

If a dam should fail, it would pose a serious threat to the health and safety of those living downstream and to the communities that depend on the reservoir for drinking water. A dam failure could create adverse environmental impacts in the same downstream floodplains that it has been protecting for years. When severe storms and heavy rains occur, the dam is often the only barrier between the rising water level and homes, property, and farmland.

Rehabilitation

The legislation authorizes NRCS to work with local community leaders and watershed project sponsors to address public health and safety concerns and environmental impacts of aging dams. NRCS provides technical and financial assistance in planning, designing, and implementing rehabilitation projects for dams or, in appropriate cases, removing them.

More than 70 percent of the dams were built before the National Environmental Policy Act of 1970. Early watershed projects focused on flood control and may not have considered community resource issues such as water quality, riparian corridors, wetland restoration, and threatened or endangered species. Rehabilitation of these dams provides an opportunity for communities to gain new benefits, such as adding municipal and irrigation water supplies, recreation, and wetland and wildlife enhancement.

Rehabilitation projects may be cost shared between the federal government and local sponsors. NRCS will provide 65 percent of the total cost of the rehabilitation project. Local sponsors can provide the remaining 35 percent through "in kind" costs for the value of land rights, project administration, and other planning and implementation costs associated with the project. Federal funds cannot be used for operation and maintenance activities.

Local watershed project sponsors must submit an application—available from the local NRCS office—to request assistance in rehabilitating their dam.

What Can You Do?

Contact your local conservation district, NRCS office, or state dam safety agency about watershed dams in your community that may need rehabilitation. Find out who the local watershed project sponsors are and volunteer to help increase public awareness of the importance of flood control dams in your community. Participate in public meetings about potential rehabilitation projects in your area.

Project sponsors can identify additional resource needs that could be addressed in a potential rehabilitation project. They can identify high priority rehabilitation needs, determine the availability of land rights, and assure that operation and maintenance is current for all their dams.

Questions and Answers

Rehabilitation of Aging Dams

The Small Watershed Rehabilitation Amendments of 2000 (Section 313, PL 106-472) were signed into law by the President on November 9, 2000. This legislation authorized the USDA Natural Resources Conservation Service (NRCS) to work with local community leaders and watershed project sponsors to address public health and safety concerns and environmental impacts of aging dams.

Q. Are all dams eligible for rehabilitation under this legislation?

A. Only dams that were constructed under the following USDA assisted water resource programs qualify for rehabilitation assistance:

- Small Watershed Program (PL-534 Flood Control Act of 1944 and PL-566 Watershed Protection and Flood Prevention Act),
- Pilot Watershed Program (1952-1954), and
- Resource Conservation and Development Program.

Q. How many dams are eligible for assistance under this legislation?

A. More than 10,000 small flood control dams—installed in 47 states since 1948—are eligible for rehabilitation assistance. The three states without watershed dams are Alaska, Delaware, and Rhode Island.

Q. How much money does this legislation provide?

A. This legislation provides authorization only. Funds must be appropriated annually through Congress. The legislation authorizes up to \$90 million over the next 5 years: FY 2001, \$5 million; FY 2002, \$10 million; FY

2003, \$15 million; FY 2004, \$25 million; and FY 2005, \$35 million. No funds were appropriated for rehabilitation projects for FY 2001

Q: What work is meant by "rehabilitation"?

A: Rehabilitation includes

- Extending the life of the dam
- Addressing deterioration of components of the dam.
- Repairs from catastrophic storms.
- Upgrades needed to meet state dam safety laws.
- Decommissioning (removal of the dam)

Q: How much financial assistance will be provided for rehabilitation of a dam?

A: Federal funds may be used for 65 percent of the *total* cost of a rehabilitation project. The total cost includes construction, land rights, project administration, and other planning and implementation costs associated with the project.

Q: Who covers the remaining costs?

Local project sponsors are responsible for funding the remaining 35 percent of the project. These funds may include “in-kind” costs for the value of land rights, project administration, and other planning and implementation costs associated with the project. Local sponsors must provide all land rights, permits, etc.—the value of this work is part of the sponsors’ 35 percent share of the total cost.

Q: Will federal rehabilitation funds pay for operation and maintenance of the dam?

Federal funds cannot be used for operation and maintenance activities. The legislation specifically states that sponsors will continue to be responsible for operation and maintenance of the dam. *Note:* If the dam needs rehabilitating because of inadequate operation and maintenance, the local sponsors are ineligible for rehabilitation funds.

Q: What other legislation impacts the use of the rehabilitation funds?

Rehabilitation projects must meet the requirements of the National Environmental Policy Act. Cultural resources, historic preservation, and threatened or endangered species issues must be considered in the planning process.

Q: Who helps plan the rehabilitation project?

Local sponsors lead the planning effort with assistance from NRCS. The planning process will include public participation to determine the resource needs of the project area and to consider all viable alternatives.

Q: Are there requirements for designing a rehabilitated dam?

The dam must meet current NRCS design standards, applicable state dam safety requirements, and other applicable state and local laws.

Q: How long does it take to plan a rehabilitation project?

In most cases, adequate planning takes a minimum of one year to complete the process. The complexity and potential controversy of alternative solutions and the availability of specialized staff can add to the timeframe.

Q: How do sponsors and community leaders request assistance for rehabilitation?

Local sponsors must submit an application form to request assistance in rehabilitating their dam. The application—available from the local NRCS office—includes questions on the size and condition of the dam and the impact it has on the community. This information will be the basis for discussions between NRCS and the sponsors.

Q: Who decides which projects are funded?

NRCS will develop a priority ranking system to identify high priority rehabilitation projects and involve the state dam safety agency in the ranking process. Project sponsors will receive details of the ranking system that explain how their project will be ranked.

Q: What can sponsors do now—even if funding is not available?

Sponsors can help increase public awareness of the importance of flood control dams to their community. They can identify additional resource needs that could be addressed in a potential rehabilitation project. Specifically, sponsors could do the following:

- Identify high priority rehabilitation needs in their project.
- Determine availability of land rights.
- Assure that operation and maintenance is current for all their dams.
- Arrange for financing the 35 percent local cost share.