

Residential Substantially Damaged Buildings in Relation to the Katrina Surge Inundation and Advisory Base Flood Elevations

City of Waveland, Mississippi

Storm surge with wave action inundated most of the City of Waveland. Fast moving waters damaged over 2,400 residential structures, 88% of which received substantial damage (damage from any source where the cost to repair to pre-damage condition equals or exceeds 50% of the pre-damage fair-market value).

Substantially damaged structures must be repaired or rebuilt in compliance with all applicable building codes and floodplain management criteria. For Katrina communities to receive FEMA mitigation grant funding these repaired or rebuilt structures must meet a higher flood protection standard — the Advisory Base Flood Elevation (ABFE). The current FEMA Flood Insurance Rate Maps (FIRMs) for the Mississippi Gulf Coast, published in the early 1980s, show Base Flood Elevations (BFEs) (flood elevations that have a 1% chance of being equalled or exceeded in any given year) and serve as the basis of floodplain management. After Katrina, FEMA quickly calculated ABFEs that incorporate the 25 years of tide gage and storm records that have been collected since the FIRMs were last published. Many communities have adopted ABFEs for use during rebuilding.

This map displays inspected structures within the Hurricane Katrina surge inundation limits, as well as the ABFE contours. To meet National Flood Insurance Program (NFIP) requirements, substantially damaged residences must be elevated. For more Information: www.fema.gov/hazard/flood/recoverydata/index.shtm



Steel frame building on St. Louis Bay survived storm surge and wave action above the elevated floor level

During hurricanes and other coastal storms, coastal areas will experience flooding with high velocity water and wave action. Breaking waves and high velocities make flooding even more destructive. Coastal storm surge can knock over buildings, move large debris, erode shorelines and dunes, then deposit material in different locations. Areas subject to coastal flooding with high velocity flows are designated as V or VE zones on FIRMs.

For more information about the NFIP and floodplain management provisions:

www.fema.gov/plan/prevent/floodplain/How_the_NFIP_works.shtm



FEMA