

## Brazoria County Adopts Freeboard Regulation in Combatting Flood Loss

**BRAZORIA COUNTY, TX** – Located in the Gulf Coast region of Texas, Brazoria County is among a number of counties that are part of the region known as the Texas Coastal Bend. The principal streams flowing through the county into the Gulf of Mexico include the Brazos and San Bernard rivers, Oyster Creek, Bastrop Bayou, and Chocolate Bayou. With a history of flooding, Brazoria County developed a regulation several years ago to reduce flood risk by ensuring new construction is elevated.

“In September 2007, the county made the decision to become proactive in combatting flood loss. We established a best practice model for new construction permitting within a flood zone,” said Joe Ripple, Brazoria County floodplain administrator. “The 2015 flood proved our decision to be a good one.”

According to Ripple, all new construction must be elevated two feet above the Federal Emergency Management Agency’s (FEMA) National Flood Insurance Program (NFIP), recommended standards for Special Flood Hazard Areas (SFHAs), thus creating a freeboard.

Freeboard is a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. It tends to compensate for many unknown factors that could contribute to flood heights greater than the height estimated for a selected size flood and floodway conditions.

Freeboard also offers a financial advantage. It results in significantly lower flood insurance rates due to lower flood risk.

For the purpose of administering the NFIP, FEMA identifies and maps flood hazard areas by conducting flood hazard studies and publishing Flood Insurance Rate Maps (FIRMs). These flood hazard areas are based on a flood having a 1-percent probability of being equaled or exceeded in any given year (also referred to as the 100-year flood or Base Flood).

Structures within the SFHA in a community participating in the NFIP are subject to floodplain management regulations that impact building standards and are designed to minimize flood risk. The Code of Federal Regulations (44 CFR 60.3c2) requires that the lowest floor of a residential structure, including basement, built within the SFHA be at or above the Base Flood Elevation (BFE).

While not required by NFIP standards, Ripple said communities are encouraged to adopt a freeboard to account for a rise built into the concept of designating a floodway and the encroachment requirements where floodways have not been designated.

“The goal was not just to meet FEMA elevation standards but to create a freeboard above the standard,” said Ripple. “It was clear to leadership that in the short term, this strategy would increase cost of construction, but in the long term, it would reduce the flooding risk for these structures.”

After years of drought throughout the state of Texas, strategies were being developed on how to share the ever shrinking Brazos River. In 2015, starting on Memorial Day, rain inundated southeast Texas causing massive flooding. The Brazos rose to a level of 52 feet, coming out of its banks in Rosharon, Texas, spilling into Oyster Creek and the surrounding bayous.

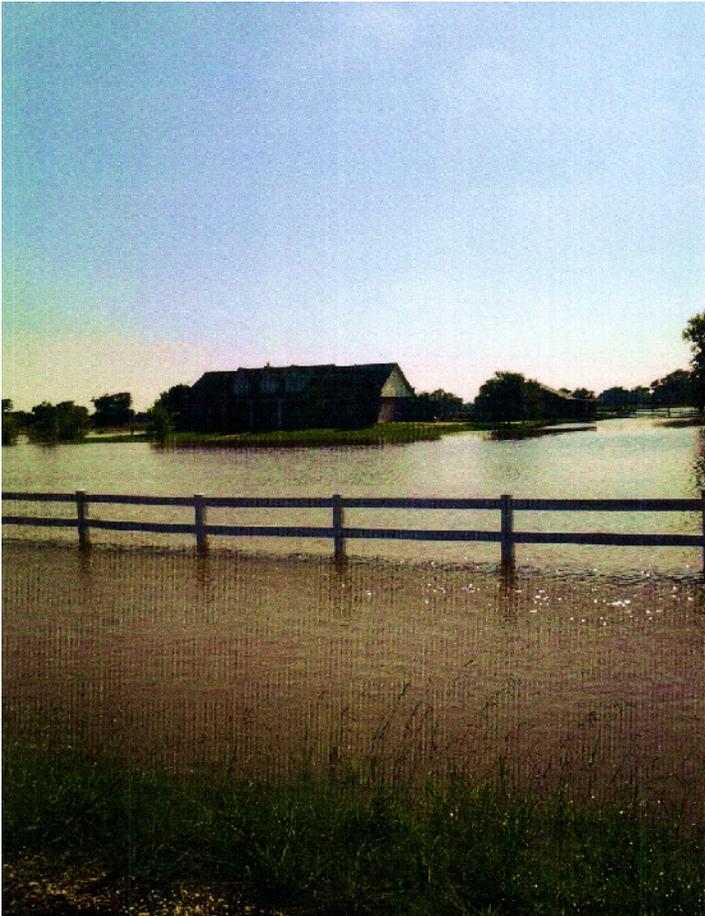
“This flood event was the first real test of the freeboard requirement. While there were a significant number of homes that flooded in Brazoria County, not a single home flooded that met the county’s elevation standards,” said Ripple.

As the flood water receded, a sigh of relief was felt by many because their homes were saved as a result of a proactive approach to flood preparation.



For additional information on the Brazoria County Freeboard Regulation, visit:

- [Managing Floodplain Development Through the NFIP](#)
- Technical Bulletin 10, [Ensuring that Structures Built on Fill In or Near Special Flood Hazard Areas are Reasonably Safe From Flooding](#)



A new construction located in a subdivision in Rosharon, Texas survived the 2015 flood event. The homeowner adhered to the 2-foot free board requirement when the home was built. Flood waters inundated the yard leaving the home unscathed. (Photo provided by Joe Ripple, Brazoria County Floodplain Director)