Historically, disaster programs in the United States have been directed at returning people and communities back to “normal” as quickly as possible. Unfortunately, in our rush to do this, we have also restored them to their previous at-risk condition. This was again demonstrated with the catastrophic disasters caused by Hurricanes Katrina and Rita. It will always be necessary for the federal, state, and local governments to have programs to administer assistance after disasters. The ASFPM believes that disaster aid and the post-disaster recovery period should be used as much as possible to encourage, facilitate, and reward actions that are lessening the potential damage from future floods, and building overall local sustainability.

However, under many current policies, post-disaster rewards are still provided for those who did no mitigation before the disaster and (in the case of local governments) have enabled additional at-risk development to take place. In other cases, the complexity of the disaster assistance program or financial reality makes it more attractive to people and to communities to restore damaged buildings or infrastructure to an at-risk condition than to mitigate the danger. A concerted effort must be made to improve the manner in which disasters are managed and disaster assistance provided. Government efforts must be efficient without fostering an added moral hazard.

**Public Assistance after Disaster**

The bulk of federal disaster assistance is provided for the repair and rehabilitation of public infrastructure (roads, bridges, stormwater systems, utilities, etc.) after a disaster. This assistance comes in the form of funding for repairs and replacement through the Federal Emergency Management Agency (FEMA), levee repairs by the Corps of Engineers and the Natural Resources Conservation Service, and activities like clearing the channel of a waterway. A much smaller portion of all the federal financial assistance goes to individuals and families for emergency needs and for repairs to their residences.

FEMA has adopted a policy and maintains a list of pre-approved mitigation measures that can be funded under the Public Assistance program as part of repair for public buildings and infrastructure projects. However, this policy is not always fully embraced by FEMA Public Assistance staff (and its disaster employees and contractors) when reviewing projects that otherwise are eligible for disaster assistance, such as public buildings, infrastructure, and critical facilities.

The programs of the Robert T. Stafford Relief and Recovery Act are an important element of recovery from and mitigation of the devastation of floods. The assistance programs established in that Act help communities replace infrastructure and mitigate against future damage. Some changes are needed to address catastrophic situations that lead to the inability of local governments to pay their local officials’ salaries. Permit officials are an especially critical part of the recovery process. Unfortunately, the Stafford Act’s provisions allow federal funds to be used only for payment of overtime for such officials and not their base pay. This has forced some communities to lay off their officials in order to hire additional personnel to assist in administering the rebuilding effort, which adversely affects the community’s long-term recovery and mitigation against future disaster. Also detrimental is the inability to use Stafford Act funds to make determinations of substantial damage, which are required under the National Flood Insurance Program (NFIP) before rebuilding and mitigation can proceed.
To make federal programs for disaster assistance to localities more consistent and effective, the following steps are recommended.

- Flood disaster aid for public infrastructure should only be awarded to communities that are participating in and compliant with the NFIP. Such economic sanctions applied to local governments should result in wiser decisions being made at the local level about investment in the floodplain, siting critical facilities, and insuring public structures.

- All federal assistance for structural, nonstructural, and disaster assistance programs should be based on the same sliding cost-sharing formula. Under this concept, a minimum federal share of the cost would be available to all communities, including those without financial resources to undertake expensive projects. But, as an incentive, the federal share would be increased for communities and states that engage in disaster-resistant activities beyond minimum criteria. Further, nonstructural mitigation projects would always receive a higher share of federal funding than structural projects.

- As part of its Public Assistance program, FEMA should ensure that its employees and contractors have the necessary guidance and training to identify, assess, formulate, and approve feasible and cost effective mitigation measures for public facilities and public infrastructure during post-disaster reconstruction.

- FEMA Stafford Act provisions should be revised so that communities can be reimbursed for costs they incur to perform damage inspections, administer codes and ordinances, and process permits for repair and reconstruction when the damage to public and private property exceeds the capacity of the responsible local agency. The costs associated with performing these functions should be reimbursable for 12 to 24 months or longer if needed to guide the community’s post-disaster rebuilding and recovery.

**Improving Efficiency and Effectiveness**

In most disasters, numerous federal agencies direct funding and programs toward the stricken area. There are at least two dozen separate programs in as many federal agencies for nonstructural disaster recovery assistance alone. It is frustrating when a coordinated federal disaster response and recovery strategy does not evolve and, instead, each agency pursues its own priorities, application procedures, and rules. Considerable time and energy is lost in trying to mesh specific procedures and policies among agencies or levels of government in order to take the simplest of steps toward recovery—for example, determining whether the applicable federal rules require a damaged house to be assessed by its pre-disaster market value or its damaged market value.

Between the mid-1990s and 2003, FEMA was a lean organization and responded to both natural and human-made events in an effective matter. FEMA had built excellent relationships with states and communities; was able to respond quickly to disasters and decide on policy matters regarding its programs; had a true multi-hazard focus; and had developed a track record of success in accomplishing its mission. Furthermore, FEMA oversaw a system of comprehensive emergency management in the country—one that linked and incorporated preparedness, response, recovery, and mitigation into an overall approach for how the nation addresses hazards and disasters.
Since 2003, when FEMA was subsumed by the Department of Homeland Security and despite the development of the National Response Plan, there has been an apparent lack of coordination among federal agencies. Events like Hurricane Isabel and Hurricane Katrina have shown FEMA's reduced capability. It has become painfully clear that FEMA lost the nimbleness and direct access to the President that it had as an independent agency.

Legislation has been enacted to provide autonomy for FEMA within the Department of Homeland Security. This new legislation will enable the four phases of disaster management—preparedness, mitigation, response, and recovery—to be directed by FEMA as before. The separation of these functions within the Department of Homeland Security has hobbled FEMA's effectiveness. It is absolutely critical that these functions be reunited and that FEMA be allowed to regain its central, effective, disaster-coordination function.

These recommendations are offered to improve federal disaster management.

- FEMA should be restored to independent-agency status, with direct access to the President.
- Until FEMA becomes an independent agency, Congress should carefully oversee the implementation of the 2006 legislation that strengthens FEMA's position within the Department of Homeland Security.
- FEMA should continue to work with all federal agencies to ensure that all disaster-related policies and programs are supportive of the floodplain management standards embodied in the NFIP.
- Upgraded Executive Orders or other measures should tie disaster relief and other federal funds to NFIP participation, compliance, and the maintenance of flood insurance by individuals and state and local governments.
- A National Response Plan should be developed that not only details standard response but also directs the use of disaster funds that are viewed as discretionary and the goals of long-term recovery and redevelopment. Additional guidance and clarity must be provided under the Emergency Support Function 14: Long Term Recovery, including purpose, roles, and the concept of operations.
- A uniform set of application forms covering many or all programs would facilitate implementation of mitigation measures during reconstruction.
- Data related to damage assessments conducted for purposes of Individual Assistance should be shared with state and local officials.
- The availability of post-disaster Public Assistance and Individual Assistance ought to be reviewed to ensure consistency with the spirit of Executive Order 11988's directive to curtail federal support to any activity that creates, continues, or otherwise supports activities that may result in future flood damage.
- A set of emergency rules should be adopted that covers disaster programs in all agencies.
so that issues of funding, cost sharing, priorities, and the like are handled consistently.

- The administration and oversight of the Hazard Mitigation Grant Program, Flood Mitigation Assistance, and the Pre-Disaster Mitigation program should eventually be turned over to qualified states.
- Federal agencies, including FEMA, NOAA's Office of Coastal Resource Management, the Economic Development Administration, the Environmental Protection Agency, the Corps, and the Natural Resources Conservation Service, should collaborate in the design of a state-combined review process of flood compliance, enforcement, and mitigation opportunities, to be implemented particularly after a flood when FEMA is positioned to pull federal agencies together.

**Flood Forecasting and Warning**

River forecasts and warnings are being made more widely accessible and easier to interpret. Forecasts should explicitly state the variability of estimates so that individuals do not get a false sense of security, but instead pursue appropriate protective actions, just in case. Flood forecasts and warnings also should attempt to incorporate impact-based estimates where possible. For example, recent forecasts from the National Weather Service will sometimes include statements such as “A crest of 979 feet will submerge parts of Main Street and Oak Street.” Statements such as these reinforce the consequences of the event in a way that is not possible using only flood crests or depths. The ASFPM urges caution in releasing warnings that are confusing or may have the effect of delaying appropriate action—like evacuation.

- Federal agencies must speak with one voice in the issuance of forecasts and warnings.
- Better ways need to be found to convey to the public the uncertainties associated with weather and flood forecasts, and to help people understand their risk and take appropriate action to prepare for and avoid such hazards.
- Programs such as the National Streamflow Information Program must be fully funded. The program consists of a backbone of federally funded stream gages that are critical to flood forecasting and warning and to calibrating models for flood mapping and data for flood mitigation.

Many local governments are developing flood warning and monitoring systems. Despite vast differences in program components, there is one common frustration: the difficulty of progressing beyond collecting and monitoring data to actually evacuating people and property during a flood threat.

- The National Weather Service, in partnership with state and local governments and other federal agencies, needs to find ways to better integrate and utilize this locally generated data, including disseminating it in a way that causes people to understand their risk, personalize it, and then take appropriate and timely action.
Flood Response
An impending flood results in many activities’ occurring—often concurrently. Emergency action plans for dams and levees are exercised, local emergency operations plans are activated, evacuation and flood fighting efforts begin. All of these efforts are heavily influenced not only by policies and programs that involve flood response, but also by programs that involve mitigation, preparedness, response, and recovery. For example, the owner of levee certified under the NFIP as being able to protect against the 100-year flood should be required to demonstrate, through periodic exercising of an emergency action plan, that the structure will not fail or be overtopped due to unfamiliarity with emergency procedures. Yet current levee certification requirements do not require this kind of demonstrated effort.

Another ramification of poor flood response activities is damage to other communities. Flood fighting either saves or damages property, depending on one’s perspective and location. Independent sandbagging efforts on the levees during the 1993 Midwest flood led to flood damage at other sites along the river, and to sabotage. Finally, the issue of evacuation must receive significant attention. Hurricane Katrina showed that mandatory evacuation orders must be issued with enough time for the affected population to evacuate, that evacuation routes must be identified and maintained, and that evacuation shelters must be accessible, functional, and adequate in size.

The following actions would improve the nation’s flood response efforts.

- Leveed rivers that affect multiple states—like the Mississippi—should have a flood fighting plan in place, with some mechanism of federal oversight or coordination to ensure that the outcome of the flood fight is understood.
- Emergency action plans and emergency operations plans must be developed in anticipation of a disaster to ensure that emergency activities (such as building temporary levees or placing sandbags) will not adversely affect other properties or communities.
- Nationwide campaigns like “Turn around Don’t Drown” should continue to educate citizens of the dangers of driving into flooded areas, the leading cause of flooding deaths.
- Assistance to communities through mechanisms such as Public Assistance or operations and maintenance funding should be conditioned upon the development and periodic exercise of local emergency action/operations plans, and on evacuation plans in areas that are susceptible to large or catastrophic floods.

The Response Recovery Continuum
There is no question that after a disaster, all levels of government must respond as swiftly as necessary for the safety and welfare of those affected. It is during the later, recovery phase that there must be a rational pause to avoid missing the many opportunities presented. All mitigation is meaningful only in the context of the hazard looming somewhere in the future. Science can reasonably assure us of the locations of flood hazard areas that, in the absence of mitigation, will certainly become the settings for future disasters. Therefore, all efforts toward recovery must involve an intelligent assessment of ways to seize mitigation opportunities wherever they present themselves.
Any taxpayer-funded flood disaster relief must be tied to requirements for mitigation. Some mitigation is required as a condition of receiving relief in some situations under some programs now, but it should be made a universal and more stringent requirement.

The availability and amount of financial assistance after a flood disaster should be contingent on participation in and compliance with the NFIP.

**Emergency Management Assistance Compact**
The Emergency Management Assistance Compact (EMAC) was established by Congress in 1996 (P.L. 104-321) as a mutual aid agreement and partnership among the member states. All 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands have enacted legislation to become members of the compact.

The strength of EMAC and the quality that distinguishes it from other plans and compacts lies in the governance structure; its relationship with federal organizations, states, counties, territories and regions; and the ability to move almost any resource one state has to assist another state, including medical resources. EMAC allows for a quick response to disasters using the unique resources and expertise possessed by member states. In 2005, EMAC was used to deploy almost 66,000 personnel in response to Hurricanes Katrina and Rita. Currently, EMAC is only being used in the response plan of a disaster and not for long term recovery or mitigation.

The Emergency Management Assistance Compact needs to be expanded to cover the recovery and mitigation phases of catastrophic events.