



FEMA

MITIGATION DIRECTORATE

Mitigation Assessment Teams

BUILDING STRONGER AND SAFER

The Federal Emergency Management Agency's (FEMA's) Mitigation Assessment Teams (MATs) conduct engineering analyses after major natural disasters to assess damage to government facilities, homes, businesses, and other structures, and to determine the causes of structural failures and successes. Based on a comprehensive analysis of data, MATs prepare recommendations for construction codes and standards, building design issues, and best practices. The program works in collaboration with State and local governments, and draws on a wide range of technical expertise from the private sector.

ASSESSING DAMAGES WITH AN EYE TO THE FUTURE

MATs comprise technical experts from FEMA, State and local agencies, and the private sector, including specialists in civil and coastal engineering, hydraulics, architecture, construction, and building code development and enforcement. The composition of each MAT depends on the type of damages incurred. The teams assess damages to many types of structures, including hospitals, police and fire stations, schools, government offices, and homes.

The goal is to learn how buildings performed in the hazard event and why they withstood or did not withstand the strain caused by hazards. Key questions include: How did buildings perform? Did wind damages exceed building codes? Did flood damages go beyond the flood zone? Were building codes enforced? Were construction materials sufficient to withstand wind and water damages? Were local, State, and Federal building standards and ordinances sufficient?

CONSENSUS RECOMMENDATIONS FOR BUILDING STRONGER AND SAFER

The key to the MAT process is consensus. The team consults with partnering government agencies and private organizations throughout the process to ensure consensus

on each phase of the investigation, including methodology, data collection, and analysis. This helps to ensure the MAT's final recommendations represent the most current data and technical expertise available.

ASSESSING DAMAGE CAUSED BY HURRICANE KATRINA

FEMA's MAT conducted field investigations with State and local agencies to evaluate damages caused by Hurricane Katrina, primarily in Louisiana, Mississippi, and Alabama. The MAT analyzed the causes of structural failures and successes, the extent of wind damage, the height of flooding, and building contamination caused by contact with floodwater containing toxic materials. Findings and recommendations can be found in the following three documents:

- *Summary Report on Building Performance: Hurricane Katrina 2005* (FEMA 548)
- *Hurricane Katrina in the Gulf Coast: Building Performance Observations, Recommendations, and Technical Guidance* (FEMA 549)
- *Recommended Residential Construction for the Gulf Coast: Building on Strong and Safe Foundations* (FEMA 550)

To view these reports online, please visit:

http://www.fema.gov/rebuild/mat/mat_reprts.



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Upon conclusion of the field investigation, specialists work as a team to analyze the field data, as well as other damage reports and studies conducted by government agencies or private firms. The team then prepares conclusions and develops recommendations about appropriate construction methods. Once consensus is reached, FEMA issues a series of “Recovery Advisories,” which provide initial guidance on building issues and best practices that can be used in the reconstruction process.

FEMA also publishes a comprehensive report that includes detailed technical recommendations for improving building construction and design, building code policy and enforcement, and mitigation activities that can limit or eliminate damages in future disasters.

INFORMATION FOR THE PUBLIC

FEMA has published the *Homeowner’s Guide to Retrofitting*, (FEMA 312) for individuals whose homes have been flooded or that are located in flood hazard areas. This publication outlines the actions individuals should take to reduce flood damage to their homes. It explains the damage-reduction methods that are available, discusses the degree to which they work, and helps individuals

determine whether they meet their needs. This publication is designed for readers who have little or no knowledge of flood protection methods or building construction techniques.

FEMA has also produced a series of 31 illustrated fact sheets that provide technical guidance and recommendations concerning the construction of coastal residential buildings. These materials present information aimed at improving the performance of buildings subject to flood and wind forces in coastal environments. The fact sheets make extensive use of photographs and drawings to illustrate National Flood Insurance Program (NFIP) regulatory requirements; the proper siting of coastal buildings; and recommended design and construction practices, including structural connections, the building envelope, utilities, and accessory structures. Many of the fact sheets include lists of additional resources that provide more information about the topics discussed. The fact sheets are available in digital form as Adobe PDF files that can be downloaded from FEMA’s website: http://www.fema.gov/rebuild/mat/mat_fema499. A print publication (FEMA 499) is also available from the FEMA Distribution Center at 1-800-480-2520.