



Keeping Floodwaters at Bay: Rebuilding Ada

Full Mitigation Best Practice Story

Norman County, Minnesota

Ada, MN - The small town of Ada, population 1657, lies in the flat fertile farmlands of northwest Minnesota. The Wild Rice River meanders its way through the countryside a mile outside of town, traveling fifteen miles to empty into the northward heading Red River.



Entering Ada on a recent hot summer day, the whirr of portable generators powering sewer system lift stations after a severe storm cut power to the community is the only indication that the town has experienced flooding troubles in the past. The generators were purchased with mitigation grant money after the devastating Red River Valley flood of 1997. They now keep the city's sewer system from collapsing in the event of a power outage during a storm or flood.

Despite not having a river view, Ada has suffered flooding often. In the last 35 years, Norman County, for which Ada is the county seat, has been included in 17 declared disasters, almost exclusively for flooding.

The Wild Rice River drainage basin can be characterized by three distinct geological regions. The upland area to the east is gently rolling, giving way to an extensive beach ridge area that drops as much as 200 feet in elevation to the flat glacial lake plain of the Red River Valley, where Ada and much of the Norman County rural farmsteads are located. From Ada, west to the Red River, in the old lake plain the land drops only a couple of feet per mile in comparison to the upper portion of the basin, where the drop in elevation varies from 10 to 30 feet per mile. In the spring, snowmelt and spring rains contribute to the runoff in the upper portion of the watershed above Ada and west to the Red River. Spring and summer runoff events can readily exceed capacity of the river channels in the lake plain, causing overflow onto the land and overland flooding as the water eventually flows into the Red River.

In trying to describe the flooding of 1997, one Ada resident said the images of the devastation and chaos are still too overwhelming for him to want to remember. The floodwaters forced the after-dark evacuation of the town's nursing home, and damaged the high school beyond repair. The area's only medical center for 45 miles endured standing water for days, creating a totally unacceptable environment for a health facility. Many long-time residents worried that the town would not survive the ravages of the flood.

In the months after, FEMA and state disaster assistance contributed to rebuilding the school and the medical facility on the opposite edge of town from where the floodwaters overran the city. State agencies funded the construction of a levee around the community of Ada as a part of the flood mitigation efforts.

"When the 2000 and 2001 floods occurred, the cost savings came in the fighting of the flood. In 1997, the City of Ada used ½ million sandbags. In 2001, 150,000 sandbags were provided as a just-in-case measure to the city of Ada." said Kevin Ruud, Norman County Emergency Manager and Environmental Services Director.

"Ada couldn't have done it without the help of federal and state dollars funding the \$40 million dollar new school and hospital facilities. It was a tremendous boost to the town," said Dwight Heitman, a school board member at the time of the flooding.

Portable generators and municipal sewer system improvements are not as high profile a form of mitigation as building levees and relocating schools, but the measures provide a direct result in savings on damage costs to the residents of the entire city. Greg Holmvik, Ada police chief and emergency manager, said, "The backup generators have proven their value a good six or seven times in the last few years. Because we had them and they kept the lift stations going, no homes have experienced sewer backup from loss of power."

Mitigation funds were also used to upgrade the city sewers with a forced main system. "This area is so flat that the storm sewers couldn't keep up and caused sewer backup, so that we were having terrible trouble with sanitary sewer backup in homes. With the forced main we've increased the pumping capacity by 40% and we've greatly reduced to virtually eliminated the problem," said Holmvik.

Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region V**

State: **Minnesota**

County: **Norman County**

City/Community: **Ada**

Key Activity/Project Information

Sector: **Public/Private Partnership**

Hazard Type: **Flooding**

Activity/Project Type: **Flood-proofing**

Activity/Project Start Date: **10/1997**

Activity/Project End Date: **05/2001**

Funding Source: **Flood Mitigation Assistance (FMA)**

Application/Project Number: **9999**

Activity/Project Economic Analysis

Cost: **\$40,000,000.00 (Estimated)**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Yes**

Federal Disaster #: **1187 , 08/25/1997**

Federal Disaster Year: **1997**

Value Tested By Disaster? **Yes**

Tested By Federal Disaster #: **No Federal Disaster specified**

Year First Tested: **2001**

Repetitive Loss Property? **Unknown**

Reference URLs

Reference URL 1: <http://www.floodsmart.gov/>

Reference URL 2: <http://www.hsem.state.mn.us/>

Main Points

- Despite not having a river view, Ada has suffered flooding - often. In the last 35 years Norman County, in which Ada is the county seat, has been included in 17 declared disasters.
- The floodwaters forced the after-dark evacuation of the town's nursing home, and damaged the high school beyond repair. The area's only medical center for 45 miles endured standing water for days, creating a totally unacceptable environment for a health facility.
- In the months after, FEMA and state disaster assistance contributed to rebuilding the school and the medical facility on the opposite edge of town from where the floodwaters overran the city. State agencies funded the construction of a levee around the community of Ada as a part of the flood mitigation efforts.