



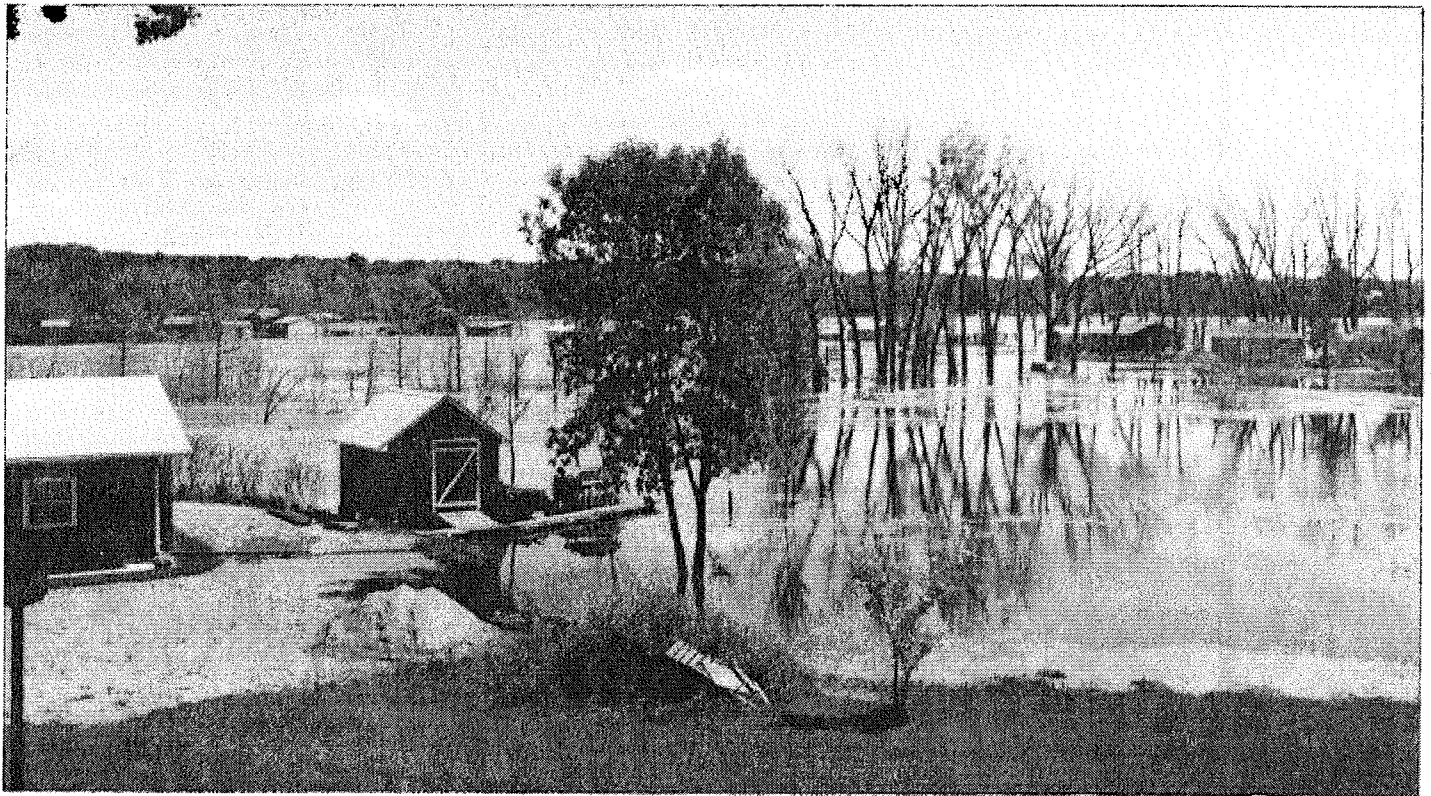
US Army Corps
of Engineers
St. Paul District

Crosscurrents

Vol. 8

No. 11

December 1985



With no natural outlet, Lake Pulaski continues to rise, flooding many of the homes in the area. On August 1 when the photo was taken, the lake level was at about 966.5 feet. Now on November 25, almost three months later, the water level has risen six more inches.

Photo by Lyle Nickley

High Water Forces Pulaski Homeowners to Evacuate

Over fifty homeowners have been forced to evacuate their homes by rising lake levels on Lake Pulaski. And with the water still rising, over 50 other homes are being threatened.

Lake Pulaski, located in Buffalo City, Minn., has no natural outlet for drainage. Therefore, the rising lake levels continue to flood many of the homes in the area.

In efforts to stabilize the water level on Lake Pulaski, the Corps completed a plan for the construction of a pumped pipeline outlet. The water from Lake Pulaski would be drained into Buffalo Lake which drains

into Deer Lake to Mill Creek and finally into the Crow River.

However, according to state rules, a lake cannot be artificially lowered more than 18 inches below the Ordinary High Water Level (OHWL).

In February of 1982, the lake level had reached 961.03 feet. During June of the same year, the DNR established the OHWL at 968.8 feet.

By March of 1983, the level of the lake had risen more than two feet. Many of the homes were being flooded and many more were being threatened by the rapid rise of

the lake.

In October 1983, the city council of Buffalo requested that the Corps conduct a study to control the lake level.

However before an artificial outlet could be constructed, the lake level would have to rise four more feet.

Then in 1985 after a public hearing to lower the OHWL, the DNR reestablished it at 967.5 feet.

The water level as of October 15 was reported to be at 967.15 feet. With the rising

Continued on page 5

District Shares Expertise on Nonstructural Projects

In 1977, a 500-year flood left residents devastated in the Tug Fork Valley of West Virginia. Over 700 homes were flooded in the community of Williamson alone, causing about \$79 million in damages. In May 1984, the community was again flooded, causing \$45 million more in damages.

To assist the residents of the valley, Congress authorized nearly \$250 million to the Huntington District to begin developing and implementing a plan to provide flood protection in the entire valley.

Beginning with Williamson, the Huntington District divided the community into four distinct geographical areas.

In the first two areas, East Williamson and Fairview, the district has begun developing plans for a nonstructural project.

However, while developing plans for the two areas, the Huntington District requested that the St. Paul District advise them on the nonstructural features of the project.

St. Paul was the first district to successfully complete a major nonstructural project at Prairie du Chien, Wis.

Jody Rooney, Tom Raster, Suzanne Gaines and Gary Ditch visited the Huntington District and discussed the various aspects and problems encountered during the Prairie du Chien project.

"However, after arriving at Huntington, we soon discovered that their project was very different and quite larger than the one in Prairie du Chien," Tom Raster, project manager, said.

According to Gary Ditch, chief of Real Estate, the town of Williamson is located in the flood-plain of the Tug Fork River. There is very little flat land available on which to relocate residents because of the Appalachian Mountains.

In the preliminary nonstructural plans, the residents of East Williamson and Fairview can either volunteer to be relocated, to flood-proof their homes or to remain in the flood-plain.

"However, there is a lot of incentive for people to relocate," Jody Rooney, economist, said. "Homes will be bought and residents relocated, all at Federal government cost."

For example, if a family of six is now living in a two bedroom house, the government must find a decent, safe and sanitary replacement home as required by the Public Law 91-646. This means the family would probably be given a four or five bedroom home, depending on the circumstances, Gary explained.

The Huntington District is planning to demonstrate how flood-proofing will work

in the two suburbs. "Eight residents have already volunteered," Suzanne Gaines, sociologist said. "It's really fascinating. Huntington will be raising the homes up to 12 feet off the ground."

The flood-proofing demonstrations to elevate the homes are intended to encourage others to volunteer to have it done to their homes.

The last two areas, West Williamson and Fairview, will be protected by giant floodwalls. Unlike those in the St. Paul District, the floodwalls will be constructed of steel sheetpiling cells, 52 feet in diameter and about 22 feet high. The proposed floodwall for West Williamson will be 6,300 feet long, costing more than \$49 million. While the central business district, will be protected by a 3,900 foot floodwall, costing about \$26 million, Tom said.

"Overall, the entire project is quite unique," Tom said. "Up river from Williamson, the Huntington District plans to straighten one loop of the river by blasting through the mountains. The original channel would then be filled with the rocks and soil removed from the mountains, making flat land for construction of homes or businesses away from the flood-plain."

Pulaski

water and the lowered ordinary high water mark, a path has been opened for a Corps' project at Pulaski. The water level is now within 18 inches of the new OHWL.

With this obstacle removed, a new problem has appeared which will have to be dealt with.

Landowners downstream of the proposed outlet have sent petitions to the DNR opposing the project. According to the petitions, the landowners feel they already have enough water. When the Crow River floods, the access water flows into Buffalo and Deer lakes, flooding many of the homes in the area.

However, according to the plans developed by the Corps, water would only be pumped into Buffalo Lake when the water level is down.

To maintain the water level on Lake Pulaski at 966 feet, water would be drained less than 43 days a year, Al said.

If the plans are approved, construction of the outlet will begin in 1986. The total cost of the entire project is estimated at \$700,000.



Shown above is one of the many homes that were surveyed in 1983 when the water level was 963.5 feet. Since that time, the lake has risen almost four feet.



US Army Corps
of Engineers
St. Paul District

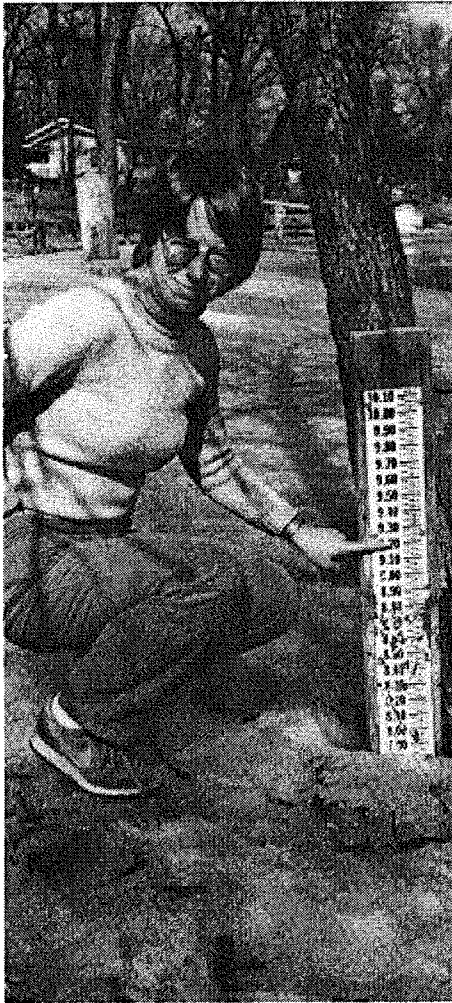
Crosscurrents

Vol. 10

No. 4

April 1987

Pumps installed; Pulaski levels go down

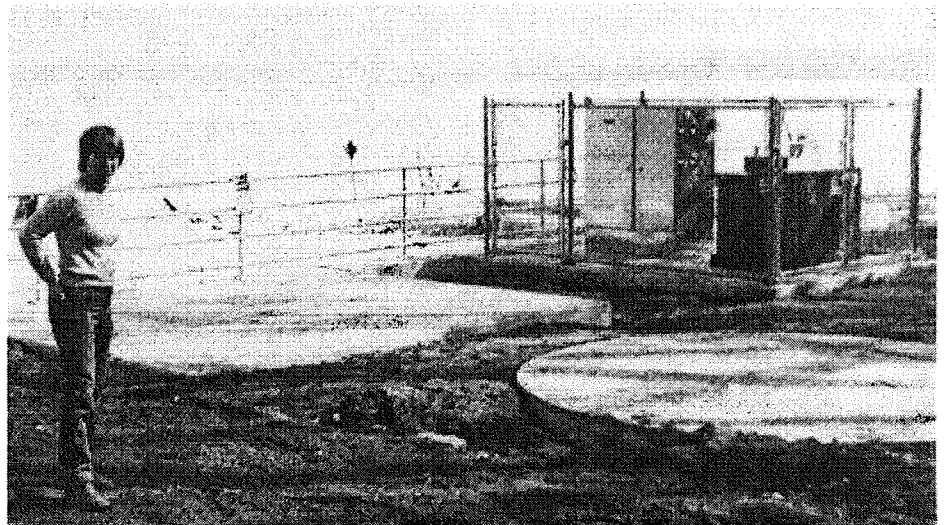


Project Manager Mary Schommer, Flood Plain Management and Small Projects Branch, points to the January 1987 high water mark (elevation 969.2) on a gage at Lake Pulaski in Wright County, Minnesota. By mid-march, pumps installed at the lake by the district as part of a Section 205 Small Projects Program had lowered the water level more than 18 inches. Pumping began in early February and is expected to continue until the level is drawn down a total of approximately three feet to the drawdown level set by the Minnesota Department of Natural Resources. Once that level is reached, the pumps will be operated only when necessary to maintain the lake level at an elevation of 966.



More than 50 houses at Lake Pulaski have been damaged beyond repair by water which has risen more than 17 feet since 1941. While houses like this one won't be helped by the district's Section 205 project at Lake Pulaski, the owners of dozens of other Pulaski homes

threatened by high water should be resting a little easier now that the pumps are lowering the water levels. Construction on the \$1.3 million project started last November and the pumps started operating in February.



Mary Schommer, project manager for the Lake Pulaski Project, stands by the underground pump site at Griffing Park at the edge of the lake. The two underground pumps were installed in January and began pumping in early February. More than 13 million gallons of water a day are being pumped from Pulaski through a new outlet pipe to

nearby Buffalo Lake. The federal cost of the project was slightly more than \$1 million while the local sponsor, the Lake Pulaski Improvement District, contributed more than \$340,000. The pumps and electrical motors are located beneath the concrete slabs. The electrical controls for the pumps are located above ground in the fenced area.