

June 2003

Frequently Asked Questions

Rehabilitation of Aging Dams

The Watershed Rehabilitation Amendments to the Watershed Protection and Flood Prevention Act (PL 83-566) authorizes the USDA Natural Resources Conservation Service (NRCS) to work with local communities and watershed project sponsors to address public health and safety concerns and potential adverse environmental impacts of aging dams. The following provides answers to frequently asked questions concerning the rehabilitation of aging dams.

Q. How many dams have been constructed with the assistance of NRCS watershed programs?

- A.** More than 11,000 dams have been installed in 47 states since 1948. The three states where watershed dams are not located: Delaware, Rhode Island, and Alaska.

Q. Where are these dams located on the landscape?

- A.** Typically, watershed dams are located on drainageways that are generally dry or have very little flow except following rainstorms. Very few dams are placed on larger drainageways that actually flow year-round.

Q. What is the typical size of these dams?

- A.** Generally, watershed dams are between 25 and 60 feet in height. These dams create lakes that range in size from a few acres to several hundred acres. The lakes created by these dams typically hold between 100 and 5,000 acre-feet of water. They can temporarily detain as much as several thousand acre-feet of floodwater before it is slowly released downstream after a rainstorm.

Q. What materials are the dams built with?

- A.** Most dams are built with compacted earth with metal or concrete pipes that draw down water that is temporarily detained behind the dams after storms.

Q. What benefits do these dams provide?

- A.**
- Flood control—by temporarily detaining runoff that has flowed to the dam and safely releasing it downstream through a pipe through the dam.
 - Improved water quality—by settling out contaminants and sediment in the reservoir, thus protecting downstream streams and rivers.
 - Irrigation water supply—by storing the water during rainy seasons for use by communities or agricultural irrigation later in the year when it is needed for crop production.
 - Drinking water—by storing water in the reservoir for use by municipal and industrial entities.
 - Fish and wildlife habitat—by improving wetland and vegetative habitat that creates better shelter and food sources.
 - Habitat for threatened and endangered species—by creation of special features to enhance and protect threatened and endangered species.
 - Wetland habitat—by creating vegetative riparian areas along the upper reaches of the reservoir.
 - Restoration of riparian habitat—by providing protection of downstream areas that promote vegetative growth and improvement of the riparian areas.
 - Public recreation—by providing a source of quality fishing, hunting, picnicking, etc.

Q. How do these dams help prevent floods in downstream areas?

A. Runoff from large storms is temporarily stored upstream from the dam and slowly released through a pipe in the dam.

Q. What level of flood protection do most dams provide?

A. Most dams provide protection of downstream areas from storms that occur less than once every 25 years.

Q. What happens when a greater storm event occurs?

A. Each dam is designed with an auxiliary spillway constructed around one end of the dam that safely conveys excess flow around the dam, thus protecting it from overtopping and failure.

Q. How long were the dams designed to function?

A. The majority of the 11,000 dams were designed with a 50-year design life.

Q. How old are the watershed dams?

A. The average age of the 11,000 watershed dams in the nation is 35 years old. Over 170 dams are more than 50 years old. Within the next 10 years, more than 3,000 dams will reach 50 years old.

Q. What happens when a dam reaches the end of its designed life span?

A. Time takes its toll on dams. Reservoirs fill with sediment, metal and concrete deteriorate, land use conditions upstream from the dam change and increase the volume of water being delivered to the site, and many do not meet current dam safety requirements.

Q. Have any of the dams built under the Watershed Program ever failed?

A. To date, no dams have failed that have resulted in loss of life or property. However, some have had significant problems that have been corrected before a catastrophic failure or tragedy has occurred. These occurrences will undoubtedly increase as the dams get older.

Q. Who planned, designed, and constructed the dams?

A. Local communities, with technical and financial assistance from the Natural Resources Conservation Service (formerly the Soil Conservation Service).

Q. When a dam reaches the end of its life span, what options do local communities have?

A. Dams can be rebuilt or rehabilitated so they can function for a long time in the future (50 years or more). General options include raising the dam to provide additional storage or dredging the sediment and replacing metal components. In some cases where flood control is no longer needed downstream, the dam can be removed and the site restored to natural conditions.

Q. Who is responsible for the dams?

A. Most of the dams are located on private land. Watershed project sponsors have easements to construct, operate and maintain the dams. These project sponsors are responsible for the functioning and safety of the dams.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.