



Centralia Home Elevation Project

Full Mitigation Best Practice Story

Lewis County, Washington

Centralia, WA - Approximately every five years, heavy winter rains force the Chehalis and Skookumchuck Rivers outside their banks, flooding as many as 600 homes and businesses throughout the City of Centralia. With six Federally declared flood disasters since 1975, City officials and residents knew that something had to be done to break the cycle of flooding.



Mitigating flood losses in the area have long been a priority of City officials. Since the City joined the National Flood Insurance Program (NFIP) in the early 1980s, it has been able to minimize flood losses to structures constructed after the adoption of a local Flood Insurance Rate Map (FIRM) and Flood Damage Prevention Ordinance. However, pre-FIRM structures were still vulnerable to flooding, as evidenced by the repetitive nature of losses in the area. The vast majority of flood related damages, almost 98 percent, have occurred to structures that were built prior to the identification of floodplains on a FIRM.

During the most recent flood event in 1996 alone, the cost to repair properties along the Chehalis River was approximately \$633,000. Properties along the Skookumchuck River, the second principal source of flooding in the City, incurred \$437,000 in damages in 1996.

In a series of public meetings held in 1996, City officials met with residents to determine the best course of action to reduce the threat of flooding in the area. Acquisition of flood-prone structures was considered, but this alternative was rejected due to its high cost and because residents did not perceive that the conversion of scattered individual lots to open space areas would be in the community's best interest. Elevation in place was chosen as the preferred alternative, because it resulted in long-term mitigation without compromising other community goals. The City of Centralia applied for funds available through the State of Washington Emergency Management Division under FEMA's Hazard Mitigation Grant Program (HMGP).

In February 1997, the City was granted approval to expend \$1.5 million in HMGP funds to elevate 48 homes that have experienced repetitive flood losses. This grant has been supplemented twice, so that the City of Centralia would be able to fund the elevation of at least 80, or approximately 17 percent, of at-risk homes. The total cost for the Centralia HMGP-funded elevation project is now \$3,131,140. Of that total, 75 percent was funded by FEMA, 12.5 percent by the State of Washington, and 12.5 percent by individual homeowners.

To ensure that properties most at risk were first in line to benefit from mitigation funds, Centralia officials devised a scoring system to prioritize properties for HMGP funding. Each structure was assigned points based on several key factors, including its current elevation relative to the base flood elevation, the depth of flooding during the 1996 flood, the number of times the property has flooded, and whether the property owner carried flood insurance. The City requires that all structures be elevated to the base flood elevation plus one foot of freeboard, or to one foot above the 1996 flood level, whichever is higher. In most cases, the 1996 flood level exceeds the 100-year flood elevation.

The project has already shown some benefit to the community. November 1998, was the rainiest November in recorded history, and the rains have shown no sign of letting up so far. The rivers have exceeded flood stage several times already this winter, and although rising waters did not reach the levels of the 1996 flood, at least one elevated house would have been inundated without this project.

One such resident is Karen Meuchel, who wrote to *The Daily Chronicle*, the local newspaper, to thank FEMA, Centralia officials, and even the construction team for helping her gain some peace of mind whenever a hard rain falls. Meuchel had special praise for Roy Browning and Gary Nordeen, two local building officials who have managed the project and provided assistance to program participants. Meuchel wrote about the experience of elevating her home: "I know all too well the devastation and loss from a flood. My home never had floodwater in it until 1990. By 1996, the water level in my yard was over my head and I had no way out except by boat. Thank you so much to all of the above. What could have been a very stressful period actually turned out to be an enjoyable experience. I will still have a certain amount of frustration when we do flood again. However, I will now be able to assist other flood victims."

Considering the history of repetitive flooding in Centralia, officials have little doubt that the project will pay for itself in avoided losses in coming years. Moreover, the project provides peace of mind to residents who have a lot less to worry about after each heavy rainfall event.

Standard Homeowner's insurance policies do not cover flood damage. The National Flood Insurance Program makes Federally backed flood insurance available to homeowners, renters, and business owners in participating communities.

Activity/Project Location

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

FEMA Region: **Region X**

State: **Washington**

County: **Lewis County**

City/Community: **Centralia**

Key Activity/Project Information

Sector: **Public**

Hazard Type: **Flooding**

Activity/Project Type: **Elevation, Structural**

Structure Type: **Wood Frame**

Activity/Project Start Date: **02/1997**

Activity/Project End Date: **04/2000**

Funding Source: **Hazard Mitigation Grant Program (HMGP); Homeowner; State sources**

Funding Recipient: **Local Government**

Funding Recipient Name: **City of Centralia**

Activity/Project Economic Analysis

Cost: **\$3,131,140.00 (Actual)**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Yes**

Federal Disaster #: **1100 , 02/09/1996**

Value Tested By Disaster? **No**

Repetitive Loss Property? **Unknown**

Reference URLs

Reference URL 1: <http://www.fema.gov/business/nfip/>

Reference URL 2: <http://emd.wa.gov/>

Main Points

- In a series of public meetings, City officials met with residents to determine the best course of action to reduce the threat of flooding in the area. Acquisition of flood-prone structures was considered and rejected. Elevation was the preferred alternative.
- To ensure that properties most at risk were first in line to benefit from mitigation funds, Centralia officials devised a scoring system to prioritize properties for HMGP funding.
- Considering the history of repetitive flooding in Centralia, officials have little doubt that the project will pay for itself in avoided losses in coming years.