

# Mitigation best practices



FEMA

## Elevation Saved Family Home from Hurricane Ike

### At a Glance

Paul Strizek treasures his house in Kemah, Texas, on Galveston Bay. He elevated the house on 14-foot piers in 1994, and it saved the house when Hurricane Ike hit in 2008.

**Estimated cost of elevation and hazard mitigation work:**  
\$35,000 in 1994

**Estimated savings from Hurricane Ike:**  
\$146,000 (Est. cost to rebuild house)

**KEMAH, Texas** - Paul Strizek's home on Galveston Bay is much, much more than just a house. For more than 50 years, his bayside cottage here has been at the center of the most important of his family memories.

It was his mother's house. So it was worth it to Strizek to pick up the home and elevate it on concrete piers several years ago. "It cost some money," he said, "but I didn't want to lose that house."

His investment paid off Sept. 13 when Hurricane Ike stormed ashore over Galveston Island just 20 miles south of Strizek's house. The Category 2 hurricane carried winds up to 125 mph, driving storm surge up the bay.

Many of his neighbors' houses were shattered. Two doors down from him, the surge swept an unelevated bay house out to sea.

The surge took down Strizek's steps, a dock and the lower level's breakaway walls. All were carried out to sea. But the house survived, in excellent shape.



Paul Strizek and his house in Kemah.

He thinks the surge was 12 feet at his house. The piers hold the house up 14 feet. "If I hadn't raised that house, it would be gone," Strizek said.

Despite the risk of facing the wind and sea on Galveston Bay, his house matters to Strizek in part because of the pervasive charm of the area.

History traces settlement of the area, on the south shore of the Clear Creek Inlet, back more than 150 years. According to local legend, an early inhabitant was the pirate

Jean LaFitte, who is rumored to have buried stolen treasures near what is now Kemah. The specific town was founded in 1898 for railroad expansion. Two years later, it was leveled by the 1900 Galveston hurricane, one of the worst disasters in U.S. history. It was virtually destroyed again by Hurricane Carla in 1961. Lesser storms also figure prominently in its history.

But the site, with its sweeping blue-green vistas of the bay and prime access at the Clear Creek outlet, proved irresistible; and it has been rebuilt time and again.

**“If I hadn’t raised that house, it would be gone.”**

Originally a small fishing town, Kemah was known as Houston’s playground in the 1920s. “We were just across the line into Galveston County, which was much more tolerant of gambling, drinking and vice,” Strizek said. His house was owned then by a woman of questionable repute.

Today, Kemah is a playground again, a popular tourist destination and home to about 2,300 people struggling to rebuild and recover from their latest hurricane.

Another reason for Strizek’s attachment is the house itself. “This house was built around 1919, as far as we have been able to determine,” he said. “The materials and workmanship are superb.” The inside was finished with old-growth East Texas pine, a wood considered to be of exceptional building quality.

The house is also Strizek’s link with his past and his mother, Jane Strizek.

“My mother bought this house in 1963 as our summer home. Then we moved here full time in 1966, and I went to high school here. It was a sleepy little town then, with a drawbridge where the highway bridge is now. The house was low, on the ground, an old bay house on short pilings maybe three feet into the ground. I could crawl under it. She named it The Ark.

“Lots of the bay houses were like that then. And a lot of them washed away in Carla. I have a picture of mother’s house from 1961, undermined and heavily damaged. But somehow it has survived, all these years, all these storms,” Strizek said.

His mother lived there until her death in 1993. “My only brother and I were there with her when she passed away, in her own house, in her own bed, in her sleep,” he said. Since then, his brother died, too. “I will never let that house go,” Strizek said.



Breakaway walls gone with the storm.

In 1994 Strizek renovated the house extensively. “It would have been easier to tear it down and start over than to rebuild it up,” he said. “But because of my emotional ties to the house, I wanted to save everything we could. My contractor and I tried to save the historical aspects of it. Any time he had to remove any of the East Texas pine, he saved it and used it to make new molding.”

The contractor has lived in the area all his life and knows the challenges. He brought in a structural engineer to design the concrete piers, which drive down two feet below the ground, rest in a 2.5-foot concrete pier foundation, and lift the house up 14 feet. The lower level was fitted with breakaway walls. “That means that the nails that were put into the concrete and the connections between the studs and the piers are all built to minimum standards – built to give way in a storm. We knew not to store anything of value there. It’s all built to be sacrificed to the storm, and it was,” Strizek said.

A concrete sea wall that Strizek built after Tropical Storm Frances in 1998 helped curb erosion and dissipate wave energy. In addition, the windows were boarded up before the storm.

Gregory Pekar, the Texas state hazard mitigation officer, said that we can all learn from construction of older homes like

Strizek’s. “Time and time again across the state, we see that pre-World War II homes, built of full-sized timbers and typically with solid three quarter-inch wood siding inside and out, are really quite strong. These days, we use lightweight materials and well-enforced building codes to help our homes withstand the strong coastal winds.”

“Elevating the house wasn’t cheap,” Strizek said. “I spent about \$175,000 on the renovation, all told, and probably \$30,000 to \$35,000 of that cost was for raising the house. I think elevation was required for me to get a building permit at that time – I’m not sure – but I knew I was going to do it, whether it was required or not, because I didn’t want to lose this house.”

Strizek sees some others trying to cut corners in rebuilding and arguing against government building codes. “But the truth is those regulations are for a good purpose,” he said. “I would hope that anybody that is on the ground now and thinking about rebuilding will go up on their own or will be required to do so.

“For me, I knew that elevation was worth the money to me to protect my investment. I knew the only way to go was up.”