

Keeping Dams Safe

**Protecting People, Property and
Natural Resources**

A view of Blackhawk Lake, a prime recreational area in southwestern Wisconsin.

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. Otter Creek Watershed Structure No. 9 was selected as one of the dams to be repaired under the national Pilot Dam Rehabilitation Program. Experience and information gained from this project is being used as other dams are rehabilitated across the nation.

The Otter Creek Watershed Plan, authorized in 1968, included 6 flood control dams, two of which were built. Structure No. 9 was completed in 1970 and creates Blackhawk Lake, a prime recreational lake in an area of Wisconsin with few lakes.

Otter Creek Watershed

Rehabilitation of Otter Creek Structure No. 9 extends life of this dam by 100 years. A home downstream from the structure was found to be in a breach inundation area of the dam. As part of the rehabilitation, the home was protected from flooding, removing the threat to the lives of it's inhabitants.

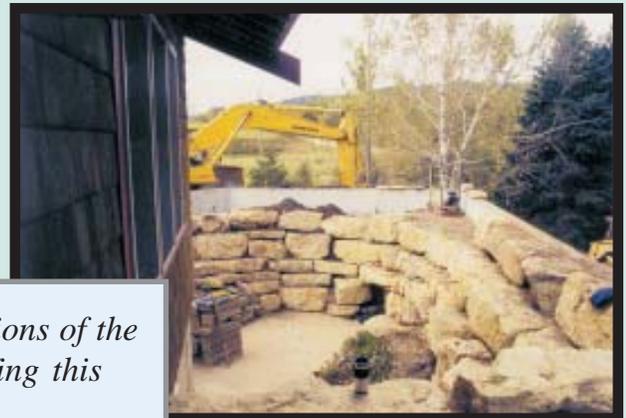
The USDA Natural Resources Conservation Service (NRCS) developed an environmental assessment and supplement to the original watershed plan. The plan recommended repair of the principal spillway pipe, floodproofing the home, modification of the inlet gate to allow for flexibility of flow regimes including additional coldwater flow and new zoning. These recommendations were implemented. A flood plain zoning ordinance prohibiting construction in the breach inundation area was implemented as part of the Pilot Dam Rehabilitation Program.

Construction project cost: \$216,500

Funding: Sixty-five percent of the project construction cost and 100 percent of the technical assistance costs were provided by NRCS. The remaining cost of repair work was provided by the project sponsor.

Watershed Project Sponsor

Iowa County
Land Conservation Department



Part of the recommendations of the plan included floodproofing this home, as shown here.

Otter Creek Watershed

◆ Size: 112,768 acres or 176.2 square miles

Dams: 2

Project Primary Purpose: The primary purpose of this project is to continue to provide flood control for the watershed and to protect a home in the breach inundation area through floodproofing. A secondary purpose of the project is to enhance the function of the inlet gate to discharge cold water into the stream below the dam.

History: The dams were built from 1970 to 1974 and were designed for a 100-year life. Prior to construction of the structures, frequent and severe flooding destroyed crops and livestock, undermined and washed out roads and bridges, damaged farm buildings, fences and machinery and deposited debris on crop and pasture land.

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 led 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 132 watershed rehabilitation projects in the Nation.

A total of 132 watershed rehabilitation projects have been funded in 21 states. Sixty-seven are in planning, 27 are in the design or construction phase and 38 projects have been completed.

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

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

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