



Village Relocates Uphill Above Floodplain

Full Mitigation Best Practice Story

Montgomery County, Missouri

Rhineland, MO - Established in 1853 along the banks of the Missouri River on a backdrop of rolling hills and bluffs, repetitive flooding became a way of life for the nearly 200 residents of the tight-knit community of Rhineland. But between April and July of 1993, four major storms caused the Mississippi River, the Missouri River, and other tributaries to swell and flood communities, including Rhineland. Most of Missouri's 1,500 levees failed or overtopped during the historic floods and damages throughout the State totaled nearly \$6 billion.



"We've had past floods and they were nothing compared to 1993," explained Ervin Elsenraat, former mayor of Rhineland.

"Former Governor Mel Carnahan set a priority to get people out of the floodplain and inform communities of the voluntary buyout program," said Sallie Hemenway, director of operations at Missouri's Department of Economic Development Business and Community Services.

The buyout program, which is voluntary, offers homeowners pre-flood, fair market value of property to relocate outside the flood-prone area. Existing structures are cleared from the floodplain and the deed-restricted property remains in perpetuity.

Preserving their community was just as important to Rhineland's citizens as escaping the floodplain to protect their lives and property. "As homes in Rhineland were severely damaged from repetitive flooding and the market value depreciated, people searched alternatives to the buyout plan," said Steve Etcher, executive director of the Boonslick Regional Planning Commission.

The residents decided to relocate homes to the crest of the nearby bluff at a total estimated cost of \$4.3 million. Local government, Missouri Housing Development Commission, Missouri Economic Development joined resources with U.S. Housing and Urban Development (HUD) Community Development Block Grants and the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) to accomplish the move. Rhineland resident Sib Elsenraat agreed to sell 49 acres of the family farm, which had been in his family for nearly a century.

"The key to any move is that people have to want to do it. That's what happened here," said Elsenraat. "I wanted the town to stay together for the good of the town. I just happened to have had suitable land available for the relocation," he added.

"We took control of the floodplain by trading a lot on the hill for a lot from the floodplain," stated Etcher. Residents devised a lottery system allowing homeowners to draw numbers for lots of comparable size to the ones in the floodplain. To ensure same neighbors, many exchanged lots among themselves, referred to as the "swap meet."

When it was finally time to move, exhilaration filled the air as the community, government officials, sightseers, and the local and National media converged on the small village. Homes were hoisted by movers and rolled up the hill, one by one.

Local businesses severely damaged by the flood also had strong community ties and business owners elected to remain with the village. A side of the bluff was excavated for new construction to make the town accessible to traffic along Highway 94 and close to the interstate Katy Trail. Eight businesses were rebuilt against the bluff, many feet below the hilltop community but above the floodplain.

In 1995, another flood hit the area and nearly all homes set for the move uphill were out of the floodplain. The remaining houses prepared for relocation were raised on beams to avoid flooding and none were damaged. "We never expected to see two, 100-year floods in our lifetime. We had two within two years," said Etcher.

The community is now over 100 feet above the Missouri River. Community ties to the old sites remain as individual gardens are planted and children play at the new baseball park. Current sights include a picturesque and vibrant community that preserved an essential part of its heritage and restored its historical homes. New vitality is apparent as many new homes have been constructed.

“A disaster is a tragedy, but recovery is an opportunity. Accomplishing goals takes good working relationships at the State level, at State and Federal levels, and at the State and local levels,” said Hemenway.

Activity/Project Location

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

FEMA Region: **Region VII**

State: **Missouri**

County: **Montgomery County**

City/Community: **Rhineland**

Key Activity/Project Information

Sector: **Public**

Hazard Type: **Flooding**

Activity/Project Type: **Relocation**

Activity/Project Start Date: **08/1994**

Activity/Project End Date: **07/1996**

Funding Source: **Hazard Mitigation Grant Program (HMGP); Local Sources; State sources; Other Federal Agencies (OFA)**

Application/Project Number: **Unknown**

Activity/Project Economic Analysis

Cost: **\$4,300,000.00 (Estimated)**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Yes**

Federal Disaster #: **995 , 07/09/1993**

Federal Disaster Year: **1993**

Value Tested By Disaster? **No**

Repetitive Loss Property? **No**

Reference URLs

No URLs were submitted

Main Points

No Main Points were entered.



Floodwaters soaked Rhineland during Midwest Floods of 1993.



A few committee members involved with the Rhineland relocation.