



# FEMA

## Flood Recovery Guidance Advisory Base Flood Elevations

Gary Zimmerer  
April 19, 2006

# Opportunity

- We have a tremendous responsibility and an historic opportunity to measurably strengthen Coastal Louisiana
- Public safety and reduced long-term vulnerability must remain as key decision drivers during recovery
- ABFEs are aimed at meeting these objectives

# Advisory Flood Information

- Rebuilding of the Gulf Coast is underway and communities need information *now* to ensure that buildings are reasonably protected from future storm events
- Hurricane Katrina and Rita were very large storms that raised questions as to the validity of the current flood maps and BFEs
- The Flood Recovery Guidance and Advisory Base Flood Elevations are an interim product to assist communities in their rebuilding efforts while new Flood Insurance Rate Maps are completed

# ABFE vs. Flood Insurance

- ABFEs do not affect:
  - Availability of flood insurance
  - Cost of Insurance
- Structures will continue to be rated using zones and flood elevations on the current effective FIRM
- If new construction is elevated to the ABFEs insurance rates may be lower

# Assessing the current data: Three Reasons Flood Risk Changes

- New Weather Data: rainfall and hurricane experiences since original studies completed
- Physical Changes: Changes to landscape
  - Flood control facilities
  - Subsidence
  - Loss of coastal barrier
- Improved Science: Physics and Modeling

*Not all factors necessarily point in a single direction*

# ABFE's Why Do Them?

- Ignoring risk leads to devastating consequences
- Openly discussing risk allows investors to make decisions which match their objectives
- Federal, State, and Local governments should lead the charge by
  - Acknowledging risk
  - Making it part of the planning process
  - Taking steps (investing) to reduce it both long and short term

# Results of Assessment

- Current flood maps generally understate risk
- Flood Recovery Guidance, including Advisory Base Flood Elevations have been provided for 15 coastal parishes in LA and 3 Counties in MS
- Advisory Base Flood Elevations are better reflection of risk than current maps

# Hurricanes Katrina and Rita Flood Recovery Guidance

## Inside of levees or other flood protection measures

- Integrity of the flood system needs to be addressed
- Ability to be certified to FEMA National Flood Insurance Program criteria is required
- If flood protection intact/certified:
  - Effective FIRM BFEs can be used for flood recovery and establishing building elevation requirements

# Flood Recovery Guidance Issued December 1, 2005

- St. Tammany, Tangipahoa, St. John the Baptist, St. Charles, Lafourche, Terrebonne, St. Mary, Iberia, Vermilion, Cameron, Calcasieu

# Flood Recovery Guidance Issued April 12, 2006

- Orleans, Jefferson, St. Bernard, Plaquemines, and St. Charles (advisory addendum #1)

# Flood Recovery Guidance

## Issued April 12, 2006

- General information
- Clearly states the flood control system cannot meet NFIP 1% certification
- Inside Levee-Protected Areas
  - Recommend structures be elevated to the higher of either the current effective BFE or 3 feet above the highest existing adjacent grade
- Outside of Levee-Protected Areas
  - Freeboard above current BFE of 1 to 3 feet

# Plaquemines Parish

- Flood Recovery Guidance only issued for Belle Chasse levee area at this time and areas not protected by levees
- All other levee areas in the parish are still under further review

# ABFE ELEVATION with Levee

- Current levees do afford substantial protection and are currently being repaired
- Will not provide complete protection against the base flood
- Recommended guidance will reduce damages but may only have minimal protection against total failure of the flood protection system
- It is a reasonable standard given the level of protection, temporary nature of risk, and the commitment by the administration to restore the flood control system
- Without eventual levee certification BFE would reflect storm surge elevations

# Data Used in Decisions

- Latest techniques in storm surge modeling used
- The analysis was accomplished as a joint effort between the USACE and FEMA
- Flood risk information for the New Orleans area is a very complex issue
- NFIP should not drive decisions regarding levee design levels

# What is Next?

- Flood Recovery Maps available by mid May depicting the ABFE guidance and storm related data
- Continue to work on the revised flood insurance studies. Target date for preliminary flood insurance rate maps is the end of the year

# Lead by Example

- LRA support for adoption
- Federal Government requirement for use with Mitigation and Public Assistance Grants

# Hurricanes Katrina and Rita Flood Recovery Guidance

- **Web Access to Flood Recovery Information:**
  - Hurricanes Katrina & Rita Flood Recovery Information
    - <http://www.fema.gov/hazard/flood/recoverydata/>
  - **FEMA *Coastal Construction Manual* (FEMA 55)**
    - <http://www.fema.gov/fima/mat/fema499.shtm>

# Questions/Comments



## ADVISORY Base Flood Elevations for Jefferson Parish, Louisiana

Hurricanes Katrina and Rita were both strong Category 5 hurricanes for several days in the Caribbean and Gulf of Mexico before pushing waters toward the Louisiana coast. Katrina made landfall on August 29, 2005, near the Mississippi-Louisiana border, and Rita made landfall on September 23, 2005, at the Texas-Louisiana border. These hurricanes caused extensive damage in the parishes of along the Gulf Coast and Lake Pontchartrain.

To minimize the flood impacts of future events, the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) is providing advisory information concerning coastal flood elevations and interior levee ponding elevations that can be used to guide recovery efforts. This guidance is necessary because Hurricanes Katrina and Rita, along with other recent storms, have created concerns about the accuracy of the flood risk information for Jefferson Parish (including incorporated areas) and whether the risk may be understated.

Assessing flood hazards in Jefferson Parish is challenging due to the existence of numerous flood control facilities. These facilities experienced damage of varying degrees throughout southeastern Louisiana as a result of Hurricanes Katrina and Rita, and the U.S. Army Corps of Engineers (USACE) is on an aggressive path to repair and improve the flood control system. The USACE is on schedule to have repairs to damaged areas completed by June 2006, to have all federal levees constructed to authorized heights by September 2007, and to have fully authorized levels of protection and improvements to the system completed by 2010.

Although USACE improvements to the flood control system will make Jefferson Parish safer than it was before the storms, they will not eliminate the potential for flooding. **In fact, based on analyses recently completed by the USACE, the flood control system will not meet the standards**

**necessary for providing protection against the 1-percent-annual-chance (100-year) flood, which is also referred to as the base flood.** The National Flood Insurance Program (NFIP) uses the base flood as the standard for floodplain management.

FEMA and the USACE have worked together to develop flood hazard data and formulate recommendations to be considered by State and local governments as they begin to make recovery decisions. This information is both reliable and current, and is aimed at assisting in the recovery process as it moves forward. Owing to the differences in flood risk information for areas inside and outside of levees, this Flood Recovery Guidance has been organized below to treat these two physical settings separately.

### Inside of Levee-Protected Areas

For areas in the Parish located within existing levees, FEMA has determined that eventual levee certification is likely. In the levee areas of Sub-Basins "a" to "c" located in the northern part of the Parish (see Figure 1), FEMA recommends the following: new construction and substantially damaged homes and businesses within a designated FEMA floodplain should be elevated to either the Base Flood Elevation (BFE) shown on the current effective Flood Insurance Rate Map (FIRM) or at least 3 feet above the highest adjacent existing ground elevation at the building site, whichever is higher; and new construction and substantially damaged homes and businesses not located in a designated FEMA floodplain should be elevated at least 3 feet above the highest adjacent existing ground elevation at the building site.

For the Parish Advisory BFE (ABFE) inside levees, this Guidance is similar to NFIP rules for areas protected by levees being restored to provide 1-percent-annual-chance base flood protection. Should the requirements needed for application of these rules fail to materialize, flood elevations

