



Elevated Home Serves as Neighborhood Shelter during Katrina

Full Mitigation Best Practice Story

Jackson County, Mississippi

Moss Point, MS - The Stork family's home is the only elevated building in their community. Although the house was built to mitigate flooding, the family decided to evacuate to avoid being in the path of Hurricane Katrina's reported 90- mile-per-hour winds as it approached the Gulf Coast on August 29, 2005.



In the family's absence, the Storks' house became a refuge for 37 neighbors and their pets trapped by a 15-foot storm surge. Concerned about the powerful winds associated with the storm, Joseph Stork, and his family chose to wait out the storm in the family's church, which sits on a slab-on-grade foundation.

The Storks' small middle-class community borders a canal that flows into a bayou. Before they evacuated, the couple offered their elevated home to a few neighbors as a shelter in case of flooding. Built in 1998, the 1,100-square-foot house is elevated 13.1 feet above sea level and sits on eight-foot-tall wood pilings that are 12-inches by 12-inches square. The 26 pilings are six feet apart and embedded six feet into the ground. The home's double 2-by-10-inch floor joists are securely anchored to the piles.

As Katrina's surge sent waist-deep waters rushing into the church, the family knew they needed to get to higher ground immediately. They decided to return to their elevated home. A family friend who owned a boat transported the family back to their house. "I didn't want to be stuck at home, up in the air with a chance that the house might collapse when the winds came – but we would have been much safer having remained in our house," said Joseph Stork in hindsight.

When the Storks returned, they found their modest house crammed with residents of the community. Sadly aware that nearly all of the homes in their community were under water, the Storks were relieved that everyone in the area survived Katrina, and were pleased that their elevated home played a major role in that survival. "There were 37 people, three Great Danes, a pit bull, a bull mastiff, two Chihuahuas, a dachshund, two cats and two tropical birds here," Joseph Stork said. "We were like Noah's Ark; we had so many adults, kids and animals at this house," added Jane Stork.

When the Storks began rebuilding their home in 1997 after a fire destroyed the original house, they discovered they had to elevate the house in accordance with the City's recent adoption of building codes compliant with the National Flood Insurance Program. According to Thomas Franklin, floodplain administrator for the City of Moss Point, all new construction in the area was based on the Southern Building Code Congress in effect at the time. Moss Point later adopted the 2003 International Construction Code that includes an International Residential Code for all new residential construction.

"The house is elevated four feet above the required nine-foot Base Flood Elevation (BFE). Having done so certainly paid off for them," Mr. Franklin noted. The BFE is the average floodwater depth for a flood event that has an estimated one percent chance of occurring during any given year. Buildings constructed to this standard are expected to sit above the floodwater and avoid damage during all but the most severe inundations.

"The City of Moss Point had us build this house like this and we griped about it and griped about it. We have now made it through two floods – first Hurricane Georges in September 1998 when water rose to the third step, and now Hurricane Katrina. Thank God we [elevated the house]," Joseph Stork exclaimed.

The Storks are intimately aware that local and federal building codes are designed to save lives and mitigate damages from disasters. Katrina's rushing waters soaked the insulation beneath the house and caused some damage to the building and staircase. However, the Storks feel the overall damage incurred is minor compared to what their neighbors suffered. "The house held up good," Joseph noted.

It took about a week for outside help to reach the community and two weeks before power was restored. In the meantime, the community coordinated its limited resources to sustain everyone.

The Storks are considering other mitigation strategies that they can apply to their home to help strengthen it against future storms. Elevating the air conditioning unit is important because Katrina's waters ruined the one that was located on the lowest

floor. "We have applied for a Small Business Administration (SBA) loan to help pay for repairs; maybe we'll have enough money to purchase storm shutters. It's a pain to put boards up over the windows every year and it's expensive too," Jane Stork explained. SBA low-interest disaster loans are available to homeowners, renters, business owners, and nonprofit organizations for losses not fully covered by insurance. Additionally, SBA loans allow borrowers as much as an additional 20 percent to mitigate future catastrophic losses.

Now on the road to recovery, the Storks are concerned about the future of their community. Floodwaters submerged many buildings, prompting some of their neighbors to sell their properties and move away. However, others are eager to retrofit and elevate their homes, and rebuild the community. Regardless of how the community transforms, the Stork family and their neighbors know that their elevated home saved lives during Katrina.

Activity/Project Location

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

FEMA Region: **Region IV**

State: **Mississippi**

County: **Jackson County**

City/Community: **Moss Point**

Key Activity/Project Information

Sector: **Private**

Hazard Type: **Hurricane/Tropical Storm**

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

Structure Type: **Wood Frame**

Activity/Project Start Date: **09/1997**

Activity/Project End Date: **02/1998**

Funding Source: **Homeowner**

Activity/Project Economic Analysis

Cost: **Amount Not Available**

Non FEMA Cost: **0**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **No**

Value Tested By Disaster? **Yes**

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

Year First Tested: **2005**

Activity/Project Disaster Information

Repetitive Loss Property? **No**

Reference URLs

Reference URL 1: <http://www.msema.org>

Reference URL 2: <http://www.fema.gov/government/grant/mitmeasures/elevate.shtm>

Main Points

- The Stork family's home is the only elevated building in their community.
- The house became a refuge for 37 neighbors and their pets trapped by Katrina's 15-foot storm surge.
- The family elevate their house in accordance with the City of Moss Point's adoption of building codes compliant with the National Flood Insurance Program.
- The house is elevated four feet above the required nine-foot Base Flood Elevation.
- Katrina's rushing waters soaked the insulation beneath the house and caused some damage to the building and staircase.
- However, the Storks feel the overall damage incurred is minor compared to what their neighbors suffered.



The Stork family's elevated home in Moss Point, Mississippi.



Carolyn Chaudron, and Joseph and Jan Stork.



One of many homes in the Storks' neighborhood that was submerged by Hurricane Katrina's floodwaters.