



## Fighting Floods, Saving Property and Protecting Lives in Kenosha

### Full Mitigation Best Practice Story

#### *Kenosha County, Wisconsin*



**Kenosha County, WI** - In the span of 10 years, five emergency declarations have been issued for the Fox River Floodplain in Kenosha County. Following an emergency declaration in May 2004, when the Fox River again overflowed its banks, many fewer homes and residents were at risk, and the costs for response and recovery were substantially reduced. One reason for the remarkable turnaround is that over the 10-year period, 56 property owners have participated in the Fox River Flood Mitigation Program. The Kenosha County Housing Authority administers the program. The Southeastern Wisconsin Regional Planning Commission (SEWRPC) provides staff support.

In 1994, Kenosha County officials initiated a plan to help people move out of the flood-prone area that was mapped as the 100-year floodplain of the Fox River. Since then owners of 56 properties in the communities of Wheatland, Salem and Silver Lake have participated in the voluntary buyout program. Various resources were used to fund the program including Community Development Block Grants - Emergency Assistance Program (CDBG-EAP) from the Wisconsin Department of Commerce, and grant money from the Hazard Mitigation Grant Program and Flood Mitigation Assistance programs administered through Wisconsin Emergency Management (WEM).

During the emergency phase of the 2004 flood, Kenosha County Emergency Management/Homeland Security Director Ben Schliesman noted that as a result of the buyout program, emergency responders had far fewer doors to knock on as they went door-to-door to warn residents of the dangerous flooding situation. Schliesman reported that in addition to fewer enforcement personnel required, no rescue squads needed to be dispatched to help people leave the flooded area. Additionally, flood fighting and emergency response costs were below previous years of serious flooding, although the May 2004 event was the second-highest crest level of the Fox River, at almost four feet above flood stage.

Following flooding in 2000, the Fox River crested at 2.75 feet over flood stage. Under a federally declared disaster, the communities of Salem and Silver Lake were reimbursed for emergency protective measures under the Public Assistance program for \$3,431 in expenses. Kenosha County received reimbursement for \$9,253 in expenses for emergency protective measures. Federal reimbursements included the cost of sandbagging and overtime hours incurred by emergency authorities in notifying and evacuating residents. With fewer homes to notify and provide sandbags for, the cost decreased for the affected communities and the county enforcement agency. More importantly, the risk of serious injury to first responders and residents was substantially reduced.

Reductions in flood-fighting and emergency response costs are only a small portion of the economic impact of a buyout program. Tina Chitwood, coordinator of the program and senior economic development planner for SEWRPC, noted that monetary damages from past floods reported by buyout participants included other costs such as hotel expenses for displaced residents, lost wages from missed work, costs associated with cutting down trees and using power generators, repair of damaged foundations and siding and mold and flood debris cleanup. Cost estimates recounted on participant surveys used by Chitwood in the buyout process ranged from \$2,000 to \$7,000 in damages incurred by households in the program area.

Under the disaster declaration of 2000, eligible flood victims in the Silver Lake and Salem communities received grants from FEMA that averaged \$2,800 for minimal repairs to make the home livable. If the homes had remained in the floodplain, with each successive flood event, like in 2004, an estimated \$156,800 in disaster recovery grants for these residents could have been incurred. Property replacement and cleanup costs not covered by grants, and the emotional strain of residents suffering property loss and damage must also be factored into the overall impact if no mitigation measures had been undertaken.

The relief of not worrying about flooding every spring is apparent to Kenosha-area resident Megan Shuemate. She recalled each time the Fox River flooded, her family always had water on their property. "Our garage got flooded, water got under the house" said Shuemate. "Although we didn't have a basement, the house was damp all the time and we had mold problems. If we had still been there, this year's flood would have been worse than other years."

The buyout program provided the Shuemates with an opportunity to move out of the unhealthy conditions of flood-prone properties. Added benefits to buyout participants were several aids that helped them toward buying another home outside the floodplain. These aids included a purchase price based on pre-flood fair market value of the house, and payment of relocation expenses of up to \$25,000 for homeowners in additional funds to buy a comparable house their existing home.

"The buyout program went smoothly for us and helped us get into our next house," said Shuemate. The family moved to nearby Burlington and, as Shuemate describes, found a house "at the highest point of the hill in our development."

Thus far, the Fox River Flood Mitigation Program removed 56 structures at a cost of \$5.5 million dollars, with FEMA contributing \$2.5 million in HMGP and FMA grants and CDBG providing approximately \$3 million in grants.

Using a formula based on past experiences with flood damages to homes and the effect on infrastructure, recovery officials estimate that the height of the water in the flooding in May of 2004 would have caused projected damages to homes in the floodplain of an estimated 20% of the value of the home. The value of those houses removed from the site of the flooding averaged \$84,000 for the 56 properties. Using projected damage estimates, the flood of 2004 would have caused \$940,000 in damages to homes and the associated costs of recovery had the acquisition project not occurred.

#### Activity/Project Location

Geographical Area: **Single County (County-wide)**

FEMA Region: **Region V**

State: **Wisconsin**

County: **Kenosha County**

#### Key Activity/Project Information

Sector: **Private**

Hazard Type: **Flooding**

Activity/Project Type: **Acquisition/Buyouts**

Activity/Project Start Date: **01/1994**

Activity/Project End Date: **Ongoing**

Funding Source: **Hazard Mitigation Grant Program (HMGP)**

#### Activity/Project Economic Analysis

Cost: **\$5,500,000.00 (Estimated)**

Non FEMA Cost:

## Activity/Project Disaster Information

Mitigation Resulted From Federal Disaster? **Unknown**

Value Tested By Disaster? **Yes**

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

Year First Tested: **2004**

Repetitive Loss Property? **Unknown**

## Reference URLs

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

Reference URL 2: <http://emergencymanagement.wi.gov/>

## Main Points

- In 1994, Kenosha County officials initiated a plan to help people move out of the flood-prone area that was mapped as the 100-year floodplain of the Fox River.
- Following flooding in 2000, the Fox River crested at 2.75 feet over flood stage.
- Reductions in flood-fighting and emergency response costs are only a small portion of the economic impact of a buyout program.
- Thus far, the Fox River Flood Mitigation Program removed 56 structures at a cost of \$5.5 million dollars, with FEMA contributing \$2.5 million in HMGP and FMA grants and CDBG providing approximately \$3 million in grants.



Floodwaters damaged this home five times in 10 years



This home was among the 56 that were acquired and demolished