



# Unusually High Rainfall in 2007 Highlights the Benefits of Flood Control Dams and the Need for Additional Flood Protection

These are a few examples of how watershed projects, planned and implemented by local sponsors with assistance from the USDA Natural Resource Conservation Service, have help reduce flood damages across the nation. (P. L.-566 Watershed Protection and Flood Prevention Program).

## Minnesota

The South Zumbro Watershed Project in southeast Minnesota proved its value during heavy rainstorms in August 2007. Some parts of the city of Rochester received rainfall in excess of 11 inches in 24 hours.



“Had the flood control project not been in place we could have had a couple hundred million dollars in damages,” said Gary Neumann, Rochester’s assistant city administrator. “We had no surface flood damages, just some damages from things such as sewer backup and city storm water problems.”

Rochester is a city of over 100,000 and has a river and multiple streams coming into the city. “It’s like being located in a bowl and without the flood control project a storm like the one in August would have caused major flooding,” said Neumann.

In 1978 a devastating flood took five lives and caused \$60 million in damages in Rochester. Following that storm local people requested help with the flooding problem from the U. S. Department of Agriculture Soil Conservation Service (now the Natural Resources Conservation Service) and the Corps of Engineers.

A coordinated watershed project plan for the South Zumbro Watershed was planned that included seven flood control dams, in-city channel enlargement and land treatment. The plan was approved for operation in 1982, work began in 1987 and the project was completed in 1995. The NRCS provided assistance with the land treatment and construction of the flood control dams and the Corps of Engineers provided assistance with the channel part of the project.

## Oklahoma

Remnants of Tropical Storm Erin tore through Texas, Oklahoma, and Missouri and on through Midwestern and eastern states leaving devastation in its wake and causing the loss of at least 22 lives. Dramatic rescues and damages caused by the storm were reported by the news media in several states and Governors declared state of emergencies and asked for disaster aid after what some are calling the worse flooding in a century.



In Oklahoma, as in many other states where the USDA Watershed Program represents a significant investment in infrastructure, the 2,105 flood control dams prevented over **\$30 million dollars** in flood related damages between **August 18-19<sup>th</sup>**. This is in addition to the **\$290 million** dollars in benefits from flood reduction in Oklahoma during the period of January to July 2007. Similar benefits, as well as the need for more flood control work as been documented in other states

An additional **\$48 million** in reduced damages would have been realized if the **330 planned dams** had been constructed based upon estimates by the USDA Natural Resources Conservation Service.

## Nebraska

Over 10 inches of rainfall fell in southwest Nebraska in May 2007 causing flooding, but thanks to the 11 flood control dams and thousands of conservation practices applied to the land in the Blackwood Creek Watershed the damage from flooding was greatly reduced. According to USDA Natural Resources Conservation Service estimates, the project **prevented \$537,000** in damages during this one storm.

Nebraska has nearly 900 flood control dams that provide **\$27 million in annual benefits**.

## Texas

Storms that produced heavy rains on June 18, 2007, brought flooding and flood damage to Cooke, Grayson and Collin counties in north Texas. The USDA Natural Resources Conservation Service (NRCS), estimated that damages would have been **\$7 million** worse if not for the floodwater retarding structures located in those counties.

Local watershed sponsors, with the assistance of NRCS, have constructed nearly 300 flood control dams in Cooke, Grayson, and Collin counties. These dams were constructed through the Watershed Protection and Flood Prevention Act, which authorizes NRCS to provide assistance to local sponsors with planning and installation of projects to reduce flooding, as well as provide erosion and sedimentation control.

The dams store water from heavy rainfall events and slowly release it through a pipe over a period of several days to reduce flooding downstream.

Damage reduction estimates by NRCS were based on rainfall amounts from 3 to 8 inches on June 18 during a six-hour period in three of these watersheds: Choctaw Creek, Little Elm and Laterals, and Elm Fork.

### Similar Reports From Other Texas Watersheds

Ninety flood control dams in 16 watersheds in Brown, Comanche, and Mills Counties prevented at least **\$5 million** in damages when rainfall exceeding five inches on June 17, 2007.

One hundred flood control dams in six watersheds in Bell, Falls, and McLennan counties prevented **\$4 million** in damages from flooding when over five inches of rain fell on June 27, 2007.

Damages from flooding would have been at least **\$1 million** greater if not for 44 flood control dams in six watersheds in Bexar, Comal, and Kendall Counties as heavy rains fell on June 27, 2007.

With about 2,000 floodwater retarding structures throughout Texas, NRCS estimates that the state derives more than **\$101 million annual benefits**, which includes soil erosion savings, water conservation, road and bridge damage reduction, wetland/upland wildlife habitat creation, recreation, and personal property protection.

## Wisconsin

Wisconsin has 87 flood control dams in 26 watershed projects. In an average year, these watershed projects reduce flood damages on crops, roads and communities by an estimated **\$2 million**, according to NRCS. This year, with the unrelenting heavy rains, the estimated reduction is **\$15 million less in flood damages**.

Vernon County in western Wisconsin has 22 PL-566 dams. Vernon County received 12.5 inches of rain in a four week period. Resource Conservationist Phil Hahn noted that the principal spillway pipes on several dams in the county have had full flow three times this spring. "Without these dams, we would have seen major flooding, bridges washed out, sediment dumped on crops and roads, and homes nearest the West Fork of Kickapoo River would have flooded," said Hahn.

Richland County Conservationist Cathy Cooper reports that the county has received 13 inches of rain in May and another 5 inches in June. A single storm on May 21st brought 5.1 inches of rain and another on May 23 brought 2.5 inches. The Mill Creek PL 566 project, completed in 1962, and Pine River Dike, completed in 1996, saved the community from almost certain flash flooding and extensive damage.

Fond du Lac County was hit extremely hard with continuous rains this spring. The Village of North Fond du Lac just completed a watershed project in 1997. By reconnecting a tributary to Anderson Creek, the village is now no longer in the tributary's floodplain. The North Fond du Lac Watershed received 20 inches of rain over the past six weeks. The diversion between the tributary and Anderson Creek has flowed full at least three times so far. The project removed 44 homes from the floodplain, that would have been flooded. In addition, the brand new Horace Mann High School and Middle School suffered no flood damage.

"We were amazed at how few problems we had with the storm water system and the improvements played a large part in it. Everything worked extremely well and we're thrilled, to say the least," says Mike Tolvstad, Director of Public Works for the Village of North Fond du Lac. "All the improvements from the watershed projects worked just wonderfully," said Tolvstad.