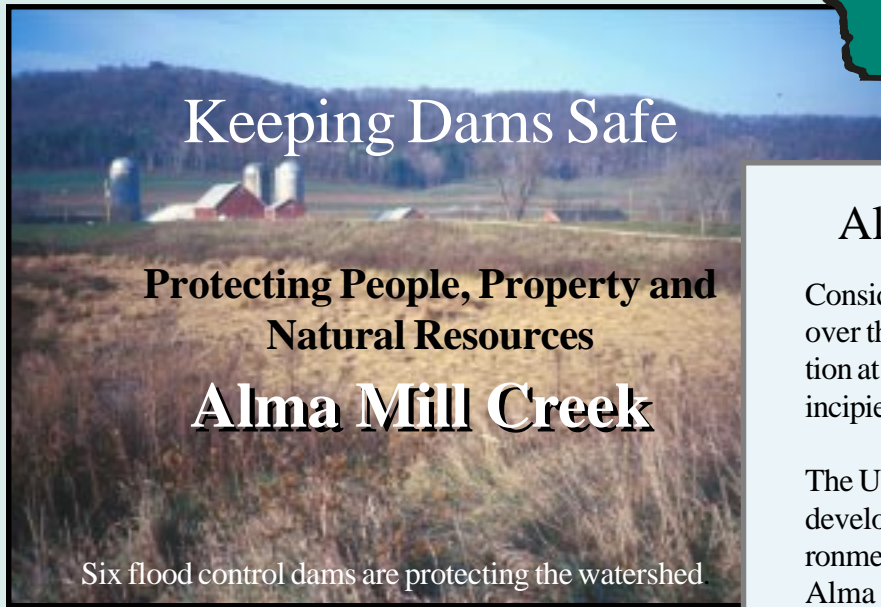




Wisconsin Dam Rehabilitation Project October 2003



Keeping Dams Safe

**Protecting People, Property and
Natural Resources**

Alma Mill Creek

Six flood control dams are protecting the watershed

This dam provides significant reduction of flood and sediment damage to roads, bridges and wildlife habitat and has stopped the advance of a gully that was causing severe erosion. Road runs across top of dam.

The watershed dams built through Public Law 83-566 are important to Wisconsin in many ways. They provide flood control to prime farmland, highways, communities and residences and conserve natural resources.

Wisconsin was chosen in 2000 as a pilot state to rehabilitate several aging watershed dams. Alma Mill Creek Watershed Dams 2, 3 and 5 are part of this national pilot rehabilitation project.

When rehabilitation work is complete these structures will:

- ◆ meet current NRCS standards for providing public health and safety
- ◆ have an extended effective life of another 50 years
- ◆ comply with Wisconsin Department of Natural Resources Dam Safety Administrative Code (NR333).

Sedimentation has an adverse effect on sago pondweed, a favorite food source of tundra swans. Dams in the Alma Creek Watershed prevent tons of sediment from reaching Rieck's Lake, important habitat for migrating swans.

Alma Mill Creek Watershed

Considerable siltation occurred behind several dams over the years reducing floodwater storage. Separation at pipe joints in the principal spillway caused incipient and potential failure of the dams.

The USDA Natural Resources Conservation Service developed a supplemental watershed plan and environmental assessment which recommended repair to Alma Creek Watershed Structures 2, 3 and 5.

Prior to construction, an ordinance was enacted to restrict development on the floodplain downstream of the three dams. Principal spillway outlet conduits were repaired at all three structures and sediment removed from structures 3 and 5. As a result, the three dams will continue to provide gully, sediment and flood control.

Construction project cost: \$260,000

Funding: Sixty-five percent of the project construction cost and technical assistance was provided by the USDA Natural Resources Conservation Service. The remaining cost of repair work was provided by the project sponsor.

Watershed Project Sponsor:
Buffalo County Land Conservation
Department



Alma Creek Watershed

- ◆ Size: 10,957 acres or 17.1 square miles
- ◆ Dams: 6
- ◆ Project Primary Purpose: watershed protection through gully, sediment and flood control.
- ◆ History: Dams no. 2, 3, and 5 were built in 1961 and were designed for a 50-year life. Prior to construction significant amounts of sediment were deposited at bridges, increasing maintenance costs due to cleanout, bridge extension and raising bridges and roadways. In addition many large gullies were destroying crop fields and threatening farm buildings.

Wisconsin Watershed Program

Eighty-seven small flood control dams have been built in Wisconsin through the Watershed Protection and Flood Control Act of 1954 (Public Law 83-566). Most of these dams were built from the mid-1950's through the 1980's. These dams provide flood control to prime farmland, highways, and communities. They are an integral part of the communities and benefit people's lives every day.

Wisconsin Rehabilitation Needs

- ◆ Over thirteen dams in the state have deteriorating components, including pipe separations or cracked concrete pipe supports.
- ◆ Over 20 dams are known to be built in rock formations that have fractured bedrock, a condition that lead to a failure of a dam in 1978 and 2000.
- ◆ Increased hazards have been created downstream from more than 20 dams due to home development in or near the floodplains.
- ◆ Structural components like slide gates and principal spillway pipes have deteriorated.
- ◆ Sedimentation has reduced flood storage capacity in some structures.

National Rehabilitation Needs



Location of dams that are over 30 years old.

- ◆ Since 1948 over 11,000 small flood control dams have been built in 2,000 watersheds in 47 states.
- ◆ Many of these earlier constructed dams were designed for a 50-year life expectancy. Over one-half of the dams are over 30 years old.
- ◆ Today, many of these older dams need rehabilitation. Concrete and metal used in the principal spillways have deteriorated and in some situations public safety and health are at risk.
- ◆ Over the next five years it is anticipated that NRCS will receive 900 sponsor requests requiring 1,500 watershed assessments resulting in 700 watershed plans.
- ◆ There are currently 110 watershed rehabilitation projects in the Nation.

For additional information about this rehabilitation project contact the USDA Natural Resources Conservation Service office, 8030 Excelsior Drive, Suite 200, Madison, Wisconsin, 53717, (608) 662-4422.

Information about pilot rehabilitation projects in other states and about other issues related to aging watershed dams is available at the NRCS national website (www.nrcs.usda.gov). Click on Programs then Watershed Rehabilitation.

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