

**UNITED STATES ARMY CORPS OF ENGINEERS**

**COMPLETE STATEMENT**

**OF**

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**BEFORE THE**

**SUBCOMMITTEE ON ECONOMIC DEVELOPMENT, PUBLIC BUILDINGS  
AND EMERGENCY MANAGEMENT**

**COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE  
UNITED STATES HOUSE OF REPRESENTATIVES**

**ON**

**THE CORPS ROLES AND RESPONSIBILITIES  
IN THE NATIONAL FLOOD PLAIN REMAPPING EFFORT**

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Madam Chairwoman and distinguished members of the Subcommittee:

Thank you for the opportunity to testify before the Subcommittee and to present information on the roles and responsibilities of the U.S. Army Corps of Engineers (Corps) in the national flood plain remapping efforts.

Before I discuss the details of the Corps efforts, I believe it would be of value to give an overview of our broad roles and responsibilities.

### **Overview of the Corps Role and Responsibility in Flood Management**

The Corps shares with the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA), both the expertise and mandate to address the nation's vulnerabilities to flood related disasters and damages. Since passage of the Flood Control Act of 1936 established a federal role in flood management, the Corps authorized responsibilities have expanded to include developing structural and non structural solutions to managing flood risks, inspecting the condition of existing flood management infrastructure, providing technical and planning support to states and communities, conducting advance emergency measures to alleviate impending flooding, and rehabilitating levees and other flood management infrastructure damaged by flooding. Since 1936 the Corps has completed approximately 400 major lake and reservoir projects, emplaced over 8,500 miles of levees and dikes, and implemented hundreds of smaller local flood management projects.

In recent years the Corps has placed an increasing emphasis on nonstructural approaches to flood management. Nonstructural alternatives focus on efforts and measures to reduce flood damages in an area by addressing the development in the flood plain. Alternatives include such measures as flood plain zoning, participating in the National Flood Insurance Program (NFIP), developing and implementing flood warning systems (coordinated with the National Oceanic and Atmospheric Administration's (NOAA's) flood warning program) and emergency evacuation plans, and floodproofing individual structures as well as removing structures from the extreme flood hazard areas.

The Corps can provide flood management technical or emergency assistance through a wide variety of authorities and programs. For example, through its Flood Plain Management Services Program (FPMS), the Corps can provide information, technical assistance and planning guidance (paid for by the federal government) to states and local communities to help them address flood management issues. Typical focus areas are flood hazard evaluation, dam break analysis, flood warning preparedness, flood plain management and much more. In cases where flooding is imminent in a specific area, the Corps is authorized to take immediate advance measures to protect life and property, such as constructing temporary flow restriction structures and removing log debris blockages.

The responsibility for managing the Nation's flood risks does not lie exclusively with Federal agencies, such as the Corps and FEMA. Rather, it is shared across multiple federal, state, and local government agencies with a complex set of programs and authorities, including private citizens and private enterprises such as banking and insurance industries, as well as developers.

Both the Corps and FEMA have programs to assist states and communities reduce flood damages and promote sound flood risk management. However, the authority to determine how land is used within flood plains and enforce flood-wise requirements is entirely the responsibility of state and local government. Flood plain management choices made by state and local officials can impact the maximum effectiveness of federal programs to mitigate flood risk and the performance of federal flood damage reduction. However, the federal investment is protected by the execution of agreements between the federal and non-federal partners.

One key challenge for our nation is to ensure the public is educated both as to the flood risks they face and to the available actions they can take to reduce their risks. Because of this complex arrangement of responsibilities, only a collaborative approach will enable communities to effectively reduce risks from flooding.

### **The Corps Roles and Responsibilities in the Map Modernization Program**

Both the Corps and FEMA have a long history of partnering on flood plain mapping as part of the NFIP. Over the past 30 years, the Corps has completed over 3,000 studies for FEMA related to identifying the flood potential of various areas across the country. These studies involved activities such as flood plain delineations and detailed flood insurance studies. In August 2005, both agencies signed an agreement that further streamlined the process for the Corps to provide flood plain mapping and other related services to FEMA.

FEMA has embarked on a program, known as the Map Modernization Program (MapMod), to update and improve the nation's Flood Insurance Rate Maps (FIRMs). This current nationwide program has provided an excellent opportunity for our agencies to strengthen our working relationship. As a result, we have been very successful through MapMod in leveraging data, partnering on flood plain studies, collaborating on related policy changes and jointly communicating flood hazard information to the public. The Corps is also working with NOAA to ensure that the Corps projects have vertical controls tied to the National Spatial Reference System and that elevations are consistent with FEMA map modernization efforts.

The Corps cooperates with FEMA and other federal, state and local agencies through numerous avenues in support of FEMA's remapping program. These include,

- Providing data collected from previous or current Corps studies such as hydraulic and hydrologic models and topographic mapping;

- Performing new flood plain mapping studies or providing technical assistance directly for FEMA or through partnerships with state and local governments under the FPMS Program or Planning Assistance to States (PAS) Program;
- Providing available levee information collected through the Corps Levee Safety Program. This includes the development of the national levee database and improved levee inspection program;
- Performing or supporting levee certification when possible; and
- Conducting more detailed flood damage reduction studies through our cost-sharing processes in order to evaluate an array of alternatives to reduce flood risk; thus, influencing how the area would be remapped in the future.

### The Corps Role in Levee Certification

Levee certification is a technical finding for the NFIP that concludes there is reasonable certainty the levee protecting the area will contain the base (1% annual chance exceedance) regulatory flood. The certification finding must be accomplished by either a registered professional engineer or a Federal agency with levee design and construction qualifications such as the Corps, Natural Resources Conservation Service, Tennessee Valley Authority, U.S. Bureau of Reclamation, or International Boundary and Water Commission.

The responsibility for seeking levee certification and funding the certification effort is generally that of the agency with jurisdiction over the flood plain in question. The agency may perform the certification analysis, or may request such technical determination by others.

The Corps has had and continues to have a major role in the planning, design and construction of many levee systems throughout the Nation. Through the MapMod Program, FEMA realized that mapping areas behind levees needed special attention. Both agencies have worked closely to coordinate policies related to levee certification for the remapping program. These policies include,

- FEMA Procedure Memorandum No. 34 (PM No. 34) – *Interim Guidance for Studies Including Levees*, which clarifies it is the levee owner or community's responsibility to document the levee meets the NFIP requirements for 1-percent-annual-chance flood protection;
- FEMA Procedure Memorandum No. 43—*Guidelines for Identifying Provisionally Accredited Levees*, which establishes procedures and timelines for provisionally accrediting some levees and levee systems;
- The Corps Maintenance Deficiency Correction Period policy, which provides a one year timeframe for qualifying levees to correct maintenance issues and links directly to FEMA's Provisionally Accredited Levee policy; and,
- The Corps Engineer Technical Letter (ETL 1110-2-570), which describes the process the Corps will use when performing a levee certification for NFIP purposes.

As part of the remapping process, FEMA must verify that all levees recognized as providing protection from the base flood meet the requirements outlined in Title 44 of the Code of Federal Regulations, Section 65.10 (44 CFR 65.10), *Mapping of areas protected by levee systems*.

In some instances, the Corps is being requested to either conduct or support levee certifications. While the Corps does not have an authority that specifically addresses levee certification for NFIP purposes, a number of authorities have been determined to be applicable. The Corps has authorities and funding mechanisms to perform certifications, when requested, on levees that,

1. The Corps operates and maintains. The Corps is responsible for certification and would be based on availability of project or operation and maintenance funds.
2. Levees in the Corps Inspection of Completed Works (ICW) Program. These include levees designed and built by the Corps but operated by a local non-federal sponsor. The certification may be funded via ICW funds, if available. Otherwise, funding must be provided by the requester. There is no ICW funding available for certifications in FY2008.
3. Levees in the Corps Rehabilitation and Inspection Program (RIP). This includes non-federal levees which meet RIP criteria, have been accepted into the program and are currently in active status. The certification must be funded by the requester.
4. Upon request, the Corps has authority to certify levees for projects constructed by other Federal agencies. Certification must be funded by the requesting Federal agency.
5. Levees currently part of an ongoing project or study. Certification may be funded using project appropriated funds.

The Corps does not have authority to certify levees for non-federal projects that are not within a Corps program or part of an ongoing Corps study or project. As stated above, the responsibility for seeking levee certification and funding the certification effort rests with the agency seeking certification.

The Corps has authority to provide technical analysis and support, but not a final levee certification, for any levee through the FPMS Program subject to availability of appropriated funds or voluntary contributions from the requester.

The Corps levee certification procedures for the NFIP are procedures that have existed since 1997. The first Corps national guidance for its participation in performing levee certification determinations was released in April 1997 and was entitled – “Guidance on Levee Certification for the National Flood Insurance Program.” That guidance was reaffirmed in June 2006. To become more consistent and diligent within the Corps, in September 2007, we issued an Engineer Technical Letter (ETL) for levee certification. This ETL describes the process that the Corps will use when performing a levee certification and was based on existing policy and procedures.

## **The Corps Future Direction to Manage Flood Risk**

Before closing I believe it will be beneficial for you to understand the Corps vision, strategy, initiatives, and future direction to address the fundamental challenge of managing the nation's flood risk in cooperation with FEMA and others, of which Map Mod is one management component.

Traditionally, a major focus of Corps efforts to address flooding hazards has been through projects to decrease the probability of flooding through the construction of levees or other flood management infrastructure. Today, the Corps is focusing on the most effective combination of tools available that citizens may use to lower or "buy down" their flood risk. We will consider not only reducing the probability of flooding, but also reducing the consequences should a flood occur. Furthermore, the decision on which tools to implement involves all stakeholders. For example, the Corps can help reduce risk by building levees, whereas in a coordinated but independent action, local government can further reduce flood risk by implementing flood plain management actions such as evacuation plans, zoning ordinances and public outreach.

This cannot be achieved without a new paradigm of joint partnerships in a comprehensive approach of public education and flood risk management.

### Actions for Change

The Corps has embarked on an ambitious program to incorporate the lessons learned from Hurricanes Katrina and Rita into "Actions for Change," a major change initiative to transform our planning, design, construction, and operation and maintenance principles and decision-making processes. Key elements of the program are changes that will enhance the way the Corps uses risk to guide decision making and ensures that all stakeholders understand the risks associated with projects. The four main focus areas include:

- Comprehensive Systems Approach
- Risk Informed Decision Making
- Communication of Risk to the Public
- Professional and Technical Expertise

We will review the work we are doing and try to find ways to refocus, redirect and redouble our efforts to meet the objectives set in each of these focus areas. The Corps has already made great strides towards achieving these objectives within the following initiatives:

### National Flood Risk Management Program

In the United States, the responsibility for managing flood risks is shared across the Federal, state and local levels of government and the private sector. In the absence of continuous collaboration, conflicting policies, programs and interests from multiple

layers of government can work at cross purposes and undermine efforts to improve flood risk management nationwide.

For this reason, in May of 2006, the Corps implemented the National Flood Risk Management Program (NFRMP). Its purpose is to integrate and synchronize the ongoing, diverse flood risk management projects, programs and authorities of the Corps with counterpart projects, programs and authorities of FEMA, other federal agencies, state organizations, and regional and local agencies.

### Integrated Ocean and Coastal Mapping

Another NFRMP contribution is the interagency effort underway to coordinate more effectively on mapping in the coastal zone to conserve taxpayer resources and gain multiple uses out of every mapping dollar spent. The Corps, NOAA, USGS, and MMS, co-chairs the Interagency Working Group on Ocean and Coastal Mapping – which includes FEMA and other federal coastal mapping agencies, under the governance of the Joint Subcommittee on Ocean Science and Technology (JSOST) -- with the goal of avoiding duplication of coastal mapping activities and facilitating the coordination and leveraging of mapping resources across the federal sector and with state, industry and academic mapping interests.

### Shared Vision Planning

Since the 1980s, the Corps and the nation have faced water resource conflicts and learned that these conflicts require the cooperation of many agencies, levels of government and the people whose lives are affected. The Corps has learned how difficult it is to reach consensus and take action under those conditions, and so have worked with its partners to develop a collaborative approach to technical analysis called Shared Vision Planning.

In Shared Vision Planning, decision makers, experts and stakeholders work together to build a computer model that captures the collective vision of the problems and solutions. By letting people build a picture of how flooding will affect their lives and how solutions will reduce risks, they have more understanding and trust in the analysis and potential solutions. It helps develop a shared vision of the problem and the potential solutions.

In addition to various Corps projects around the country, we are presently working with the state of California's Department of Water Resources and its partners to apply the Shared Vision Planning concepts to state water planning, including intersection with flood risk management. Under Actions for Change, the Institute for Water Resources is currently conducting a study as part of Shared Vision Planning and NFRMP to develop a framework and tools for improved public involvement in flood risk management planning and decision-making.

## Levee Safety Program

In November 2007, the Corps officially established a Levee Safety Program, an important step forward to ensure the public is aware of the risks associated with levees in Corps programs. The mission of the program is to assess the integrity and viability of levee systems and recommend actions to ensure these systems do not pose unacceptable risks. The main objectives are to hold public safety paramount, reduce adverse economic impacts, and develop reliable and accurate information.

Within the program, a National Levee Database has been created to serve as a national source of information to facilitate and link activities, which include flood risk communication, levee certification, levee inspection, flood plain management, and risk assessments. The database presently includes levees within a Corps program or FEMA's NFIP. WRDA 2007 extended the Corps authority and allows the inclusion of all non-federal levees on a voluntary basis. The non-federal levee data will be provided to the Corps at no cost to the federal government. Also, a methodology for performing technical risk assessments of existing levee infrastructure is under development to serve as a consistent risk based framework to evaluate levees nationally. Additional activities within this program include the creation of national teams to focus on developing new policies in other areas concerning levee safety, such as inspections of existing levee systems in a Corps program, verification or establishment of existing geodetic control, minimum standards for new levee systems and interim risk reduction measures. Key policy issues in which close collaboration between the Corps, FEMA, and other stakeholders is necessary relate directly to the Levee Safety Program. Specifically, these areas include levee inventory, mapping the flood hazard, inspection and assessment of levees, operation and maintenance of levees, and emergency response and evacuations.

## Intergovernmental Flood Risk Management Committee

The Intergovernmental Committee for Flood Risk Management has held quarterly meetings since August 2005, for the purpose of providing FEMA and Corps leadership an opportunity to coordinate programs and policies, and thus improve program implementation for the flood risk management community. Additionally, the quarterly meetings have provided an opportunity for two groups representing state and local government agencies with flood risk management responsibilities, the Association of State Flood plain Managers and the National Association of Storm and Floodwater Management Agencies to provide both FEMA and the Corps direct feedback on specific policy and implementation issues faced at the state and local level. This collaborative effort has been very successful in helping the Corps and FEMA to understand the non-federal perspective and to integrate and align Corps and FEMA programs.

To date, the group has focused primarily on coordinating the Corps NFRMP with the FEMA MapMod. This collaboration is needed to ensure compatibility between Corps and FEMA programs and thus improve program implementation for the non-federal flood risk management community.

While still retaining a focus on MapMod collaboration during the upcoming five years, the committee will also expand its scope to identify and address other policy and program issues requiring improved collaboration. As needed, the committee will also coordinate with other federal agencies. For example, improving risk communication is one subject area in which the Committee will likely seek to engage the federal agencies that provide flood information, such as NOAA and the U.S. Geological Survey. These agencies are involved in efforts to communicate better this flood risk information to the public and to decision makers.

### Silver Jackets Program

The Corps is cooperating with FEMA and other federal agencies through the Silver Jackets Program to create interagency teams at the state level to develop and implement solutions to state natural hazard priorities. The Silver Jackets Program's primary goals are to leverage information and resources, improve public risk communication through a united effort, and create a mechanism to collaboratively solve issues and implement initiatives. To date, the Silver Jackets Program has initiated pilot programs in Ohio, Indiana and California. These teams have succeeded not only in improving communication, but also in leveraging resources and programs between federal agencies.

### Public-Private Partnerships

The Corps is seeking partnerships to share data and risk model development with those that best understand risk, such as the banking and insurance industries. For instance, the insurance industry has a similar goal of assessing hazards and therefore, there exists an opportunity for the federal government and insurance industry to leverage mutual efforts, such as in the areas of research and development, implementation of assessment tools, and increase of public and policy-makers awareness. The Corps also seeks to collaborate more closely with business councils and developers so they understand local flood risks and can assist us in public education campaigns.

### Closing

Madam Chairwoman, thank you for the opportunity to testify today on the Corps roles and responsibilities in FEMA's remapping program and our broader mission of assisting in the reduction of flood risk for the nation. I will be pleased to answer any questions you may have.