

# USACE FLOOD RISK MANAGEMENT FREQUENTLY ASKED QUESTIONS

This document is designed to provide USACE Flood Risk Managers with some resources and help explain to others USACE programs. It does not replace any regulations. Sources for all information are identified and remain the primary source for detailed guidance on implementation of programs. It will be posted on the National Flood Risk Management Program website. It is not designed for the public but can be used as a resource by others to find quick answers and where to find additional information.

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## **I. USACE Flood Risk Management Program (FRMP)**

### **What is Floodplain Management?**

Floodplain management is a decision making process whose goal is to achieve appropriate use of the nation's floodplains. Appropriate use is any activity or set of activities compatible with the risk to natural resources (natural and beneficial functions of floodplains) and human resources (life and property).

The division of responsibilities for floodplain management among federal, state, tribal, and local governments is not clearly defined. As a result, attention to floodplain management varies widely among and within federal, state, tribal, and local governments.

Prior to the creation of the National Flood Insurance Program (NFIP), floodplain management as a practice was not well established - only a few states and several hundred communities actually regulated floodplain development. For many communities, the NFIP was the community's initial exposure to land use planning and community regulations.

### **What is the history of the USACE FRM program?**

As a major army command, USACE is assigned mission responsibilities in major construction and other engineering support to the Army and Air Force, in nationwide water resource management, in engineering research and development, and in real estate services for the Army and the Department of Defense. In addition to these long-standing programs, USACE has been called upon with increasing frequency to take a leadership role in the nations flood risk management arena. AS a result, the USACE established the National Flood Risk Management Program (NFRMP) in May 2006 for the purpose of integrating and synchronizing USACE flood risk management programs and activities, both internally and externally with counterpart activities of the Department of Homeland Security, Federal Emergency Management Agency (FEMA), other federal agencies, state organizations and regional and local agencies as well as non-governmental organizations (NGO). Yearly video teleconferences have been held since 2007. In August of 2009 regional workshops were held to discuss the draft guidance and to include comments. The official guidance was issued in October 2009, formally establishing the Flood Risk Management Program in Headquarters, divisions and districts.

### **What is the Silver Jackets program?**

Silver Jackets teams are continuously operating, state-led, collaborative interagency teams working together to reduce flood risk at the state level. USACE, FEMA, and other Federal, state and tribal and local agencies provide a unified approach to addressing a state's priorities. No single agency has the complete solution -- each has one or more pieces, similar to squares in a patchwork quilt. The Silver Jackets program can be viewed as the quilting bee, the forum where all agencies, state and federal, come together to put their programs together and implement a solution.

## **Why the name Silver Jackets?**

The name “Silver Jackets” refers to the public’s view of federal emergency response: USACE in red jackets and FEMA in blue jackets. Instead of operating individually, the intent of Silver Jackets is to facilitate collaboration among many state and federal agencies, and provide one coherent forum for a state to address their priorities. When referring to this analogy, it is important to note that the jackets are symbolic...as a neutral color; silver is meant symbolize unified state and federal action. The scope of the program, however, is much broader than emergency response. The intent of the Silver Jackets program is to bring agencies together to manage a state’s flood risk, throughout the life-cycle. All aspects, mitigation, preparation/training, response and recovery, are within the scope of the team...the team’s focus will be determined by the state’s priorities, and participation may vary accordingly.

## **II. National Associations**

### **American Association of Port Authorities (AAPA)**

The American Association of Port Authorities (AAPA) is a trade association that represents deep draft public port authorities throughout the U.S., Canada, Latin America and the Caribbean. AAPA has an extensive education and training program. AAPA conducts research and compiles industry surveys; distributes a variety of newsletters, offer public relations and information services for port professionals. For U.S. members, AAPA provides advocacy services. AAPA formed in 1912. Their website is <http://aapa-ports.org/home.cfm>

### **American Planning Association (APA)**

The American Planning Association and its professional institute, the American Institute of Certified Planners, are dedicated to advancing the art, science and profession of good planning — physical, economic and social — to create communities that offer better choices for where and how people work and live since 1978. Their website is <http://www.planning.org/>

### **American Shore and Beach Preservation Association (ASBA)**

The American Shore & Beach Preservation Association recognizes that the shores, beaches and other coastal resources of America provide important quality-of-life assets within the reach of the largest possible number of people in accordance with the ideals of a democratic nation. We pursue this mission by means of:

- Protecting and improving healthy and diverse recreational opportunities.
- Managing, protecting and enhancing environmental resources.
- Encouraging responsible and sustainable economic development.
- Preserving aesthetic values.
- Reducing damage from natural hazards and human activities.
- Mitigating human impacts to natural processes.

This Association is dedicated to preserving, protecting and enhancing the beaches, shores and other coastal resources of America. The ASFPA was formed in 1926. Their website is <http://www.asbpa.org/home.php>.

### **Association of State Dam Safety Officials (ASDSO)**

ASDSO is a non-profit organization of state and federal dam safety regulators, dam owners/operators, dam designers, manufacturers/suppliers, academia, contractors and others interested in dam safety since 1983. Their mission is to advance and improve the safety of dams by supporting the dam safety community and state dam safety programs, raising awareness, facilitating cooperation, providing a forum for the exchange of information, representing dam safety interests before governments, providing outreach

programs, and creating a unified community of dam safety advocates. Their website is <http://www.damsafety.org>.

### **Association of State Flood Plain Managers (ASFPM)**

The Association of State Flood Plain Managers (ASFPM) since 1977 is an organization of professionals involved in floodplain management, flood hazard mitigation, the National Flood Insurance Program, and flood preparedness, warning and recovery. ASFPM has become a respected voice in floodplain management practice and policy in the United States because it represents the flood hazard specialists of local, state and federal government, the research community, the insurance industry, and the fields of engineering, hydrologic forecasting, emergency response, water resources, and others. They lobby congress for changes in FEMA and USACE programs. Their national conference is a wonderful training opportunity. It is a weeklong conference with many half day workshops. FEMA showcases on new programs, and presentations on a wide variety of topics such as flood risk communication, to problems in mapping and new technologies. Typically there are about 1200 attendees. They also support the Certified Floodplain Manager (CFM) program for flood risk professionals. USACE and FEMA senior leadership attend. Their website is <http://www.floods.org>.

### **National Association of Flood and Stormwater Management Agencies (NAFSMA)**

The National Association of Flood and Stormwater Management Agencies (NAFSMA) since 1978, is an organization of public agencies with its function to protect lives, property and economic activity from the adverse impacts of storm and flood waters. The mission of the association is to advocate public policy, encourage technologies and conduct education programs, which facilitate and enhance the achievement of the public service function of its members. This group is part of the Intergovernmental Flood Risk Management Committee (IFRMC) and works many issues involving flood risk, storm water and other interests. They lobby congress for changes to USACE programs. USACE senior leadership attends their national conference yearly, the Environmental Protection Agency (EPA) and FEMA also attend. The national conference is a good place to network and learn about issues that non-federal sponsors are dealing with. Their website is <http://www.nafsma.org>.

### **National Emergency Managers Association (NEMA)**

NEMA is the professional association of and for emergency management directors from all 50 states, eight territories and the District of Columbia, since 1974.

They provide national leadership and expertise in comprehensive emergency management; serve as a vital emergency management information and assistance resource; and advance continuous improvement in emergency management through strategic partnerships, innovative programs and collaborative policy positions.

The primary purpose of NEMA is to be *the* source of information, support and expertise for people like you – emergency management professionals at all levels of government and the private sector who prepare for, mitigate, respond to, recover from and provide products and services for all emergencies, disasters and threats to the nation’s security. Their website is <http://www.nemaweb.org/home.aspx>.

### **Natural Hazards Mitigation Association**

Professionals from a wide variety of disciplines have been practicing hazard mitigation for decades -- emergency managers working with architects and city planners to update building codes for disaster-resistant construction, civil engineers working with local officials to design flood-resistant urban drainage systems, foresters working with state officials to enact more effective prescribed burning practices, etc. However, until recently, natural hazard mitigation has taken place as pieces scattered within the daily duties of diverse professions -- a cross-disciplinary effort recognized as vitally important to protect the safety of individuals and communities, but often not considered a separate field or discipline.

The crucial importance of natural hazard mitigation, however, requires a more coherent approach, with readily-available and consistent technical information and training, formal and informal discourse among hazard mitigation professionals, a greater public awareness of the social components of hazard mitigation, and the recognition of hazard mitigation as a profession in its own right.

To this end, the Natural Hazard Mitigation Association (NHMA) was formed in 2008 by a diverse group of professionals from all aspects of the hazard mitigation field. Their website is <http://www.nhma.info/>.

### **III. National Committees**

#### **Intergovernmental Flood Risk Management Committee (IFRMC)**

This intergovernmental forum of representatives from the USACE, FEMA, ASFPM, the NAFSMA, and ASDSO coordinates flood risk management programs and policies and allows key stakeholder groups, representing the non-federal perspective, to address policy and implementation issues faced at the state and local levels.

#### **Federal Interagency Floodplain Management Task Force (FIFM-TF)**

This national level task force of representatives from federal agencies with major water resource programs, co-chaired by FEMA and USACE, is responsible for updating and maintaining a Unified National Program for Floodplain Management; coordinating federal agency policies for flood risk management; and identifying and recommending federal government actions and policies to reduce flood losses and improve safety for the floodplain residents.

#### **National Committee on Levee Safety**

Section 9003 of the Water Resources Development Act (WRDA) of 2007, Congress created the National Committee on Levee Safety (NCLS) to develop recommendations for a national levee safety program, including a strategic plan for implementation of the program. The Committee consists of sixteen members from state and local governments, the private sector, and one each from USACE and FEMA. The NCLS adopted the vision of an *involved public and reliable levee systems working as part of an integrated approach to protect people and property from floods*, and developed twenty recommendations for creating a National Levee Safety Program, and presented these to Congress in *Recommendations for a National Levee Safety Program: A Report to Congress from the National Committee on Levee Safety*, 15 January 2009.

The specific recommendations of the NCLS for a National Levee Safety Program embrace three main concepts: (1) the need for leadership via a National Levee Safety Commission, which would support state delegated programs, provide national technical standards and risk communication, and coordinate environmental and safety concerns; (2) the building of strong levee safety programs in all states, which would provide oversight, regulation, and critical levee safety processes; and (3) a foundation of well-aligned federal agency programs.

## **IV. USACE Flood Risk Management Authorities**

### **What is the basic difference between USACE and other agencies?**

The USACE program is funded on a project by project basis with very few programs where funds can be used that are not tied to specific projects. Other federal agencies and most state and local agencies are funded more on a programmatic level, which allows for the movement of funds. The way USACE is funded makes it difficult to provide funding to do non-project specific work. Below is a summary of various programs within USACE.

### **What is the USACE Floodplain Management Services (FPMS) Program?**

The program's authority stems from Section 206 of the 1960 Flood Control Act (PL 86-645), as amended. Its objective is to foster public understanding of the options for dealing with flood hazards and to promote prudent use and management of the Nation's flood plains. Upon request, program services may be provided to state, regional, and local governments, Native American Indian Tribes, and other non-federal public agencies without charge. Program services also are offered to non-water resource federal agencies and to the private sector on a 100 percent cost recovery basis. Those eligible for 'free' services may choose to voluntarily contribute funds to increase the scope of services. USACE has the authority to perform certification support work under FPMS, but may not actually certify. More details can be found at the website <http://www.nfrmp.us/>

### **How does an agency, government, organization or interested individual request Flood Plain Management Services assistance from USACE?**

Agencies, governments, organizations and individuals interested in flood-related information or assistance should contact the appropriate USACE office indicated on the above referenced website. Information that is readily-available will be provided in response to a telephone request. A letter request is required for assistance that involves developing new data, making a map, or preparing a report. A sample letter request can be provided.

### **What are USACE charges for assistance?**

Upon request, the program services are provided to state, regional, and local governments; eligible Native American Indian tribes; and other non-federal public agencies without charge. At their option, these entities may provide voluntary contributions toward requested services to expand the scope or accelerate the provision of those services.

Program services also are offered to non-water resource federal agencies and to the private sector on a 100 percent cost recovery basis. For most of these requests, payment is required before services are provided. A schedule of charges is used to recover the

cost of services that take up to one day to provide. Letter request or signed agreements are used to charge for those that take longer. All requestors are encouraged to furnish available field survey data, maps, historical flood information, etc., to help reduce the cost of services.

### **What is the USACE Planning Assistance to States (PAS) Program?**

The Planning Assistance to States (PAS) Program is authorized by Section 22 of the 1974 Water Resources Development Act. This program authorizes USACE to use its technical expertise in management of water and related land resources to help states and tribes solve water resource problems. Upon request, USACE will cooperate with non-federal public sponsors in the preparation of plans for the development, utilization and conservation of water and related land resources located within the boundaries of the state. Assistance is given within the limits of available appropriations, but \$2,000,000 is the maximum federal funding available annually to any state or tribe. A 50-percent cost share is required by the non-federal sponsor. There is no authority to certify or even to provide certification support under PAS. More details can be found at website <http://www.nfrmp.us/>.

### **What are the USACE Civil Works Authorities for Projects?**

#### **What are General Investigations (GI)?**

The traditional and most common way for USACE to help a community solve a water resource problem is through individually authorized studies and projects. These types of studies are undertaken in response to a Congressional Resolution from the House Committee on Public Works and Transportation, The Senate Committee on the Environment and Public Works, or a Public Law. In this program, USACE jointly conducts a study with a non-federal sponsor and, if shown by the study to be feasible, constructs the project. This approach requires that Congress provide USACE with authority and funds to first accomplish a feasibility study and secondly, to construct the project. Local sponsors share the study and construction costs with USACE, and usually pay for all operation and maintenance costs. This approach may be used to address any one of a variety of water resource problems, including navigation, flood damage reduction, and ecosystem restoration. General Investigations funds studies, design, coordination, data collection and research and development.

#### **What is the Reconnaissance Phase?**

Initial, Reconnaissance (Recon) phase of Feasibility Study; \$100,000 limit, all federally funded. Prescribed duration is 12-18 months. During recon, the following is accomplished:

(1) Determine if the water resource problem(s) warrant federal participation in feasibility studies. Defer comprehensive review of other problems and opportunities to feasibility studies;

(2) Define the federal interest based on a preliminary appraisal consistent with Army policies, costs, benefits, and environmental impacts of identified potential project alternatives;

(3) Complete a 905(b) Preliminary Analysis (Reconnaissance Report);

(4) Prepare a Project Management Plan (PMP);

(5) Assess the level of interest and support of non-federal entities in the identified potential solutions and cost-sharing of feasibility phase and construction. A letter of intent from the local sponsor stating the willingness to pursue the cost shared feasibility study described in the PMP and to share in the costs of construction is required; and

(6) Negotiate and execute a Feasibility Cost Sharing Agreement (FCSA).

A more detailed discussion may be found at <http://140.194.76.129/publications/eng-regs/> (ER 1105-2-100, Planning Guidance Notebook)

### **What is Feasibility?**

The second and final phase of a Feasibility Study; costs are shared 50-50 with non-federal sponsor, concludes with a Feasibility Report and Environmental Impact Statement (EIS). The purpose of the feasibility study is to identify, evaluate and recommend to decision makers an appropriate, coordinated, implementable solution to the identified water resources problems and opportunities. The resulting report should be a complete decision document, referred to as a feasibility report. It presents the results of both study phases (Recon and Feasibility). The report will:

(1) Provide a complete presentation of study results and findings, including those developed in the reconnaissance phase so that readers can reach independent conclusions regarding the reasonableness of recommendation;

(2) Indicate compliance with applicable statutes, executive orders and policies;  
and

(3) Provide a sound and documented basis for decision makers at all levels to judge the recommended solutions(s).

A more detailed discussion may be found at <http://140.194.76.129/publications/eng-regs/> (ER 1105-2-100, Planning Guidance Notebook).

### **What is Planning Guidance Letter 52, Flood Plain Management Plans (Dec 1997)?**

Policy Guidance Letter (PGL) No. 52 provides guidance for implementing Section 202(c) of the Water Resources Development Act of 1996, which requires non-federal interests to prepare a floodplain management plan designed to reduce the impacts of future flood events in the project area within one year of signing a project partnership agreement (PPA) (formerly project cooperation agreement (PCA)) and to implement the plan not later than one year after completion of construction of the project. Section 202(c) requires USACE to provide guidelines to non-federal interests for the development and implementation of these floodplain management plans. In addition, this guidance encourages the development of the floodplain management plan by the non-federal sponsor during the feasibility study by promoting a broader look at gathering information that will be useful to the non-federal sponsor and which is consistent with the Principles

and Guidelines and existing USACE planning guidance. A link to the PGL is <http://www.usace.army.mil/CECW/PlanningCOP/Pages/flood.aspx>.

### **What is Construction General (CG)?**

The traditional and most common way for USACE to help a community solve a water resource problem is through individually authorized studies and projects. These types of studies are undertaken in response to a Congressional Resolution from the House Committee on Public Works and Transportation, The Senate Committee on the Environment and Public Works, or a Public Law. In this program, USACE jointly conducts a study with a non-federal sponsor and, if shown by the study to be feasible, constructs the project. This approach requires that Congress provide USACE authority and funds to first accomplish a feasibility study and secondly, to construct the project. Construction, General funds project construction and major rehabilitation.

### **What is PED?**

PED or Preconstruction Engineering and Design, is the first phase of construction. After a feasibility study is completed, part of the PED phase can be completed while waiting for authority to construct. The phase is complete when the first construction contract is ready to award.

### **What is the Continuing Authorities Program (CAP)?**

The Continuing Authorities Program provides USACE with the authority to solve water resource problems in partnership with local sponsors. Congress has authorized USACE to plan, design and construct, within specified funding limits, certain types of water resources improvements without specific congressional authorization. This saves much time in development and approval of projects. Cost sharing by a local project sponsor is required for studies, design and construction. A local project sponsor must be a municipality or a legally constituted public body empowered under state laws to give assurances and be financially capable of fulfilling all measures of local cooperation, including, but not limited to, study and construction cost sharing. In the case of Project modification for Improving the Quality of the Environment (Section 1135(b)), private interests may qualify as a non-federal sponsor; if there will be no requirement for future Operation and Maintenance (O&M). As an example, large National non-profit environmental organizations may qualify as sponsor for Section 1135(b). CAP authorities include:

- Streambank and Shoreline Erosion Protection of Public Works and Non-Profit Public Services (Section 14, Flood Control Act of 1946, as amended)
- Beach Erosion and Hurricane and Storm Damage Reduction (Section 103, River and Harbor Act of 1962, as amended)
- Navigation Improvements (Section 107, River and Harbor Act of 1960, as amended)
- Shore Damage Prevention or Mitigation Caused by Federal Navigation Projects (Section 111, River and Harbor Act of 1968, as amended)

- Placement of Dredged Material on Beaches (Section 145, Water Resources Development Act of 1976, as amended)
- Beneficial Use of Dredged Material (Section 204, Water Resources Development Act of 1992, as amended)
- Flood Control (Section 205, Flood Control Act of 1948, as amended)
- Aquatic Ecosystem Restoration (Section 206, Water Resources Development Act of 1996, as amended)
- Snagging and Clearing for Flood Damage Reduction (Section 208, Flood Control Act of 1954, as amended)
- Project Modifications for Improvement of the Environment (Section 1135(b), Water Resources Development Act of 1986, as amended)

### **What is a Post Authorization Change?**

The following is a discussion of the types of decision documents that may need to be prepared to support the project cooperation agreement. Once Congress authorizes a study, the reconnaissance and feasibility phases will normally result in a feasibility report and NEPA document. Ideally, this feasibility report is both the authorizing document and the supporting document for the project cooperation agreement. However, this requires the following conditions to be true: that the project cooperation agreement is completed within 3 years of the last approved economic analysis; that changes do not occur between completion of the feasibility report and completion of the project cooperation agreement; and that the project was developed after September 1989. When any of these conditions are not true, the following guidance is provided:

No Change from Feasibility Report. If more than 3 years have elapsed since the last approved economic analysis in a feasibility report, and there are no changes, then a post-authorization decision document, which may be titled as a limited reevaluation report (LRR), is prepared to update the economic analysis to show that the project remains justified. This post-authorization decision document, along with the feasibility report are then used as the basis for a Federal commitment and supporting documents for the project cooperation agreement.

Limited Changes from Feasibility Report. If the project has changed, but not substantially, then a post-authorization decision document, which may also be titled as a limited reevaluation report (LRR) or a engineering documentation report (EDR), is prepared. This situation covers reevaluations where more than an economic update is needed but the changes are within the approval authority of the district commander. The post-authorization decision document may also evaluate the recommended plan for compliance with current policies, criteria, guidelines and incremental justification, and may involve limited changes in economics and/or environmental effects or other technical aspects of the recommended project. The post authorization decision document along with the feasibility report are then used as the basis for a Federal commitment and supporting documents for the project cooperation agreement

Project Exceeds Maximum Cost Limit. Section 902, of the Water Resources Development Act of 1986, as amended, legislates a maximum total project cost. Projects

to which this limitation applies and for which increases in costs exceed the limitations established by Section 902, as amended, will require further authorization by Congress, raising the maximum cost established for the project. If the current estimate of the project exceeds the maximum cost limit and there are no other substantial changes from the feasibility report, then a post-authorization decision document, which may be titled as a limited reevaluation report (LRR), is prepared as a basis to obtain the required authorization by Congress. In this case, the post-authorization decision document would recommend Congressional reauthorization of the project. Pending Congressional authorization, the post-authorization decision document along with the feasibility report are then used as the basis for a Federal commitment and supporting documents for the project cooperation agreement.

Significant Changes from Feasibility Report. If a project has changed substantially after authorization, then a post-authorization decision document, which may be titled as a general reevaluation report (GRR), is prepared and used as the supporting document for the project cooperation agreement. Substantial changes are defined as changes that are beyond the district commander's approval authority. The post-authorization document that reformulates a project would be similar to a feasibility report and will contain an engineering appendix, and National Environmental Policy Act documentation. A post-authorization document that reformulates an authorized portion of a project, such as recreation or mitigation features, along with the feasibility study, would be used as the basis for a Federal commitment and supporting documents for the project cooperation agreement. If the Federal share of the total project cost is not greater than \$15 million and the changes proposed in the post-authorization decision document are within the Chief of Engineers' discretionary authority, then the document will be approved by the Division Commander. If reauthorization is necessary, the document will be processed in the same manner as a feasibility report.

Document Titles. Prior Corps guidance has established definitions for limited reevaluation reports (LRR), general reevaluation reports (GRR), engineering documentation reports (EDR) and decision documents, which are all post-authorization decision documents, and the definitions are not mutually exclusive. While the paragraphs above provide criteria that can be used to define these documents, use of these names is not required. While the paragraphs above indicate that an alternate title may be used, each of the documents may be referred to as a post-authorization decision document. This convention would be especially appropriate in cases where the approval authority may change during the development of the document.

A more detailed discussion may be found at <http://140.194.76.129/publications/eng-regs/> (ER 1105-2-100, Planning Guidance Notebook).

### **What is the objective of Executive Order 11988, Floodplain Management (May 24, 1977)?**

Executive Order 11988 required federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there

is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally-undertaken, financed, or assisted construction and improvements;
- conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

A link to the USACE website is <http://www.nfrmp.us/>. Engineering Regulation 1165-2-26, Implementation of E.O. 11988 on Floodplain Management 30 March 1984 is located at <http://www.usace.army.mil/CECW/PlanningCOP/Pages/flood.aspx>.

### **What are USACE's Environmental Operating Principles?**

USACE reaffirmed its commitment to the environment by formalizing a set of "Environmental Operating Principles" applicable to all its decision-making and programs. These principles foster unity of purpose on environmental issues, reflect a new tone and direction for dialogue on environmental matters, and ensure that employees consider conservation, environmental preservation and restoration in all USACE activities. They are:

- Strive to achieve environmental sustainability. An environment maintained in a healthy, diverse and sustainable condition is necessary to support life.
- Recognize the interdependence of life and the physical environment. Proactively consider environmental consequences of USACE programs and act accordingly in all appropriate circumstances.
- Seek balance and synergy among human development activities and natural systems by designing economic and environmental solutions that support and reinforce one another.
- Continue to accept corporate responsibility and accountability under the law for activities and decisions under our control that impact human health and welfare and the continued viability of natural systems.
- Seeks ways and means to assess and mitigate cumulative impacts to the environment; bring systems approaches to the full life cycle of our processes and work.
- Build and share an integrated scientific, economic, and social knowledge base that supports a greater understanding of the environment and impacts of our work.
- Respect the views of individuals and groups interested in USACE activities, listen to them actively, and learn from their perspective in the search to find innovative win-win solutions to the nation's problems that also protect and enhance the environment.

The Policy for Implementing and the Integration of the USACE Environmental Operating Principles and Doctrine can be found in ER 200-1-5 can be found at <http://140.194.76.129/publications/eng-regs/>.

### **What is the USACE Civil Emergency Management Program (ER 500-1-1)?**

This regulation prescribes policies, processes and procedures for the management and execution of the Civil Emergency Management (CEM) Program of the USACE under the authorities of 33 USC 701n (commonly referred to as Public Law (PL) 84-99); The Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 et seq.) (The Stafford Act); Army Regulation (AR) 500-60, Disaster Relief; Engineer Regulation (ER) 500-1-1, Civil Emergency Management Program; and ER 1130-2-530, Flood Control Operations and Maintenance Policies.  
<http://140.194.76.129/publications/eng-regs/>.

### **Significant Laws and Programs Related to the Army Corps of Engineers Authority in Designing, Building, and Maintaining Levees.**

A timeline showing when the various authorities were passed can be found at [http://www.usace.army.mil/LeveeSafety/Background/Documents/prog\\_timeline.pdf](http://www.usace.army.mil/LeveeSafety/Background/Documents/prog_timeline.pdf)

### **What is the Inspection of completed Works (ICW)?**

Section 221 of the Flood Control Act of 1970, as amended (84 Stat. 1831, 42 U.S.C. 1962d-5b), requires that a written agreement be executed between the Secretary of the Army and the non-federal sponsor to identify the “items of local cooperation” for USACE projects, including operation and maintenance of the project. It also authorizes USACE to “undertake performance of those items of cooperation necessary to the functioning of the project for its purposes if USACE had first notified the non-federal interest of its failure to perform the terms of its agreement and has given such interest a reasonable time after such notification to so perform.” ICW eligible projects are federally authorized and locally maintained. To determine whether the non-federal sponsor is performing as it has agreed, (i.e. doing required maintenance), USACE undertakes an inspection of the completed projects. Projects that meet inspection criteria are eligible for federal rehabilitation funds if damaged in a flood event.

### **What is the Flood Control and Coastal Emergencies program?**

The Flood Control and Coastal Emergencies (FCCE) program is direct funded through emergency supplemental appropriations. FCCE funds are used to inspect locally constructed and O&M levees systems that have applied and met criteria to be in the PL 84-99 program. FCCE projects have an 80/20 cost share requirement.

### **What is the PL84-99 program?**

Flood Control and Coastal Emergencies (FCCE): USACE may provide disaster response and support under Public Law (PL) 84-99. A USACE-unique authority, PL 84-99

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missions and activities are funded by annual Energy and Water Development Appropriations Acts and, when necessary, emergency supplemental appropriations acts. Under this law, the Chief of Engineers, acting for the Secretary of the Army, is authorized to undertake a number of activities including:

- disaster preparedness through all hazards planning (pays the EM staff salaries)
- advance measures
- emergency operations (EOC Operations, Flood Response and Post Flood Response)
- rehabilitation of flood control works damaged by flood (see RIP)
- protection or repair of federally authorized shore protective works threatened or damaged by coastal storm (see ICW)
- provisions of emergency water due to drought or contaminated source (rarely used).

### **What is the Rehabilitation and Inspection Program (RIP)?**

A program established by the Army Corps of Engineers that provides for inspections of constructed federal and non-federal projects damaged by floods and storms. Financial assistance for levee rehabilitation is limited to repairs or restoration to the project's pre-disaster condition and level of protection. An initial eligibility inspection must be performed by USACE and subsequent maintenance inspections are required.

### **What are Project Information Reports (PIR) for Rehabilitation Assistance under PL84-99?**

A PIR is the documentation required to obtain permission and funding to repair ICW or RIP flood control or shore protection projects damaged by and eligible event. PIR's for Rehabilitation Assistance will be prepared in accordance with EP 500-1-1. There are three principle elements of a PIR: the project was damaged by an eligible event, the damage is not routine maintenance, and the benefit to cost ratio is greater than 1.0. The approval authority for Rehabilitation Assistance PIR's is the Division Commander. The Division Commander may delegate approval authority to a member of the Senior Executive Service on the division staff, or a permanently designated Deputy Division Engineer.

## **V. Typical Questions a Flood Risk Manager Receives**

### **How do you explain the 1% annual chance of flooding (100 year event)?**

The 100-year flood has a 1% chance of occurring in any given year, it is not a safety standard, and it has been set as the level that flood insurance is not required if 1% protection is provided. Although a 100-year flood sounds remote, keep in mind that over the life of an average 30-year mortgage, a home located within the 100-year flood zone (A or V zone) has a 26% chance of being inundated by the size flood. This same home has less than a 1% chance of fire damage during the same period. What is more significant is the house in a 10-year flood area is almost certain to see a 10-year flood (96% chance) in the same 30-year mortgage cycle. In many areas the difference in flood heights between a 10-year and a 100-year event is less than one foot.

Flood Frequency Chart

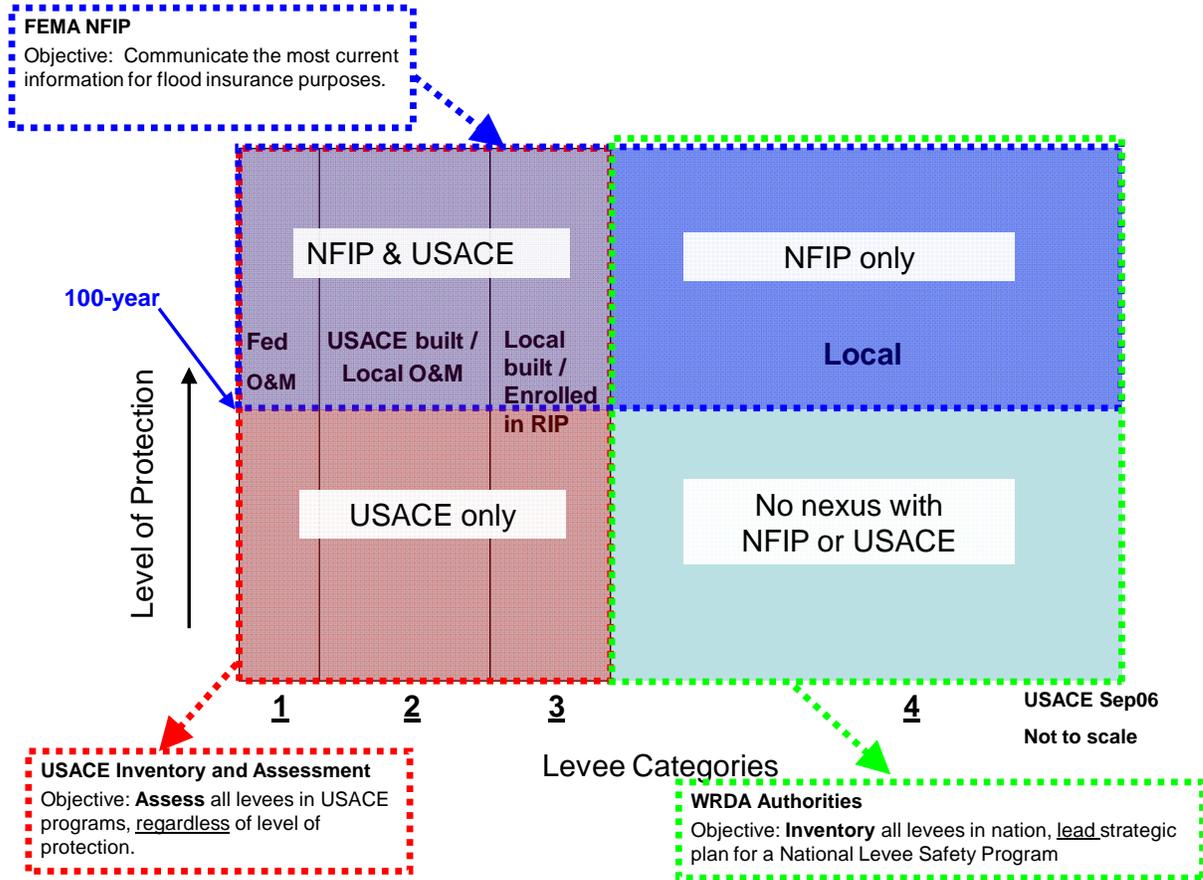
<u>Flood frequency (years)</u>	<u>Chance of flooding in any given year</u>	<u>Percent chance of flooding during 30-year mortgage</u>
10	10 out of 100 (10%)	96%
50	2 out of 100 (2%)	46%
100	1 out of 100 (1%)	26%
500	0.2 out of 100 (0.2%)	6%

### **What is residual risk?**

Residual Risk is the flood risk that remains after all efforts to reduce the risk are completed. Residual risk is the exposure to loss remaining after other known risks have been countered, factored in or eliminated.

## What is the Universe of Levees?

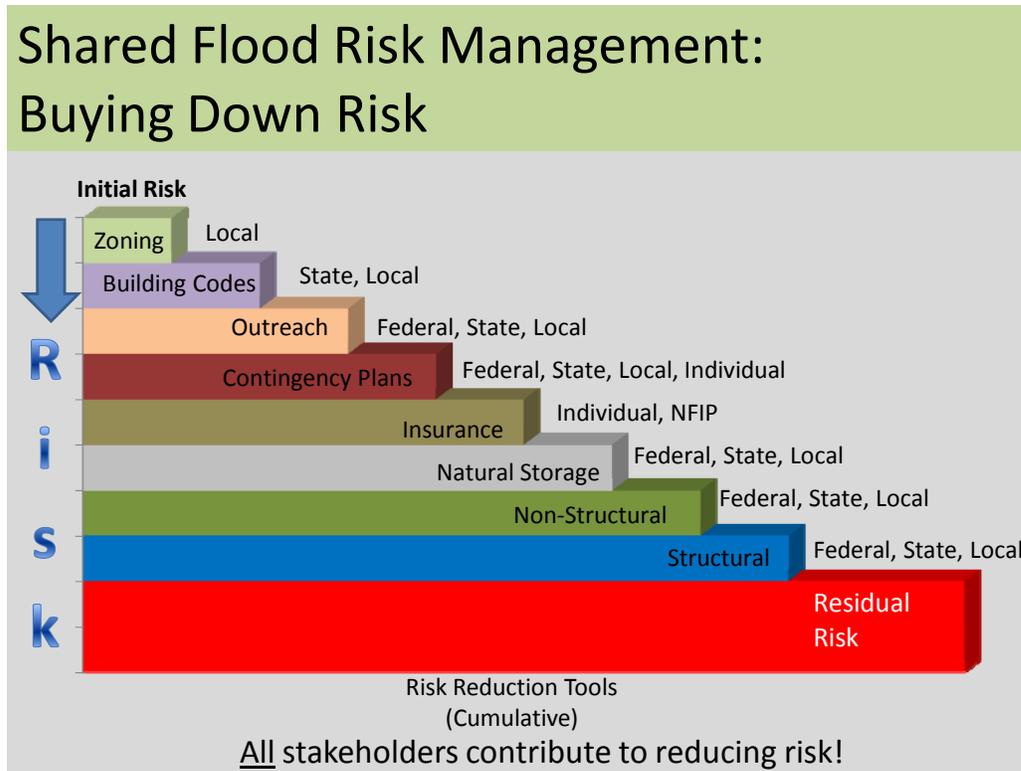
The Universe of Levees is shown in the chart below. It shows where USACE has an interest and what is left.



## What is the table for buying down risk?

Major General Don Riley wrote a paper called Improving Public Safety – From Federal Protection to Shared Risk Reduction (2/26/2008) which first discussed the Corps of Engineers vision of buying down risk and shared responsibility. The below table is the latest version of the chart. It has been modified over time.

(<http://www.nfrmp.us/docs/FloodPolicyWhitePaperfEB08.pdf>)



**The local community wants to improve their flood control system, part is federal, and part is not. They are willing to pay for all the upgrades. What authorities do they need to be aware of?**

If the portion of the system they wish to improve is the federal portion, with their funds, they will need to proceed and ask permission through the 408 process. Such modifications must be approved by the Chief of Engineers. The authority is for major changes to an existing authorized project, the process is outlined in a 17 November 2008 Clarification Guidance on the Policy and Procedural guidance for the Approval of Modifications and Alterations of Corps of Engineers Project, issued by CECW-PB signed by Steve Stockton; ER1165-2-119, dated 20 September 1982, Modifications to completed Projects; and 33 USC 408, Taking possession of, use of or injury to harbor and river improvements.

If the portion of the project does not have a tie-in or any effect on the existing authorized project, then the non-federal partner may proceed through the normal permitting process.

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If the non-federal partner wants to proceed with a project that may have an impact the federal project even though they are not touching the federal project, then the 408 process must be followed.

If there is a an ongoing or proposed study to consider alternative solutions, the non-federal partner must follow the 408 process and must also submit the necessary package for proposed credit (Section 104 of WRDA 1986 or Section 2003 of WRDA 2007) which must be submitted at the same time for approval by the Secretary of the Army for Civil Works. This is to allow the non-federal sponsor credit for work completed ahead of federal authorization and funding of construction project.

To initiate a new study based on additional protection required from an existing project, an initial study can be performed under the Section 216 of the Flood Control Act of 1970 and procedure is outlined in ER 1165-2-119, Modifications of Completed Projects, dated 20 September 1982 or they may follow the process to initiate a new study, starting with a Reconnaissance Report (ER 1110-2-100, Planning Guidance Notebook).

### **When should USACE provide information to the local community for submission to FEMA for map changes?**

During Design, USACE should provide to the non-federal sponsor information necessary for the submission of a Conditional Letter of Map Revision (CLOMR) to FEMA for any modifications proposed in the floodway that are regulated by the local government as part of their participation in the National Flood Insurance Program. More information can be found at [http://www.fema.gov/plan/prevent/fhm/dl\\_mt-2.shtm](http://www.fema.gov/plan/prevent/fhm/dl_mt-2.shtm).

### **When the local community official or levee district asks the question: Who can certify my levee?**

USACE can certify the levees using EC 1110-2-6067 USACE Process for the National Flood Insurance Program (NFIP) Levee System Evaluation. The non-federal partner can also certify the levee; it does not require USACE be the certifier of USACE levees.

The Frequently Asked Questions for EC 1110-2-6067, question 11, provides a more complete answer, [http://www.usace.army.mil/LeveeSafety/KeyDocuments/Documents/nfis\\_faq.pdf](http://www.usace.army.mil/LeveeSafety/KeyDocuments/Documents/nfis_faq.pdf).

### **USACE already inspected my levee, why do I have to go through the certification process?**

The USACE inspection program is not part of the FEMA certification process. The inspection program is based on the fact that a federally authorized project was built. The local sponsor is required to maintain the project based on the operations and maintenance manual and inspection checklist. If you receive an unsatisfactory rating it may have an impact on the levee certification but it may not. An example is a project that was designed for the 0.2-percent-annual chance flood (500 year) and has issues but it will still

pass the 1-percent-annual chance flood. The inspection program is also part of maintaining a system's eligibility for P.L. 84-99 assistance after an event. P.L. 84-99 does not directly relate to FEMA's need for certification.

The levee inspection process does not provide the necessary documentation required for levee certification. 44 CFR 65.10 provides the guidance necessary for FEMA to certify a levee. The USACE has its own guidance on how USACE districts are to perform a levee evaluation for the NFIP program.

### **What does it mean if you are placed in the “inactive” status for P.L. 84-99?**

In the event that projects enter into the “inactive” status due to routine inspections, all deficiencies will need to be corrected and projects receive at least a “minimally acceptable” inspection rating before the projects' status can be changed to “active”. When the project is placed in the “inactive” status, immediately the project becomes ineligible for P.L. 84-99 rehabilitation assistance after a federally declared event.

Regardless of status in receive rehabilitation assistance, the project will remain eligible for receive flood fighting assistance to protect life and property in the event state and local resources are overwhelmed during times of emergency. (ER 500-1-1, <http://140.194.76.129/publications/eng-regs/>)

### **Does PL 84-99 cover coastal systems, i.e. hurricane or shore protection projects?**

The Rehabilitation and Inspection Program provides for the emergency repair or rehabilitation of federally authorized and constructed hurricane or shore protection projects (HSPP). USACE may rehabilitate Federally authorized and constructed HSPP structures substantially eroded/damaged or destroyed by wind, wave, or water action of an other than ordinary nature. Emergency repair and rehabilitation of HSPP's under the authority of PL 84-99 will be limited to that necessary to allow for adequate functioning of the project, or restoration to pre-storm condition, whichever is less. (ER 500-1-1, <http://140.194.76.129/publications/eng-regs/>)

## **VI. Other USACE Programs that are part of the FRMP matrix organization**

### **Dam and Levee Safety Program**

In 1986 the Congress authorized “the National Dam Safety Program Act” to conduct an inventory and assessments of all dams nationwide. This has been a successful program and “the National Levee Safety Program Act” is modeled after it (authorized by title IX WRDA 2007). The Levee Safety Program is divided into three areas: 1) Levee Inventory 2) Technical Risk Assessments 3) Revised Inspection of Completed Works Procedures The National Inventory of Dams shows that 45 percent of all federal dams are at least 50 years old; and that 80 percent of them are at least 30 years old.

The Levee Safety Program has developed their website located at <http://www.usace.army.mil/leveesafety/Pages/main.aspx>.

A great fact sheet developed by the Levee Safety program includes a Levee Myths and Facts: <http://www.usace.army.mil/LeveeSafety/Background/Pages/myths.aspx>

The Levee Safety Program has developed some frequently asked questions in association with the release of EC 1110-2-6067, USACE Process for the National Flood Insurance Program (NFIP) Levee System Evaluation which is posted at [http://www.usace.army.mil/LeveeSafety/KeyDocuments/Pages/lev\\_keydocs.aspx](http://www.usace.army.mil/LeveeSafety/KeyDocuments/Pages/lev_keydocs.aspx).

Levee Safety has also developed questions and answers for Requesting a Variance from the Corps Vegetation Standards for Levees and Floodwalls: [http://www.usace.army.mil/LeveeSafety/Documents/vegstd\\_faq.pdf](http://www.usace.army.mil/LeveeSafety/Documents/vegstd_faq.pdf).

### **Coastal Programs**

The full integration of Flood Risk Management with Coastal Programs is under discussion and development at this time.

## **VII. Training Programs and Resources**

### **What information is available on the National Flood Risk Management website?**

The National Flood Risk Management program set up the website to consolidate information and make it easier to find all the guidance and relevant documents that apply to Flood Risk Management <http://www.nfrmp.us>. The tab to guidance and policy contains the FRMP implementation guidance letter, guidance on levee certification, planning and policies, Silver Jackets Website, and Levee Safety Committee. There is also a link to prior presentations given by the FRMP team. This website has been very useful when talking with a non-federal sponsor who is looking for all USACE levee guidance. It is frequently updated.

### **What training is available for a Flood Risk Manager?**

USACE provides a wide range of training, both online and instructor lead. Examples of courses of interest include:

- Risk Communication
- Risk Communication for Flood Risk Management (under development)
- Prospect: Nonstructural Measures for Flood Risk
- OMBIL: Applications for Managers
- PCC5 H&H Considerations in Planning
- Risk Analysis for Flood Risk Management
- Risk Analysis – WRP&M

Additional details can be found at the USACE Learning Center at <http://ulc.usace.army.mil/>.

Also, one should visit USACE's Risk Analysis Gateway at <http://www.iwr.usace.army.mil/riskanalysis/>.

FEMA also provides training. More details about its Emergency Management Institute (EMI) training can be found at <http://training.fema.gov/>. One recommended course is Managing Floodplain Development through the National Flood Insurance Program (NFIP) (E273).

ASFPM website has some online training courses available for cost under the CFM continuing education (<http://www.floods.org>).

### **Certified Floodplain Manager**

The Certified Floodplain Manager is a certification program run by the Association of State Flood Plain Managers (ASFPM). This certification requires a 4-hour examination. The exam covers floodplain management, the FEMA NFIP program, local responsibilities, local ordinances, how to read a FEMA NFIP map and determine if a home is in a Special Flood Hazard Area (SFHA), how to build in special flood hazard areas, how to build in SFHAs, elevation and venting. The exam is offered at the ASFPM

conferences and offered by others many times a year. After obtaining certification, it must be maintained by Continuing Education Credits each year. A CFM is renewed every 2 years. More can be found at <http://www.floods.org>

As the Flood Risk Manager at a District or Division, the CFM credential provides credibility proving that you understand the basics of the NFIP and local floodplain management.

### **Continuing Education Credit Opportunities**

Right now, ASFPM gives credit for attending conferences and training online. Please see the ASFPM Website <http://www.floods.org> for more information on what they accept for CEC for the CFM program.

### **Other Websites as Resources**

National Flood Risk Management Program: <http://www.nfrmp.us/>

NOAA sites: <http://www.csc.noaa.gov/>

<http://www.csc.noaa.gov/howtoguides.html>

<http://www.csc.noaa.gov/digitalcoast/inundation/understand.html>

USDA Site for Risk Communication:

[http://www.foodinsight.org/Resources/Detail.aspx?topic=Risk\\_Communicator\\_Training\\_for\\_Food\\_Defense\\_Preparedness\\_Response\\_Recovery](http://www.foodinsight.org/Resources/Detail.aspx?topic=Risk_Communicator_Training_for_Food_Defense_Preparedness_Response_Recovery)

USGS site for significant floods in the US in the 20<sup>th</sup> century:

<http://ks.water.usgs.gov/pubs/fact-sheets/fs.024-00.html>

<http://pubs.usgs.gov/gip/106/>

<http://pubs.er.usgs.gov/>

Federal Interagency Floodplain Management Task Force:

[http://www.fema.gov/business/nfip/fifm\\_task\\_force.shtm](http://www.fema.gov/business/nfip/fifm_task_force.shtm)

FloodSMART for NFIP: <http://www.floodsmart.gov>

ASCE So, You Live Behind a Levee: <http://content.asce.org/ASCELeveeGuide.html>

USACE publications: <http://140.194.76.129/publications/>

Help for Scheduling meetings: <http://www.doodle.com>

NFIP Guidebook for Local Administrator:

<http://www.fema.gov/library/viewRecord.do?id=3574>.

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## **VIII. FEMA Related Programs**

### **What is the Community Rating System (CRS)?**

The Community Rating System (CRS) is a voluntary incentive program within the NFIP that recognizes and encourages communities to undertake floodplain management activities that exceed minimum NFIP requirements. Flood insurance premium rates are discounted to reflect the reduced flood risk that results from community actions to: (1) reduce flood losses, (2) facilitate accurate insurance rating, and (3) promote the awareness of flood insurance.

For CRS communities, flood insurance premium rates are discounted in increments of 5 percent. For example, a Class 1 community would receive a 45-percent premium discount for properties located in FEMA-designated SFHAs, while a Class 9 community would receive a 5-percent discount. The CRS classes for communities are based on 18 creditable activities, organized under four categories: (i) Public Information, (ii) Mapping and Regulations, (iii) Flood Damage Reduction, and (iv) Flood Preparedness. More information about the Community Rating system can be found at <http://www.fema.gov/business/nfip/crs.shtm>.

### **What is FEMA's Map Modernization Program?**

FEMA's Flood Map Modernization Program, also referred to as Map Mod, was a multi-year, multi-billion dollar effort to digitize and update Flood Insurance Rate Maps (FIRMs). The goal was to provide easily accessible, digital flood maps. This program's last year of funding was FY09. Map Mod has transitioned into the Risk Mapping, Assessment and Planning Program, also referred to as Risk MAP.

An important element of Map Mod was Procedure Memorandum 34, reiterating FEMA's continuing requirement that levees be appropriately certified and accredited if they are to be shown as providing protection on new FEMA Digital Flood Insurance Rate Maps (DFIRMs).

### **What is Risk MAP?**

Risk Mapping, Assessment, and Planning (Risk MAP) is a new FEMA program that provides communities with flood information and tools they can use to enhance their mitigation plans and better protect their citizens. Through more accurate flood maps, risk assessment tools, and outreach support, Risk MAP builds on Map Modernization and strengthens local ability to make informed decisions about reducing risk. Risk MAP's ultimate goal is saving lives and dollars.

Through collaboration with state, local and tribal entities, Risk MAP focuses on products and services beyond the traditional DFIRM, which is primarily used to set flood insurance rates and communicate 1-percent-annual-chance flood risk. FEMA will advise

officials on how to effectively communicate risk to citizens and create corresponding mitigation plans that work.

### **What is a DFIRM?**

A Digital Flood Insurance Rate Map (DFIRM) is the FEMA mapping product to show where flooding occurs and where flood insurance is required. DFIRMs are produced using Geographic Information system (GIS) technology and include a supporting database. The DFIRM database was the flagship product of FEMA's Map Modernization Program and increased the usability of flood risk data. It continues to be central to Risk MAP.

The DFIRM and supporting database has the following advantages:

- A map can be customized;
- An area of interest can be easily found and magnified;
- Areas and distances can be measured on screen; and
- Other GIS data can be overlaid with the DFIRM database.

As of October 2009, FEMA stopped issuing paper FIRMS, except for one copy for each community, when new flood maps are issued. Current effective maps and historic maps are available from the FEMA Map Service Center at <http://msc.fema.gov>.

### **What is the National Flood Hazard Layer (NFHL)?**

The NFHL is a database repository that contains the digital flood hazard information collected for new flood map studies and Letters of Map Revision (LOMRs). FEMA created the NFHL to provide stakeholders with an alternative method to access flood hazard information captured in DFIRMs and LOMRs. The NFHL is an important component of FEMA's Digital Vision – an initiative to reduce reliance on paper maps in favor of digital mapping data. Distribution of DFIRM and LOMR data through the NFHL lowers distribution costs and reduces the need for static map images through FEMA's MSC. The NFHL data layer is made available to program stakeholders through:

- The Mapping Information Platform (MIP) Map Viewer, which allows users to easily view NFHL data on a web page;
- MIP's Web Map Service, which allows users to directly pull NFHL data into a GIS tool such as Google Earth, where it can be displayed as a layer and combined with other data sets; and
- Direct data distribution from the MSC on a state-by-state basis, which allows stakeholders such as insurance companies to integrate NFHL data with other georeferenced data into a single database for complex queries and reports.

The NFHL is available through the MSC at <http://www.msc.fema.gov>.

### **What is a Provisionally Accredited Levee (PAL)?**

The Provisionally Accredited Levee, or PAL, was established by FEMA's Procedure Memorandum 43 in September 2006 and updated to accommodate the USACE maintenance Deficient Corrective Program (MDCP) procedures in March 2007. A PAL is a levee system that local government believes can be accredited and certified, but data is not immediately available to document its certification status. During the two-year period when the community is obtaining the necessary data to confirm the levees certification status, FEMA will show the protected area behind the PAL on the DFIRM as a moderate-risk flood zone (i.e., a shaded X Zone). The two-year period is not intended to allow time for levee repairs. A PAL disclaimer will appear on all FIRMS, notifying the public that only a provisional accreditation has been granted. If a community fails to submit the appropriate certification documentation in the two years, FEMA may take 18 months to revise the map and issue a new FIRM discrediting the levee and placing the area behind the levee into a high-risk Special Flood Hazard Area (SFHA).

### **What is a Special Flood Hazard Area (SFHA)?**

A Special Flood Hazard Area (SFHA) is shown on the DFIRM as the land area covered by the floodwaters of the base (one-percent-annual-chance) flood. SFHAs represent high risk flooding areas and are labeled on the DFIRM as Zone A or V. The SFHA is the area where the NFIP's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. The owner of a structure in a high-risk area must carry flood insurance if the owner carries a mortgage from a federally regulated or insured lender or servicer.

### **How can a community request a Flood Insurance Study (FIS)?**

As FEMA moves forward with Risk MAP, new approaches for determining flood risks will be implemented. As part of this effort, FEMA is using a watershed-based Coordinated Needs Management Strategy, or CNMS, to track the assessment process, document engineering gaps and their resolution, and prioritize flood map updates. In order to provide the best maps possible, FEMA works with local stakeholders, including floodplain administrators, to ensure all information on the flood maps is up-to-date and accurate. Local floodplain administrators play a key role in this process.

Communities requesting map updates should contact their FEMA Regional Office. FEMA will determine the priority for identifying new study areas and updating areas already studied based on need, risk, available topographic data, and the community's contribution to the flood study.

### **How can a community revise a FIRM?**

There are different ways that a FIRM can be physically revised:

- A community may apply for a Letter of Map Revision, or LOMR, to show changes to floodplains, floodways, or flood elevations. LOMRs are generally based on the implementation of physical measures (such as construction of

bridges, culverts, channels, etc.) that can affect the hydrologic or hydraulic characteristics of a flooding source and result in the modification of the existing regulatory floodway, the effective Base Flood Elevation (BFE), or the SFHA. The community must supply technical data that supports its map revision request. For more information about the LOMR process, go to <http://www.fema.gov/plan/prevent/floodplain/nfipkeywords/lomr.shtm>.

- A community can request a Physical Map Revision, or PMR, which is an official republication of a community's FIRM. These changes typically cover a larger geographical area than those reflected through the LOMR process. The community must submit scientific and technical data to FEMA to support its request for a PMR. Because of its scope, a PMR generally may take as long as 18 months to complete.

### **Why does the map say a structure is in a high-risk flood zone when the property in which it sits is at a relatively high elevation?**

FIRMs cannot reflect every variation in the physical geography of an area. Therefore, a FIRM will occasionally show a property as being in the high-risk flood zone) zones starting with A or V), even though the building or surrounding ground may be above the BFE. As a result, FEMA has developed procedures for a Letter of Map Amendment (LOMA) or if fill has been placed, a Letter of Map Revision Based on Fill (LOMR-F), to determine whether a specific property/structure lies within the SFPHA. This determination requires the requestor to submit property information that allows FEMA to make a flood zone determination based on the property/structure's location and elevation. More information about this process can be found at [http://www.fema.gov/plan/prevent/fhm/fmc\\_loma.shtm](http://www.fema.gov/plan/prevent/fhm/fmc_loma.shtm) or by calling the FEMA Map Information eXchange (FMIX) toll-free at 1-877-336-2627.

### **What is a LOMA?**

A LOMA is an amendment to the currently-effective FEMA FIRM that determines whether a specific property/structure lies within the SFHA. If a property/structure is found to lie outside of a SFHA either by location or elevation, the mandatory flood insurance requirements of the NFIP no longer apply. More information on the LOMA process can be found at [http://www.fema.gov/plan/prevent/fhm/ot\\_lmreq.shtm](http://www.fema.gov/plan/prevent/fhm/ot_lmreq.shtm).

### **What is a LOMR?**

A LOMR is an official physical revision of the currently-effective FEMA map. This process has the effect of revising the FIRM without reprinting the affected FIRM map panel(s). A LOMR is submitted to FEMA by the local community and upon approval, officially changes flood zone delineations and elevations. More information about the LOMR process can be found at <http://fema.gov/plan/prevent/floodplain/nfipkeywords/lomr.shtm>.

### **Can USACE submit a LOMR at the completion of a project?**

The USACE can provide the community with all the necessary information gathered during the mapping study and construction of the project if the project will change flood hazards shown on the FIRM. This information can include the certification of levee(s) if the appropriate certification documentation has been completed (EC 1110-2-6067). The chief executive officer of the local community can submit the LOMR package to FEMA for review.

### **Where can I find more information about the maps that were used to determine relative risk level?**

Flood maps are produced as a joint effort between a local community and FEMA. Once the study is complete, FEMA publishes the FIRMS. One set of paper copies of the new maps is provided to the local community and is kept on file in the Community Map Repository, which is typically found in the community's planning and zoning or engineering department. Along with the FIRMS, FEMA also publishes a Flood Insurance Study (FIS) Report that also is provided to the community and documents the detailed hydrologic and hydraulic analyses used to model the one-percent-annual chance flood event, determine BFEs, and designate floodways and high risk zones in the area that was studied. Digital copies of the FIRMS and FIS reports are available to view or purchase at <http://www.msc.fema.gov>.

### **Is flood damage from sin-driven rain covered by flood insurance?**

No. When rain enters through a wind-damaged window or door, or comes through a hole in a wall or roof, the NFIP considers the resulting ponding to be wind storm-related. FEMA defines a flood as "A general and temporary condition of partial to complete inundation of two or more acres of normally dry land area or of two or more properties from overflow of inland or tidal waters, from unusual and rapid accumulation or runoff of surface waters from any source, or from mudflow."

### **Are there limits to NFIP flood insurance coverage?**

Residential building coverage is limited to \$250,000 and \$100,000 for contents. For non-residential structures, coverage is available up to \$500,000 and \$500,000 for contents. Condominium associations can obtain coverage up to \$250,000 times the number of units in the building. Private insurance companies offer Excess Flood Insurance, which provides higher limits of coverage than the NFIP. (These products are not associated with the NFIP). More information about flood insurance and its coverage's can be found at <http://www.FloodSmart.gov>.

### **How have recent hurricanes affected the NFIP?**

Because of the NFIP's multi-billion dollar debt caused by thousands of claims for flood damage from Hurricanes Katrina, Rita, and Wilma, Congress is looking closely at ways to improve the NFIP, both in rates and coverage.

The Louisiana Mapping Project (<http://lamappingproject.com/>) and the Mississippi Coastal Mapping Project (<http://www.mscoastalmapping.com/>) are mapping initiatives sponsored by FEMA after the devastating 2005 Atlantic Hurricane season. In addition to these projects, FEMA produced Hurricane Katrina Flood Recovery Maps, which showed the extent and magnitude of Hurricane Katrina's surge and information on advisory flood data for areas in southeastern Louisiana parishes and Mississippi counties that were most severely impacted by coastal flooding. More information about these maps and other specific efforts undertaken by FEMA in response to Hurricane Katrina can be found at <http://www.fema.gov/hazard/flood/recoverydata/Katrina/index.shtm>.

### **What is the Flood Mitigation Assistance (FMA) Program?**

The Flood Mitigation Assistance (FMA) Program was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 (42 U.S.C. 4101) with the goal of reducing or eliminating claims under the NFIP. FEMA provides FMA funds to assist States and communities implement measures that reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insured under the National Flood Insurance Program. Three types of FMA grants are available:

- Planning Grants to prepare Flood Mitigation Plans. Only NFIP-participating communities with approved Flood Mitigation Plans can apply for FMA Projects Grants.
- Project Grants to implement measures to reduce flood losses, such as elevation, acquisition, or relocation of NFIP-insured structures. States are encouraged to prioritize FMA funds for applications that include repetitive loss properties; these include structures with two or more losses each with a claim of at least \$1,000 within any ten-year period since 1978.
- Management Cost Grants for the states to help administer the FMA Program. Up to ten percent of Project Grants may be awarded to states for Management Cost Grants.

### **What information is available from FEMA on levees?**

Numerous information sources exist regarding levees and their impact on addressing flood risk management issues:

- The following link provides access to FEMA levee information:  
[http://www.fema.gov/plan/prevent/fhm/lv\\_intro.shtm](http://www.fema.gov/plan/prevent/fhm/lv_intro.shtm).
- The following line provides access to USACE levee information:  
<http://www.nfrmp.us/guidance.cfm>.

### **How does the Coastal Barrier Resources Act (CBRA) impact the FMA Program?**

The Coastal Barrier Resources Act, or CBRA, significantly limits Federal assistance available in areas designated within the Coastal Barrier Resources system. If any state or community wishes to apply for a planning or project grant for a CBRA unit within this system, the FEMA Regional Environmental Officer must first consult with the U.S. Fish and Wildlife Service to determine the eligibility of the activity. More information about the Coastal Barrier Resources Act can be found at <http://www.fema.gov/business/nfip/cbrs/cbrs.shtm>.

### **Are additional funding sources available?**

Multiple grant sources can be combined for a single project, or for a group of common initiatives. Potential funding sources include funds from the Natural Resources Conservation Service's Watershed Program, which supports community watershed plans and some project implementation actions, the Department of Housing and Urban Development's Community Development Block Grant (CDBG) program, FEMA's Hazard Mitigation Grant Program, the NFIP Increased Cost of compliance (ICC), and Small business Administration (SBA) loans. FEMA's Flood Mitigation Assistance Guidance Manual provides more information about cost sharing and can be found at <http://www.fema.gov/pdf/government/grant/fma/fema299.pdf>.

### **What is the FEMA Hazard Mitigation Grant Program (HMGP)?**

FEMA's Hazard Mitigation Grant Program (HMGP) provides grants to states and local governments to implement long-term hazard mitigation measures after a major disaster is declared. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. More information about the HMGP can be found at <http://www.fema.gov/government/grant/hmgp/index.shtm>.

### **FEMA Flood Zone Designations**

Zone A - The flood insurance rate zone that corresponds to the 1% annual chance floodplain for requiring federal backed mortgages to purchase flood insurance; no depths or base flood elevations are showing within this zone.

Zone AE – The flood insurance rate zone that corresponds to the 1% annual chance floodplain for requiring federal backed mortgages to purchase flood insurance. Base Flood Elevations (BFEs) are shown at selected intervals within this zone. New buildings constructed in this zone must be elevated to the BFE (i.e., the 1% annual chance flood level).

Zone A99 – The flood insurance rate zone that corresponds to the 1% annual chance floodplain that will be protected by a federal flood protection system where construction has reached specified statutory milestones. No BFE or depths are shown in this zone.

Mandatory flood insurance purchase requirements apply; however, no minimum building standards are required for this zone.

Zone AR – The flood insurance rate zone used to depict areas protected from flood hazards by flood control structures such as a levee that are being restored. FEMA will consider using the AR designation for a community if the flood protection system has been deemed restorable by a federal agency in consultation with the local project sponsor; a minimum 3% annual chance level of flood protection is still provided to the community by the system and restoration of the flood protection system is scheduled to begin within a designated time period. Mandatory purchase requirements for flood insurance apply as do minimum building standards.

Zone X – The flood insurance rate zone that corresponds to areas outside the 1% annual chance floodplain; mandatory purchase requirements for flood insurance and minimum building standards do not apply to this zone.

## **Definitions**

**“Accredited Levee System”** An accredited levee system is a system that FEMA has determined can be shown on a DFIRM as providing a 1-percent-annual-chance or greater level of flood protection. This determination is based on the submittal of data and documentation required by 44 CFR 65.10.

**“Annual Exceedance Probability (AEP)”** is the probability that flooding will occur in

**“Authorized Project”** An authorized project is defined as a project specifically authorized by Congress for construction, generally, through language in an authorization or appropriation act, or a project authorized pursuant to Section 201, of the Flood Control Act of 1965(ER 1105-2-100, appendix G)

**"Base Flood"** Base flood is the regulatory standard under the National Flood Insurance Program for a flood having a one percent chance of being equaled or exceeded in any given year. It is also referred to as the “100-year flood.” The base flood is the national standard used by the NFIP and all Federal agencies for the purposes of requiring the purchase of flood insurance and regulating new development. Base Flood Elevations (BFEs) are typically shown on Flood Insurance Rate Maps (FIRMs).

**"Base Flood Plain"** is the one percent chance flood plain. (ER 1165-2-26)

**"Channel"** is a natural or artificial watercourse of perceptible extent with a definite bed and banks to confine and conduct continuously or periodically flowing water. (ER 1165-2-26)

**"Critical Action"** is any activity for which even a slight chance of flooding would be too great. The critical action flood plain is defined as the 500-year flood plain (0.2 percent chance flood plain). (ER 1165-2-26)

**“Engineering Documentation Report (EDR)”**. An engineering documentation report is prepared to support the project cooperation agreement when there are only minor changes in design and costs from the authorizing reports. An engineering documentation report may also be used for individual projects, which have been authorized as part of a large system study. In these cases, the report serves to define the specific design concept and to firmly establish the baseline cost estimate. The engineering documentation report can also be used for projects authorized by Congress without a feasibility report when only technical decisions are required. Guidance on engineering documentation reports is in ER 1110-2-1150.

**“Federal authorized levee”**: A levee designed and built by the Army corps of Engineers or authorized to be part of the USACE federal program, but locally operated and maintained in accordance with standards established by the Corps.

**"Flood Fringe"** is that portion of the flood plain outside of the regulatory floodway (often referred to as "floodway fringe"). (ER 1165-2-26)

**"Flood Plain"** is the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands; and including, at a minimum, that area subject to a one percent chance of flooding in any given year. (E.O. 11988)

**"Flood Plain Management"** (FPM) is a continuing process, involving both federal and non-federal actions that seek a balance between use and environmental quality in the management of the inland and coastal flood plains as components of the larger human communities. The flood damage reduction aspects of flood plain management involve modifying floods and modifying the susceptibility of property to flood damages. The former embraces the physical measures commonly called "flood control;" the latter includes regulatory and other measures intended to reduce damages by means other than modifying flood waters. By guiding flood plain land use and development, flood plain regulations seek to reduce future susceptibility to flood hazards and damages consistent with the risk involved and serve in many cases to preserve and protect natural flood plain values. (EP 1165-2-1)

**"General Design Memorandum (GDM)"**. A general design memorandum is an obsolete document and will not be prepared for any project. Either a limited or general reevaluation report shall be prepared in lieu of a general design memorandum (1110-2-1150).

**"General Reevaluation"**. A study to affirm, reformulate or modify a plan, or portions of a plan, under current planning criteria. This study may be similar to a feasibility study (ER 1105-2-100).

**"General Reevaluation Report (GRR)"**. A general reevaluation report is a separate report that documents the analyses undertaken in the general reevaluation study(ER 1105-2-100).

**"Limited Reevaluation"**. A study to provide an evaluation of a specific portion of a plan under current policies, criteria, and guidelines; and may be limited to economics or environmental effects (ER 1105-2-100).

**"Limited Reevaluation Report (LRR)"**. A limited reevaluation report is a separate report that documents the analyses undertaken in a limited reevaluation study(ER 1105-2-100).

**"Minimize"** is to reduce to the smallest possible amount or degree. (ER 1165-2-26)

**"Natural and Beneficial Values"** include but are not limited to water resources values (natural moderation of floods, water quality maintenance, and ground water recharge), living resource values (fish, wildlife and plant resources), cultural resource values (open space, natural beauty, scientific study, outdoor education and recreation) and cultivated resource values (agriculture, aquaculture and forestry). (ER 1165-2-26)

**"Nonstructural Approaches"**: Nonstructural approaches to flood proofing are intended to reduce damage from encroaching flood water by altering the property: these include

acquiring and/or relocating a building, preparing emergency measures, such as sandbagging, and flood proofing structures.

**“Post Authorization Change (PAC) Report”**. Recommended changes to authorized but unconstructed projects may require a post authorization change (PAC) report. Guidance on post authorization change reports is in Appendix G, Section III, of ER 1105-2-100.

**"Practicable"** is capable of being done within existing constraints. The test of what is practicable depends upon the situation and includes consideration of the pertinent factors, such as, environment, cost or technology. (ER 1165-2-26)

**"Preserve"** is to prevent adverse modification to the existing flood plain environment or to maintain it. (ER 1165-2-26)

**“Provisionally Accredited Levee (PAL) System”**: The PAL designation may be used for a levee system that FEMA has previously accredited with providing 1-percent-annual-chance flood protection on an effective FIRM/DFIRM, and for which FEMA is awaiting data and or documentation that will show the levee system is compliant with 44 CFR 65.10. Before FEMA will apply the PAL designation to a levee system, the community or levee owner will need to sign and return an agreement indicating the data and documentation required will be provided within a specified timeframe.

**"Regulatory Floodway"** is the area regulated by federal, state or local requirements; the channel of a river or other watercourse and the adjacent land areas that must be reserved in an open manner, i.e., unconfined or unobstructed either horizontally or vertically to provide for the discharge of the base flood so the cumulative increase in water surface elevation from encroachment does not exceed one foot as set by the National Flood Insurance Program. (ER 1165-2-26)

**“Residual Risk”** is the flood risk that remains if a proposed flood damage reduction project is implemented. Residual risk includes the consequence of capacity exceedance as well. (ER 1105-2-101).

**"Restore"** is to reestablish a setting or environment in which the natural functions of the flood plain can again operate. (ER 1165-2-26)

**“Risk”** is the measure of the probability and severity of undesirable consequences. Risk = (Frequency of an event) x (Probability of occurrence) X (Consequences) (EC 1110-2-6067).

**“Risk Analysis”** is an approach to evaluation and decision making that explicitly, and to the extent practical, analytically, incorporates considerations of risk and uncertainty in a flood damage reduction study. (ER 1105-2-101).

**Special Flood Hazard Area (SFHA):** As defined by the National Flood Insurance Program (NFIP), the land area covered by the floodwaters of the base flood on NFIP maps. The SFHA is the area where the NFIP's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

**Structural Approaches:** Structural approaches to flood proofing are intended to prevent flooding by altering the flow of floodwater; these include constructing levees or dunes, or modifying a waterway's channel.

**“Uncertainty”** is a measure of imprecision of knowledge of parameters and functions used to describe the hydraulic, hydrologic, geotechnical, and economic aspects of a project plan. (ER 1105-2-101)

## Acronym List

- AAPA – American Association of Port Authorities
- APA- American Planning Association
- AR- Army Regulation
- ASA(CW) – Assistant Secretary of the Army for Civil Works
- ASCE – American Society of Civil Engineers
- ASDSO- Association of State Dam Safety Officials
- ASFPM – Association of State Flood Plain Managers
- BFE – Base Flood Elevation used in FIRM Mapping
- BoR – Bureau of Reclamation
- CAP- Continuing Authorities Program
- CDBG- Community Development Block Grant
- CEM – Civil Emergency Management
- CEQ – Council for Environmental Quality
- CFM- Certified floodplain manager
- CG- Construction General
- CNMS – Coordinated Needs Management Strategy
- COBRA- Coastal Barrier Resources Act
- CoP – Community of Practice
- CRS – Community Rating System
- DFIRM – Digital Flood Insurance Rate Map
- DHS – Department of Homeland Security
- DOI – U.S. Department of the Interior
- E.O. – Executive Order
- EC- Engineering Curricular
- EDR- Engineering Documentation Report
- EIS-Environmental Impact Statement
- EM- Engineering Manual
- EMI – Emergency Management Institute
- EOC – Emergency Operations Center
- EP- Engineering Pamphlet
- EPA – Environmental Protection Agency
- ER- Engineering Regulation
- ETL- Engineering Technical Letter
- FCCE- Flood Control and Coastal Emergencies
- FCSA – Feasibility Cost Sharing Agreement
- FEMA – Federal Emergency Management Agency
- FIFM-TF – Federal Interagency Floodplain Management Task Force
- FIRM – Flood Insurance Rate Map
- FIS- Flood Insurance Study
- FloodSAFE – California’s Floodplain Management program
- FloodSMART – FEMA’s outreach for NFIP information
- FMA- Flood Mitigation Assistant
- FPM – Flood Plain Management
- FPMS – Flood Plain Management Services program
- FRM – Flood Risk Management
- GDM-General Design Memorandum
- GI- General Investigation
- GIS – Geographical Information System

- GRR- General Re-evaluation Report
- H&H-Hydrology and Hydraulics
- HMGP- Hazard Mitigation Grant Program
- HQ – Headquarters
- HUD – U.S. Department of Housing and Urban Development
- ICC- Increased Cost of Compliance
- ICW- Inspection of Completed Works
- IFRMC – Intergovernmental Flood Risk Management Committee
- LOMA- Letter of map amendment
- LOMC- Letter of Map Change
- LOMR- Letter of Map Revision
- LOMR-F – Letter of Map Revision Based on Fill
- LRR- Limited Re-evaluation Report
- LSO- Levee Safety Officer
- LSPM – Levee Safety Program Manager
- MDCP- Maintenance Deficient Correction Program
- MIP – Mapping Information Platform
- MNUSS- Map Needs Update Support System
- MSC – Major Subordinate Command
- MSC – Map Service Center
- NAFSMA – National Association of Flood and Stormwater Management Agencies
- NCLS – National Committee on Levee Safety
- NEMA – National Emergency Managers Association
- NFHL- National Flood Hazard Layer
- NFIP – National Flood Insurance Program
- NFIRA – National Flood Insurance Reform Act 1994
- NFPC – National Flood Proofing Committee
- NFRMP – National Flood Risk Management Program
- NGO – Non-Governmental Organization
- NHMA – Natural Hazard Mitigation Association
- NMFS- National Marine Fisheries Service
- NOAA- National Oceanographic and Atmospheric Administration
- NRCS – Natural Resources Conservation Service
- NWS – National Weather Service
- O&M- Operations and Maintenance
- P.A.L.- Provisionally Accredited Levee
- P.L. – Public Law
- PAC-Post Authorization Change
- PAS – Planning Assistance to States
- PCA- Project Cooperation Agreement
- PGL-Planning Guidance Letter
- PgMP- Program Management Plan
- PIR- Project Information Report
- PM – Project Manager
- PM- FEMA Procedure Memorandum
- PMP-Project Management Plan
- PMR – Physical Map Revision
- PPA- Project Partnership Agreement

- R&U- Risk and Uncertainty
- Recon- Reconnaissance Study
- RIP- Rehabilitation and Inspection Program
- RiskMAP – FEMA's Risk Mapping, Assessment and Planning Program
- S.J. – Silver Jackets
- SBA- Small Business Administration
- SFHA- Special Flood Hazard Area
- USACE- U.S. Army Corps of Engineers
- USDA – U.S. Department of Agriculture
- USFWS – U.S. Fish and Wildlife Service
- USGS- U.S. Geological survey
- VTC – Video conferencing
- WRDA- Water Resources Development Act