



ASSOCIATION OF STATE FLOODPLAIN MANAGERS, INC.

2809 Fish Hatchery Road Madison, Wisconsin 53713 608-274-0123
Fax: 608-274-0696 Website: www.floods.org Email: asfpm@floods.org

Chair

Pam Pogue, CFM
NFIP State Coordinator
RI Emergency Mgmt. Agency
645 New London Ave.
Cranston, RI 02920
401-946-9996
Fax 401-944-1891
pam.pogue@ri.ngb.army.mil

Vice Chair

Al W. Goodman, Jr., CFM
NFIP State Coordinator
MS Emergency Mgmt. Agency
P.O. Box 4501 Fondren Station
Jackson, MS 39296
601-366-6325
Fax 601-366-5349
agoodman@mema.ms.gov

Secretary

Rhonda Montgomery, CFM
NFIP State Coordinator
Kansas Dept. of Ag. - DWR
109 SW 9th St, 2nd Floor
Topeka, KS 66612
785-296-4622
Fax 785-296-4835
rmontgomery@kda.state.ks.us

Treasurer

William Nechamen, CFM
NFIP State Coordinator
New York State DEC
625 Broadway, 4th Floor
Albany, NY 12233
518-402-8146
Fax 518-402-9029
wsnecham@gw.dec.state.ny.us

Executive Director

Larry A. Larson, P.E., CFM
ASFPM Executive Director
2809 Fish Hatchery Road
Madison, WI 53713
608-274-0123
Fax 608-274-0696
larry@floods.org

Hurricanes Katrina & Rita Using Mitigation to Rebuild a Safer Gulf Coast

Release date 9-9-05

The devastation in the Gulf Coast and New Orleans from Katrina is unprecedented in recent US History. Yet, our nation's history and the world's history provide ample evidence that large natural disasters occur frequently and with a vengeance. Whether we are discussing tsunamis, hurricanes, floods, wildfires, or earthquake, natural hazards remain a primary force that can bring about catastrophic consequences to every region of the United States. Once the monumental job of attending to the pressing human needs through rescue and relief, immediate response and short term recovery is well underway, the nation will turn its attention to the rebuilding of the heavily damaged communities and properties. All of us will contribute to this rebuilding through not only our personal contributions, but with our tax dollars. Likewise, there must be an evaluation of how we plan, mitigate, and respond to natural hazards that ensures the nation is not ignoring natural hazards while positioning to deal with human caused disasters and acts of terrorism. We must rebuild in a way that will reduce the risk of flooding and hurricanes in the future, and the human suffering that follows.

And while the damage to the Gulf Coast and the New Orleans area is unprecedented, at the same time similar large events taught us valuable lessons that we must consider in the days, weeks, and months ahead.

Hurricane Andrew demonstrated that we had inadequate policy to deal with the situation when a large area is impacted and that significant pressure will be brought forth politically to relax reconstruction standards perhaps leaving the rebuilt structures more hazard prone than prior to the disaster. Many of these inadequacies were corrected during the Great Midwest flood recovery of 1993 that led to resources being made available such that the recovery and reconstruction were compliant with good practices. Since that time, some of these advances have been reversed and warrant reconsideration.

Likewise, the nation has ignored critical infrastructure, including levees, for years. Following the failure of the Teton Dam in 1976, it was apparent that a national dam safety program was warranted and a highly effective federal-state-dam owner partnership was established that reduces the risk of catastrophic dam failure in the nation. Levees are simply dams that guide water downstream and there is a need for us to implement a levee safety program patterned after this successful dam safety program.

This paper will outline some of the approaches that should be incorporated to reduce that risk.

Needed Actions

Reconstruction along the Nation's Coasts

Reconstruction in the coastal high hazard areas of Mississippi, Louisiana, Alabama and Florida panhandle. Huge amounts of funding will go into reconstruction of these devastated areas over the next weeks, months and years. We must ensure that reconstruction will be done to create safer, more disaster resistant homes, businesses and infrastructure. These actions are not only needed in the affected Gulf Coast area, but in all coastal areas of the nation, where the population at risk is increasing daily as people move to the coast. A number of steps in this process will be necessary:

1. **Assess the damage to each structure** to determine if it should be reconstructed. If reconstruction is appropriate, the rules and standards for safe construction must be adhered to.
2. **Evaluate the current maps and construction standards for needed adjustments to protect lives and property**
FEMA should perform an analysis of the flood maps and damages in the Gulf coast to determine if the current standards for mapping and managing those areas are adequate. Did the maps correctly reflect the expected storm surge and flood hazard? Did the existing flood maps show properties not at risk that were destroyed or badly damaged? Did those maps accurately reflect the 1% chance (100 year) flood? Will the new mapping process address any such problems? Did those structures on the coast built to existing standards survive? If not, do the standards need to be strengthened? Did the development along the coast expose supporting infrastructure to costly damages? This analysis can provide information for stronger reconstruction, and possible adjustments. Is the 1% chance flood an adequate standard? (See the Forum report on the 1% adequacy)
3. **Mitigate wherever possible.** Reconstruction in coastal areas must incorporate the tenets of natural hazards mitigation. All options for mitigation must be considered, including elevating or floodproofing the structure, or acquiring and relocating those in areas too hazardous for habitation. In some cases it may be more economical to demolish a damaged building and replace it with another one built to disaster resistant standards. Those that can be repaired must be carefully cleaned and dried to eliminate moisture and mold. While mitigating the structures against flooding, also modify them to protect against wind and storm surge.
4. FEMA/DHS is just now completing its review of an independent analysis on the benefits of mitigation, requested by Congress in 2003. **That report should be released immediately** -it is expected to reinforce the cost-effectiveness of federal, state, local and private investment in mitigation.
5. **Communities and states should adopt higher standards for reconstruction to**

reflect their hazards. The standards of the National Flood Insurance Program are minimum nation-wide standards. Each community and state should review its hazards in light of recent events and determine if higher standards are necessary to protect its citizens, properties and infrastructure. Many states and communities throughout the nation have adopted better protection standards, such as prohibiting construction in the high hazard areas, requiring “freeboard” above the 100 year flood level for structures, and ensuring that land use development is compatible with expected hazards. It has been stated that New Orleans was already considering higher construction and building codes. This is the time to make those adjustments. FEMA’s Community Rating System rewards higher standards with lower flood insurance costs in those communities.

Provide funding for federal mitigation cost sharing programs

Post-disaster mitigation funding must be restored. The Hazard Mitigation Grant Program (HMGP) provides mitigation funds after a disaster as part of the Disaster Relief Act. Funding for that program was started in 1988, but was inadequate to be effective until the Midwest floods of 1993, when Congress increased funding to 15% of the disaster costs. In FY 2003, the funding level was reduced to 7.5%, and has again proved inadequate. Property owners are most receptive to mitigating their property at a time when they have to rebuild anyway. Communities are more responsive to assisting in cost sharing mitigation in the wake of disasters. Mitigation cost sharing with federal funds under this program is only done after a rigorous test to ensure that benefits over the life of a project exceed the cost of the mitigation. . This opportunity for mitigation should not be missed. Rebuilding after Hurricanes Dennis and Katrina will be expensive enough once, lets not set ourselves up to do it again when the next major hurricane takes aim at the Gulf coast.

Repetitive loss structures—programs must be funded so they can be mitigated. Many of the nation’s repetitive loss structures (those with repeated flood insurance claims) are in the areas hit by Hurricanes Dennis and Katrina. Now is the time to mitigate the damages to those structures. Many property owners will have problems finding the resources to simply rebuild, let alone mitigate their structures. The 2004 NFIP Reform Act provides authority for added funding to help property owners mitigate repetitive loss structures, through a variety of generally non-structural means, including voluntary buyouts and relocations, elevation of buildings and floodproofing. That funding needs to be provided in the FY 06 budget so the NFIP can help reduce this drain. This matter should be of concern to everyone in a flood zone. Repetitive claims and large numbers of claims will drive up the cost of flood insurance for everyone.

Protecting and restoring natural systems and water resource projects policy

Natural systems such as wetlands, marshes and barrier beaches provide a level of protection against coastal storm events. The Gulf coast is rapidly losing barrier islands and the coastal wetlands that buffer the impact of hurricanes and flooding of the gulf coast and Southeast Louisiana. The State of Louisiana and Federal agencies in

conjunction with parishes and public developed the Louisiana Coastal Area Ecosystem Restoration Plan to address these losses. In order to have a sustainable working Gulf coast and New Orleans area, we must invest now in sound redevelopment and restoration practices. Future public financial investment in redevelopment along the Gulf coast and New Orleans area must be completed in a manner that respects the natural processes occurring along the Gulf coast. Reconstruction must balance the critical nature of coastal wetlands and other shoreline processes with the economic uses unique to coastal Louisiana and the Gulf. If we do not account for the delicate nature of this balance, we will simply be reconstructing a coast that will be even more vulnerable to the destruction caused by natural disasters.

Modernize the national Guidance for Floodplains and Reducing Flood Damages.

Procedures for planning and implementing water resources developments, including flood damage reduction projects, should be modernized with much greater attention to setting priorities for investments. The current rules for planning and evaluating federal water resource projects have not been updated for 22 years, since 1983. In addition, the current Executive Order on Floodplain Management outlining federal policies and goals for managing the nation's floodplains has not been updated for 28 years, since 1977. Despite a flood of high-level reports from agencies, the National Academy of Sciences and professional organizations calling for an updating effort, neither Congress nor the Executive Branch have taken critical actions to ensure that these guiding documents incorporate key lessons that have been learned since the rules were established.

Levees and Structural protection works

The Association of State Floodplain Managers (ASFPM) does not advocate new levees to protect undeveloped areas, and finds that using levees to protect existing development often results in creating situations where the expense of ongoing operation and maintenance costs may, over time, exceed the costs of other mitigation alternatives such as acquisition and relocation or elevation. Combinations of setback levees with some floodplain clearance can avoid pinching rivers in and creating added problems elsewhere. Even the Corps of Engineers staff has been known to say "there are only two kinds of levees, those that have failed and those that will fail". Levees are only built to a certain level of protection, which will be exceeded at some point in the future. Reliance on levees should be an option of last resort.

Current levee design and construction standards are inadequate. Levees that protect critical facilities, such as hospitals, emergency operations centers, police, emergency medical services and fire stations, major infrastructure and large and vulnerable urban centers such as New Orleans must be constructed to a higher level of protection than those protecting rural or sparsely populated areas. A comprehensive and adequate levee policy would recognize the need for these differences. Levees in rural areas can utilize the 100 year flood (1% chance flood) level of protection, but only if local land use requirements prevent the area from becoming a highly urbanized area. Existing urban areas and critical facilities need protection to at least the 500 year (0.2% chance flood, and in coastal areas a category 5 hurricane) standard to avoid the catastrophic

consequences, such as those experienced in the New Orleans area. It is important to recognize that levee failures in the New Orleans area is simply the tip of the iceberg---we have thousands of miles of levees “protecting” large and critical urban communities in this nation. We must prevent this sort of damage and suffering.

Residual risk insurance and minimum construction standards should be required for structures behind levees. Under current standards, structures behind a levee providing 100 year “protection” are not required to purchase flood insurance and are not required to be elevated. When the bigger flood occurs (and it will), and the levee is overtopped or fails, that development may be flooded not just with a foot or so of water, but to the rooftops, such as we’ve seen in New Orleans. This all or nothing approach in current national policy encourages communities to seek federal funding for just the 100 year levee, leaving not only the property owners and community, but federal taxpayers exposed to the catastrophic event. At a minimum, those structures “protected by levees must pay a small amount (**residual risk insurance**) into a fund for when that catastrophic event occurs that exceeds the levee capacity. Structures behind levees should also be required to be elevated a minimum of two feet above natural ground to protect against low level incidents and internal drainage.

A National Levee Safety Program is needed. We have no national inventory of levees, nor do we know the condition (the adequacy or safety) of many of these levees. Property owners behind levees assume they are protected, and are surprised and angry when levees fail. The state of California has been told by its courts that the state is responsible for damages caused due to failure of levees for which they are the sponsors. That exposes the state to perhaps billions of dollars in liability. Communities with levees throughout the nation face these issues. Congress should hold hearing on this issue with the intent to identify actions that will be initiated to address documented deficiencies.

The Corps of Engineers should be charged and funded to undertake a National Levee Safety Inspection Program similar to the national Dam Safety Program. No federal funding should be provided for levees unless standards for the construction, operation and maintenance of the levee are in place and maintained, and unless states and communities accept their share of the costs and responsibilities. Emergency action plans in the event of failure or overtopping of those levees must be in place and exercised yearly. These standards can differentiate between rural and urban levees, but must require that communities have land use standards in place which would prevent a rural levee at lower standards from becoming an urban levee, where large urban areas and critical facilities would not then be adequately protected.

Further information about flooding and flood mitigation issues can be found on the ASFPM web site---www.floods.org or by calling Larry Larson, Executive Director at (608) 274-0123