



Elevating Service Equipment Reduces Flood Losses for Homeowner

Full Mitigation Best Practice Story

Northampton County, Pennsylvania

Bangor, PA - Mel Stalbird has lived in his Bangor home for 50 years. Built by his grandparents in 1955, his home rests on the banks of the Delaware River in an idyllic setting his family has enjoyed for generations.



In 2004, Tropical Depression Ivan filled the Delaware River. Rising water crept up the banks and into his home. The flooding destroyed his furnace, air conditioning unit and hot water heater, which were stored in the crawlspace under his home.

Months after replacing the appliances, another flood in 2005 destroyed them again. Realizing how flood-prone his home was, Mr. Stalbird decided to take steps to prevent future losses. "I knew the river would rise again, and couldn't afford to keep replacing these units," he said.

While repairing his damaged home, Mr. Stalbird realized that by elevating his units just a few feet off the ground, they would likely be spared in the event of future flooding.

Mid-June flooding put the newly elevated equipment to the test, this time they survived the rising waters. He had elevated the air conditioner approximately eight feet, level with the first floor of his home.

The furnace was moved into the garage and elevated about two feet off the ground. A closet was constructed for the hot water heater on the first floor level of his home. Following the flooding, rather than being faced with several thousand dollars in replacement costs, the only items that needed replacement was the ductwork connecting the furnace in the garage to the rest of the home..

"It wasn't rocket science, what I did," Mr. Stalbird said. "But putting up my AC unit on the platform, relocating my hot water heater, and raising my furnace in the garage made all the difference."

Cleaning up from the June flooding, Mr. Stalbird is also taking steps to reduce future losses to flooding throughout his house. He is planning to install detachable kitchen cabinets that can be stored upstairs before a flood. "I can't stop the water from rising, but I can do my best to protect what I own," he said.

Activity/Project Location

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

FEMA Region: **Region III**

State: **Pennsylvania**

County: **Northampton County**

City/Community: **Bangor**

Key Activity/Project Information

Sector: **Private**
Hazard Type: **Flooding**
Activity/Project Type: **Elevation, Utilities**
Structure Type: **Wood Frame**
Activity/Project Start Date: **07/2005**
Activity/Project End Date: **08/2005**
Funding Source: **Homeowner**
Funding Recipient: **Property Owner - Residential**

Activity/Project Economic Analysis

Cost: **Amount Not Available**
Non FEMA Cost: **0**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Yes**
Federal Disaster #: **1557 , 09/19/2004**
Federal Disaster Year: **2004**
Value Tested By Disaster? **Yes**
Tested By Federal Disaster #: **No Federal Disaster specified**
Year First Tested: **2006**
Repetitive Loss Property? **Unknown**

Reference URLs

Reference URL 1: <http://www.floodsmart.gov>
Reference URL 2: <http://www.pema.state.pa.us/>

Main Points

- Flooding from Tropical Storm Ivan destroyed Mr. Stahlbird's furnace, air conditioning unit and hot water heater, which were stored in the crawlspace under his home.
- Months after replacing the appliances, another flood in 2005 destroyed them again.
- While repairing his damaged home, Mr. Stahlbird realized that by elevating his units just a few feet off the ground, they would likely be spared in the event of future flooding.
- The furnace was moved into the garage and elevated about two feet off the ground. A closet was constructed for the hot water heater on the first floor level of his home. The AC unit was raised onto a platform.



Photo of Mel Stahlbird-Homeowner