

Mitigation best practices



FEMA

FEMA HMGP funding provides security in Port Neches

Hurricane Rita mitigation projects protect against Hurricane Ike



Roll down shutters on Wright Building Community Center. Photo by Bonnie Hanchett

At a Glance

Hurricane Rita caused extensive damage to the public facilities in Port Neches. Damage estimate was set a million dollars. The city received funding through FEMA's Hazard Mitigation Grant Program (HMGP) to execute wind retrofit projects. With the high winds from Hurricane Ike, the high impact doors were awesome, the roofs remained intact and the shutters did their job. "It was definitely money well spent."

PORT NECHES, Texas – As Hurricane Ike ravaged the coast near the Louisiana-Texas state line with wind gusts of more than 110 mph, Emergency Management Coordinator Stephen Curran and Police Chief Paul Lemoine hunkered down in the Port Neches fire house.

The two local officials could only hope that mitigation measures funded through the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) would spare the town from the degree of damage Hurricane Rita brought three years earlier.

The purpose of HMGP is to reduce the loss of life and property in future disasters by funding mitigation measures during the recovery phase of disaster. FEMA provides up to 75 percent of the funding, with the remainder coming from the state or applicant or both.

The state administers the program and selects the projects with approval by FEMA. Applicants, which must have FEMA-approved hazard mitigation plans, may be states, local governments, Indian tribes or certain nonprofits. Funds can be used for long-term mitigation measures, including protection of public or private property.



With funding by FEMA's HMGP roofers install the Global 1-150 rated roof as part of the retrofitting measures. Photo by Bonnie Hanchett

Following Hurricane Rita, the city received funding through the FEMA Public Assistance program to return damaged public facilities to their pre-disaster condition. City officials then became aware of the HMGP opportunity to strengthen the facilities.

"We went to a seminar and found out what kind of projects would be considered for funding, and we took advantage of the program," Curran said.



High Impact Doors at Port Neches Fire Station. Photo by Bonnie Hanchett

In January 2007, Port Neches received eight HMGP grants, totaling \$1,512,825, to execute wind retrofit projects. Retrofitting measures were executed on the public works building, library, community center, fire station, city hall, sewer plant, senior citizen center and police station.

The projects involved re-roofing using FM Global 1-150 rated roofs. This type of roofing meets design and installation criteria mandated by the Factory Mutual Research Corporation, the nonprofit research arm of the Factory Mutual Insurance Company. The 1-150 rating is laboratory tested using an uplift test load of 150 pounds per square foot.

The mitigation projects also included replacing existing entry doors with heavy-duty, impact-resistant doors and adding electric roll-down storm shutters to windows.

"During Hurricane Ike, all shutters were in place. It was neat to simply push a button to secure the buildings. This freed up our time to concentrate on getting people to safety," Curran said. "In the past, it took us a couple of days to secure public buildings with plywood."

Some of the HMGP funds were used for the safe room at the Effie and Wilton Hebert Public Library. A safe room is an interior space that is fortified to provide a high level of protection against extraordinary winds, such as those in hurricanes and tornadoes.

Curran speaks proudly of the advantages of the mitigation measures undertaken and plans to take advantage of future HMGP funding. "We spent every penny that FEMA gave us, wisely," Curran said. "With the high winds from Hurricane Ike, those high impact doors were awesome, the roofs remained intact and the shutters did their job. It was definitely money well spent."

Several facilities that were not mitigated, including the post office and Public Works Annex, suffered damage from Hurricane Ike.

Story and Photos by Bonnie Hanchett

High Impact Doors

Impact 2 1/4" doors are built using internal reinforcement of steel and fiber laminates. This internal fiberglass and steel reinforcement achieves the stability and dimensional integrity required of larger doors in a high wind velocity storm.

