



Joint Recommendations on Levee Policy

developed by the

**Association of State
Floodplain Managers**

and the

National Association of Flood and Stormwater Management Agencies

from discussions at the

Flood Risk Policy Summit of December 2006



Over 60 professionals participated in a three-day Flood Risk Policy Summit jointly sponsored by the Association of State Floodplain Managers (ASFPM) and the National Association of Flood and Stormwater Management Agencies (NAFSMA) in December 2006. The purpose of the Summit was to discuss mutual concerns about current national policies for addressing flood risk and to explore options for improvement. The specific focus was the nexus between the programs of the U.S. Army Corps of Engineers (the Corps) and the Federal Emergency Management Agency (FEMA). Participants included senior policy staff of both agencies along with representatives from organizations of flood risk managers, home builders, real estate agents, lenders, engineering professionals, natural resource specialists, and others.



Shown left to right: Derek Guthrie, NAFSMA Pres., Kentucky; John Paul Woodley, Asst. Secretary of the Army, Civil Works; Pam Pogue, ASFPM Chair, Rhode Island; David Maurstad, Director, FEMA Mitigation Div.

The Corps and FEMA both have the expertise, responsibility, and authority to help states and communities reduce flood damage and promote sound floodplain management. The programs of the two agencies have different emphases and procedures, but they intersect each other in numerous ways, thus presenting great opportunity for effective flood loss reduction but also for inadvertent contradictions. This potential has prompted FEMA and the Corps, with the support of ASFPM and NAFSMA, to improve coordination between the two agencies, both at national and regional levels.

Participants at the Summit agreed that the most important flood risk policy concern at this time is addressing the safety of the nation's levees. This concern is brought into sharp focus by the destruction caused by levee failures in New Orleans after Hurricane Katrina and the notification by

the Corps of the insufficiency of numerous levees throughout the nation. With millions of lives and billions of dollars of property at risk behind levees in the United States, and with no fully articulated national policy or program for ensuring the safety of those levees, the need for action is urgent. Between them, the Corps and FEMA have authority and numerous programs to affect how well levees reduce flood risk, from their design and construction to applicable zoning and flood insurance to repair and rehabilitation.

Further, participants concluded that all levels of government (federal, state, regional, local) need to be engaged in the development of a meaningful and achievable national levee policy that addresses responsibility, accountability, and resources so that lives, homes, schools, businesses, and public infrastructure are protected from the damage and costs of flooding. Interagency collaborative programs at all levels are needed to ensure that key players understand the flood hazard behind levees and its potential impact on their livelihoods, and what solutions are available. Incentives need to be established to facilitate action. The level of effort needed to achieve this vision should be compared to that undertaken in the 1970s pursuant to the passage of the Clean Water Act. Participants at the Summit expressed a shared commitment to this vision.

Moving forward with this shared commitment, ASFPM and NAFSMA are pleased to present this set of recommendations to the Corps of Engineers, FEMA, and others for consideration in advancing the safety of levees nationwide.¹

In releasing this document, ASFPM and NAFSMA dedicate these joint recommendations to the unfaltering commitment, energy, and spirit of Ronald R. Conner of the U.S. Army Corps of Engineers Institute for Water Resources.

Policy Issues

1. Need for a National Levee Inventory and National Levee Safety Program.

- a. **Inventory**--A federally funded national levee inventory is essential to an objective assessment of the magnitude of the nation's levee problem. The inventory should include the miles of levees as well as the population and structures at risk behind levees. The Corps has started the inventory and should be charged and funded to complete the inventory of all levees in the nation.
- b. **National Levee Safety Program**--Beyond the inventory, a national levee safety program is needed. The design of a national levee safety program should be the first charge of a National Levee Safety Committee, as has been proposed in draft WRDA bills. The program must consider the role of States, Regional flood management authorities, and non-federal sponsors. Elements of delegation, authority, responsibility, and accountability must be included. While the National Dam Safety Program has been mentioned as one potential model, that program is not sufficient to be the model for effective levee safety and the integration of levee safety into other ongoing programs to manage flood risk. At the federal



Derek Guthrie, NAFMSA President

level, the Corps should provide national consistency and federal oversight (similar to that provided by EPA under the Clean Water Act), funding incentives, and delegation of authority and responsibility to other levels of government where appropriate capability exists. This program should result in shared responsibility in a coordinated and systematic approach to ensuring levees in the nation meet adequate standards.

2. **Incentives and Disincentives Based on Effective Local/Regional/State Actions.** Sliding cost-share mechanisms for federal programs (disaster relief, water resource, and flood mitigation projects) should be developed that could result in reduction in the local cost share required from communities that adopt and enforce effective and comprehensive floodplain and flood water management measures. Appropriate criteria to credit local/regional/state actions would be based on saving to federal taxpayers for disaster and related costs that would otherwise be necessary if the locals/regional/states were only meeting minimum national flood risk standards. Local actions to protect or appropriately locate critical use facilities (hospitals, evacuation centers, water supply, etc.) are the key to prevention of future federal costs and must be recognized in this process. Examples of incentives include the Community Rating System of the National Flood Insurance Program and the cost sharing provisions of the California mitigation program, which gives higher fund ranking to effective local mitigation proposals.
3. **Public Safety and Other Issues Need to be Considered on Equal Standing with National Economic Development (NED) Benefits in Corps Project Formulation and Evaluation.**

- a. The National Economic Development (NED) standard² does not capture the true cost of all flood protection objectives, especially the public safety element of prevention of loss of life, which can result in protecting highly urbanized areas to a lower level of protection than would be warranted if the full range of benefits were considered.



Woodley, USACOE and Pogue, ASFPM

- b. The Administration, in conjunction with its non-federal partners, should explore how risk, public safety, and disaster resilience³ could be incorporated into the federal water resources and mitigation planning processes.
 - c. The current federal process does not result in the utilization of all potential risk reduction and/or mitigation techniques, particularly non-structural options.
4. **Operation and Maintenance of Flood Risk Reduction Structures.**
 - a. For new projects, up-front assurance of the financial capability for conducting operation and maintenance (O&M) and for maintaining the design level of protection in perpetuity should be required. Permits should be issued and environmental mitigation for O&M should be

provided when the project is completed, obviating the need for continual O&M permits for the non-federal sponsor.

- b. For existing projects, no recognition by any federal program and no assistance for re-capitalization of the project should be given unless O&M is adequate and assured.
 - (1) Permits for O&M should be provided for new projects when the project is completed. New Endangered Species Act issues that arise after a project is operational should be resolved through balanced negotiations among the sponsor and all affected agencies, with the Corps as facilitator.
 - (2) Adaptive management should be available to meet changing conditions that affect a project; owners/operators who have met their mitigation requirements should not have to repeat them.
 - (3) There needs to be clear requirements for maintenance of all levees that come under PL 84-99⁴ and an ongoing cycle determining the extent to which those requirements are being met. The requirements should include clear direction that inadequate O&M will result in ineligibility for that program.
 - (4) There is a need for outreach, education, and guidance for levee owners, to provide them with the information and tools to better manage their responsibilities and liabilities associated with project O&M.
 - (5) If a local/regional levee owner is unable to provide adequate O&M, a program of interim levee management by either the federal, state, or regional government needs to be developed. This program would need a mechanism to recover any costs incurred by the federal, state, or regional government to ensure adequate flood protection during this interim period.
- c. Levee risk assessments should be conducted on a regular basis (e.g. every 5-10 years) to maintain an updated understanding of the level of protection provided by a levee.

5. Identifying Areas of Residual Flood Risk. Residual risk areas behind levees should be mapped and the purchase of flood insurance should be required for structures in that area. As an incentive, for communities where greater than some high percentage of structures (say 80%) have flood insurance, the cost share for federal disaster assistance could be increased.

6. Integrating Federal, State, Regional, and Local Planning. All federal agencies must be provided the necessary authority and resources to participate in a comprehensive water resources and mitigation planning process that is locally driven. Federal agencies should provide incentives in states which require communities and regional entities to coordinate ongoing planning initiatives. Incentive programs can be incorporated into federal programs such as the Corps Planning Assistance to States (Section 22) and the mandatory FEMA Hazard Mitigation Planning. The Special Area Management Plans of the National Oceanic and Atmospheric Administration's Coastal Zone Management Program and the Environmental Protection Agency's watershed management planning efforts are examples of such efforts. The Corps has authority to provide technical assistance and coordination through the Floodplain Management Services (FPMS) program and the Planning Assistance to States (PAS) program, both of which should be fully funded.

7. **Level of Protection Commensurate with Risk.** Criteria for the mapping, design, construction, and management of new levees must require a level of protection for each project that will vary with the risk associated with each particular levee.
8. **Holistic Management.** All flood and water resources planning and flood mitigation should be systems-based and account for anticipated changing future conditions, such as land development or climate. There is a need to consider planning and mitigation approaches, with a comprehensive and multi-objective focus, that include water resources, watersheds, hazards, environmental, and coastal zone issues. These factors can also be incorporated into the sliding cost share described in #2 above.
9. **No Flood Disaster Assistance for Non-NFIP Communities.** If a community is sanctioned because they were not in compliance with the National Flood Insurance Program (NFIP), it should be ineligible for federal disaster public assistance for a flood. Consideration could be given to a sliding cost share in this provision for the disaster assistance of the various federal programs that provide post-disaster assistance.
10. **Level of Risk Reflected in Flood Insurance Rates.** Premiums for flood insurance policies under the NFIP need to address the severity of flood risk more closely than they do now, with more gradations of cost based on risk of exposure for each structure.

Operational Issues

1. Need for Consistency Between the Corps and FEMA Levee Certification.

- a. Written guidance, prepared jointly by the Corps and FEMA, is needed to identify what constitutes a “proper” levee inspection, what is needed for certification to enable the NFIP to recognize the levee, and what the actual consequences (along with specified and appropriate time frames) are to the levee owner if the levee is not properly maintained to meet the NFIP requirements.
- b. When built in partnership with a federal agency, new levees that provide a 100-year or greater level of protection should be certified by the Corps at the time of completion.



MG Don Riley, USAC,
Director of Civil Works

2. Integration of FEMA and Corps Planning and Guidance.

More can be done to improve the FEMA/Corps overlap to develop more consistent guidance on planning and other levee issues. FEMA could participate on the planning team for Corps studies and the Corps could participate in the development of both state and local mitigation plans developed for FEMA. The agencies should comment on and assist each other in the development of planning guidance for these programs.

3. Consistent Definition of Flood Protection Needed.

FEMA and the Corps, along with non-federal interests, need to develop a shared definition of what constitutes a “flood protection levee” for their programs and purposes.

4. Need for FEMA/Corps Non-Federal Partners Work Group. A joint Corps / FEMA / non-federal partners work group should be established to evaluate and recommend methods to enhance the performance of levees and to determine the level of protection appropriate to the risk.

5. Improvement of Risk Communication.

- a. FEMA should require a risk communication element in all future updates of state and local hazard mitigation plans.
- b. Risk communication should be included in every project of both FEMA and the Corps, from planning through construction and O&M, and should remain a key required element as long as the project is recognized by any federal program.

6. Need for Ongoing Training. Ongoing training on the operation and maintenance of levees needs to be developed and provided to all levels of government.

ENDNOTES

¹ It should be noted that both groups have additional and more detailed recommendations on levee issues and other flood risk reduction policies and programs. The suggestions here focus only on levees and include only those developed jointly based on the Flood Risk Summit, the water policy dialogue of the American Water Resources Association, and other forums and discussions.

² The Corps is required to follow detailed procedures for benefit-cost analysis as described in the *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies*, issued in 1983, which states that the federal objective in water resources planning is to “contribute to national economic development,” or NED. Contributions to NED are “increases in the net value of the national output of goods and services, measured in monetary units.” Note that FEMA is required to follow a different benefit-cost analysis, set out in Circular No. A-20, issued by the Office of Management and Budget.

³ Disaster resilience is the ability of a community, state, or nation to withstand an extreme natural event with minimal losses, damage, diminished productivity, or quality of life and without a large amount of assistance from outside the community.

⁴ P.L. 84-99, The Flood Control and Coastal Emergency Act, gives the Corps authority to conduct emergency activities that include the “rehabilitation of flood control works threatened or destroyed by flood.” Pursuant to this Act, the Corps has a Rehabilitation and Inspection Program, through which local sponsors can become eligible for federal assistance for repairs to the structure if it is damaged in a disaster.