

Hurricane Ike Residential Case Study



Texas Engineering Extension
Service

Knowledge Engineering

800-541-7149

KE@teexmail.tamu.edu



HURRICANE IKE IMPACT REPORT

RESIDENTIAL CASE STUDY - Bridge City Residents Reestablish to Lost Homes

Storm History

2005 - Hurricane Rita

2007 - Hurricane
Humberto

2008 - Hurricane
Gustav

2008 - Hurricane Ike

Bridge City, Texas is home to approximately 8,500 people, and nearly surrounded by water. In order to enter, one must cross one of three historic bridges over either Cow Bayou, the Neches River, or a branch of the Sabine River--hence the name, Bridge City. In fact, Bridge City's motto is "Building Bridges Together," a nod to the physical bridges in located there and also the adversity Bridge City has overcome as a community in facing the seemingly constant threat of floods and hurricanes.

Case Facts

Hurricane Ike made landfall on Saturday, September 13, 2008 with Category 5 equivalent storm surge. Mayor Kirk Roccaforte of Bridge City estimates that after Hurricane Ike roared through Bridge City, only fourteen structures in the city limits and twenty-five in the entire school district remained dry. Other estimates have it that 90% of the 3,400 homes were damaged or destroyed. Much of the city experienced flooding, which peaked early that Saturday morning. By Saturday night some waters had receded and by Sunday, only the southern portion of the city was still under water. On Monday, the waters had returned to their usual resting places between the banks of the river and the bayous. When city officials returned and began attempting to catalogue what

remained of their homes, Mayor Roccaforte says they quickly realized there was hardly a structure undamaged.

Key Decisions

Prior to the arrival of Hurricane Ike, officials in Bridge City, Texas, knew they needed to plan ahead for the massive storm's wake and incoming floodwater. Mayor Roccaforte met with the city manager, and based on their recent experiences during Hurricane Rita, decided to place an order for resources and





generators the day before Ike made landfall. Floodwaters were a certainty for low-lying Bridge City and, thanks to this decision, the city's infrastructure was operational again mere days after the storm hit.

90% of homes were damaged or destroyed

1st priority was to secure equipment and assess damages to facilities and utilities

Upon returning, city officials' first priority was to secure the equipment stored elsewhere and to assess damages to facilities as well as water and wastewater systems. Contracts for sleepers and contractors had already been triggered and Mayor Roccaforte's primary goal was to ready the city for the return of its populace as soon as possible. The generators arrived from California on Sunday and the electricity for Bridge City was working by Wednesday. City workers were able to get the water systems running by Sunday evening after placing generators at water wells.

Mayor Roccaforte knew that two things were absolutely vital for Bridge City to recover and thrive: first, FEMA trailers; second, schools would need to open as quickly as possible. If the schools opened, people would be motivated to return and would be given a sense of hope and normalcy upon arrival. The mayor and city officials delivered when it came to the school district. Schools in Bridge City opened their doors just three weeks later, and had 92% of their pre-Ike enrollment.

With these priorities in mind, planning began to revolve around how to get the recovery process moving, how to get teachers and staff back in the city and back to work. With so many buildings flooded, returning teachers and staff would have no place to live. With so many buildings flooded, returning residents would have no place to live. People could not be expected to drive 100-200 miles a day for work and, with 6,000 contractors in the area, if there was a bed within 100 miles, it was already occupied. FEMA trailers were coming in at a very slow rate and nearly every resident needed a place to live while they rebuilt.



During the initial stages of recovery, city employees lived in sleeper trucks with a shower truck stationed at City Hall. They used the utility building for a kitchen and were told to take whatever they needed from the local Wal-Mart that had not been destroyed by the floodwater. City officials advertised to returning citizens that when they returned there would be no resources available—families needed to bring their own food and supplies. Medical and emergency care facilities were available in surrounding cities such as

Orange, Port Arthur and Beaumont.

30% of city residents received assistance from their employer including \$5 million from MOTIVA

Wal-mart allowed people to take whatever they needed that was above the floodline

In a gesture of community spirit, corporations in the area assisted their employees in their time of need. At least 30% of the city was assisted by their employer. MOTIVA, an oil refinery and distributor, spent at least \$5 million on employees, area responders and churches. The local paper mill donated \$50,000. The Church of Christ operated out of the Community Center until May of 2009 providing food, appliances, and clothes to residents as well as operating a database of needs in the area.

Conclusions

In the end, many residents received FEMA trailers. Mayor Roccaforte estimates 1,800 FEMA trailers were brought to the city with 3,000 temporary housing units of some type in the city and surrounding area, including those purchased by homeowners or travel trailers already owned by residents. As of summer 2010, there remained 158 temporary housing units in Bridge City, but fewer than ten of those belonged to FEMA.

Overall the city's economy has largely recovered from the storm.

Businesses that did not return were replaced. In fact, Bridge City is home

to more businesses today than before Ike, including two large drug stores. City Hall, where 3.5 feet of water stagnated for a day, was remodeled, as were the municipal building and the community center, which is now a popular location for events.



Mayor Roccaforte attributes Bridge City's recovery to having the right people, in the right place, at the right time. "We really owe the credit to our citizens," Roccaforte said, "They are the ones that held everything together and put back the pieces after the storm."