

NATIONAL FLOOD INSURANCE PROGRAM

PROGRAM DESCRIPTION

August 1, 2002



Federal Emergency Management Agency
Federal Insurance and Mitigation Administration

National Flood Insurance Program

The U.S. Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968. The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the Federal Government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the Federal Government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods.

Purpose of this Document:

The purpose of this document is to provide a comprehensive description of the NFIP intended for use by FEMA staff and NFIP constituents. It provides an overview and history of the Program and covers all three aspects of the Program: 1) floodplain identification and mapping; 2) floodplain management; and 3) flood insurance.

NFIP activities that are described in detail in this document include:

- How flood-prone areas are identified and mapped;
- FEMA's map modernization initiative;
- The floodplain management requirements a community must adopt and enforce;
- FEMA's community assistance and monitoring activities;
- How flood insurance is sold;
- What structures are eligible for flood insurance coverage and the amount of coverage available;
- How flood insurance policies are rated and claims are paid;
- The Community Rating System; and
- The Flood Mitigation Assistance program.

This document also includes a description of the Mandatory Purchase of Flood Insurance Requirement and how this requirement relates to the NFIP. Finally, it includes a description of other FEMA programs and activities that provide mitigation assistance and planning assistance in reducing the Nation's flood losses.

A list of acronyms used in this description is provided at the end of the document.

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Federal Emergency Management Agency's Mission

The Federal Emergency Management Agency (FEMA) is an independent Federal agency reporting to the President. Founded in 1979, FEMA's mission is to:

Lead America to prepare for, prevent, respond to, and recover from disaster.

FEMA is responsible for coordinating the Federal response to floods, earthquakes, hurricanes, and other natural or man-made disasters and providing disaster assistance to States, communities and individuals. Disasters are declared by the President at the request of the Governor of the impacted State if the impacts of the disaster exceed the ability of the State and the affected communities to respond. For declared disasters, FEMA activates the Federal Response Plan with 27 signatory agencies. The Federal Response Plan provides a framework for the coordination of assistance to States, communities, and individuals by Federal agencies.

The Federal Insurance and Mitigation Administration (FIMA) within FEMA is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that provide assistance for mitigating future damages from natural hazards.

FEMA also provides training and technical assistance to governmental and non-governmental entities in preparing for and responding to disasters and for protecting against future disasters through mitigation. In addition to a headquarters office in Washington, D.C., FEMA has 10 regional offices.

Overview of the NFIP

Up until 1968, Federal actions related to flooding were primarily responses to significant events that resulted in using structural measures to control flooding. Major riverine flood disasters of the 1920's and 1930's led to considerable Federal involvement in protecting life and property from flooding through the use of structural flood-control projects, such as dams and levees, with the passage of the Flood Control Act of 1936. Generally, the only available financial recourse to assist flood victims was in the form of disaster assistance. Despite the billions of dollars in Federal investments in structural flood-control projects, the losses to life and property and the amount of assistance to disaster victims from floods continued to increase.

As early as the 1950's, when the feasibility of providing flood insurance was first proposed, it became clear that private insurance companies could not profitably provide such coverage at an affordable price, primarily because of the catastrophic nature of flooding and the inability to develop an actuarial rate structure which could adequately reflect the risk to which flood-prone properties are exposed. Congress proposed an experimental program designed to demonstrate the feasibility of the private sector providing flood insurance by enacting the Federal Insurance Act of 1956, but this Act was never implemented.

In recognition of increasing flood losses and disaster relief costs, major steps were taken in the 1960's to redefine Federal policy and approaches to flood control. In 1965, Congress passed the Southeast Hurricane Disaster Relief Act. The Act was as a result of the extensive damage

caused by Hurricane Betsy in the Gulf States. The Act provided financial relief for the flooding victims and authorized a feasibility study of a national flood insurance program. The resulting report was entitled, "Insurance and Other Programs for Financial Assistance to Flood Victims". Shortly thereafter, the Bureau of the Budget Task Force on Federal Flood Control in 1966 advocated a broader perspective on flood control within the context of floodplain development in House Document 465, "A Unified National Program for Managing Flood Losses". House Document 465 included five major goals:

- Improve basic knowledge about flood hazards;
- Coordinate and plan new developments in the floodplain;
- Provide technical services;
- Move toward a practical national program of flood insurance; and
- Adjust Federal flood control policy to sound criteria and changing needs.

House Document 465 and the prior feasibility study provided the basis for the National Flood Insurance Act of 1968. The primary purposes of the 1968 Act creating the NFIP are to:

- Better indemnify individuals for flood losses through insurance;
- Reduce future flood damages through State and community floodplain management regulations; and
- Reduce Federal expenditures for disaster assistance and flood control.

Section 1315 of the 1968 Act is a key provision that prohibits FEMA from providing flood insurance unless the community adopts and enforces floodplain management regulations that meet or exceed the floodplain management criteria established in accordance with Section 1361(c) of the Act. These floodplain management criteria are contained in 44 Code of Federal Regulations (CFR) Part 60, Criteria for Land Management and Use. The emphasis of the NFIP floodplain management requirements is directed toward reducing threats to lives and the potential for damages to property in flood-prone areas. Over 19,700 communities presently participate in the NFIP. These include nearly all communities with significant flood hazards.

In addition to providing flood insurance and reducing flood damages through floodplain management regulations, the NFIP identifies and maps the Nation's floodplains. Mapping flood hazards creates broad-based awareness of the flood hazards and provides the data needed for floodplain management programs and to actuarially rate new construction for flood insurance.

When the NFIP was created, the U.S. Congress recognized that insurance for "existing buildings" constructed before a community joined the Program would be prohibitively expensive if the premiums were not subsidized by the Federal Government. Congress also recognized that most of these flood-prone buildings were built by individuals who did not have sufficient knowledge of the flood hazard to make informed decisions. Under the NFIP, "existing buildings" are generally referred to as Pre-FIRM (Flood Insurance Rate Map) buildings. These buildings were built before the flood risk was known and identified on the community's FIRM. Currently about 26 percent of the 4.3 million NFIP policies in force are Pre-FIRM subsidized compared to 70 percent of the policies being subsidized in 1978.

In exchange for the availability of subsidized insurance for existing buildings, communities are required to protect new construction and substantially improved structures through adoption and enforcement of community floodplain management ordinances. The 1968 Act requires that full actuarial rates reflecting the complete flood risk be charged on all buildings constructed or substantially improved on or after the effective date of the initial FIRM for the community or after December 31, 1974, whichever is later. These buildings are generally referred to as “Post-FIRM” buildings.

Early in the Program’s history, the Federal Government found that providing subsidized flood insurance for existing buildings was not a sufficient incentive for communities to voluntarily join the NFIP nor for individuals to purchase flood insurance. Tropical Storm Agnes in 1972, which caused extensive riverine flooding along the east coast, proved that few property owners in identified floodplains were insured. This storm cost the Nation more in disaster assistance than any previous disaster. For the Nation as a whole, only a few thousand communities participated in the NFIP and only 95,000 policies were in force.

As a result, Congress passed the Flood Disaster Protection Act of 1973. The 1973 Act prohibits Federal agencies from providing financial assistance for acquisition or construction of buildings and certain disaster assistance in the floodplains in any community that did not participate in the NFIP by July 1, 1975, or within 1 year of being identified as flood-prone.

Additionally, the 1973 Act required that Federal agencies and federally insured or regulated lenders had to require flood insurance on all grants and loans for acquisition or construction of buildings in designated Special Flood Hazard Areas (SFHAs) in communities that participate in the NFIP. This requirement is referred to as the Mandatory Flood Insurance Purchase Requirement. The SFHA is that land within the floodplain of a community subject to a 1 percent or greater chance of flooding in any given year, commonly referred to as the 100-year flood.

The Mandatory Flood Insurance Purchase Requirement, in particular, resulted in a dramatic increase in the number of communities that joined the NFIP in subsequent years. In 1973, just over 2,200 communities participated in the NFIP. Within 4 years, approximately 15,000 communities had joined the Program. It also resulted in a dramatic increase in the number of flood insurance policies in force. In 1977, approximately 1.2 million flood insurance policies were in force, an increase of almost 900,000 over the number policies in force in December of 1973.

The authors of the original study of the NFIP thought that the passage of time, natural forces, and more stringent floodplain management requirements and building codes would gradually eliminate the number of Pre-FIRM structures. Nevertheless, modern construction techniques have extended the useful life of these Pre-FIRM buildings beyond what was originally expected. However, their numbers overall continue to decrease. The decrease in the number of Pre-FIRM buildings has been attributed to a number of factors such as, severe floods in which buildings were destroyed or substantially damaged, redevelopment, natural attrition, acquisition of flood damaged structures, as well as flood control projects.

In 1994, Congress amended the 1968 Act and the 1973 Act with the National Flood Insurance Reform Act (NFIRA). The 1994 Act included measures, among others, to:

- Increase compliance by mortgage lenders with the mandatory purchase requirement and improve coverage;
- Increase the amount of flood insurance coverage that can be purchased;
- Provide flood insurance coverage for the cost of complying with floodplain management regulations by individual property owners (Increased Cost of Compliance coverage);
- Establish a Flood Mitigation Assistance grant program to assist States and communities to develop mitigation plans and implement measures to reduce future flood damages to structures;
- Codify the NFIP's Community Rating System; and
- Require FEMA to assess its flood hazard map inventory at least once every 5 years.

Funding for the NFIP is through the National Flood Insurance Fund, which was established in the Treasury by the 1968 Act. Premiums collected are deposited into the fund, and losses, and operating and administrative costs are paid out of the fund. In addition, the Program has the authority to borrow up to \$1.5 billion from the Treasury, which must be repaid along with interest. Until 1986, Federal salaries and program expenses, as well as the costs associated with flood hazard mapping and floodplain management were paid by an annual appropriation from Congress. From 1987 to 1990, Congress required the Program to pay these expenses out of premium dollars. When expressed in current dollars, \$485 million of policyholder premiums were transferred to pay salary and other expenses of the Program. Beginning in 1991, a Federal policy fee of \$25 dollars, which was increased to \$30 in 1995, is applied to most policies in order to generate the funds for salaries, expenses, and mitigation costs.

The three basic components of the Program – identifying and mapping flood-prone communities, the requirement that communities adopt and enforce floodplain management regulations, and the provision of flood insurance – are described in detail below. Other aspects and components of the Program, including the Mandatory Purchase Requirement, the Community Rating System and the Flood Mitigation Assistance program, are also described.

Flood Hazard Identification and Risk Assessment

The Director of FEMA is required by statute to identify and map the Nation's flood-prone areas and to establish flood-risk zones in such areas. Flood hazard maps have been issued for over 19,200 communities at a cost of over \$1.5 billion (actual dollars) [\$2.8 billion in 2001 dollars]. To date, approximately 100,000 flood map panels have been produced depicting approximately 150,000 square miles of floodplain areas.

The FEMA flood hazard maps are used an estimated 15 million times annually for State and community floodplain management regulations, for calculating flood insurance premiums, and for determining whether property owners are required by law to obtain flood insurance as a condition of obtaining mortgage loans or other Federal or federally related financial assistance. FEMA's flood hazard maps are also used by States and communities for emergency management

and for land use and water resources planning and by Federal agencies implementing Executive Order 11988, Floodplain Management for Federal actions proposed in or affecting floodplains.

The “100-year” Standard

The NFIP would not be able to offer insurance at affordable rates without the existence of risk management (floodplain management) to reduce flood losses. In order to assess and manage the flood risk, a national standard was needed. The U.S. Department of Housing and Urban Development, which initially administered the NFIP before FEMA was created, began its administration of the NFIP by calling on a group of experts to advise the agency as to the best standard to be used as the basis for risk assessment, insurance rating, and floodplain management for the Program. After extensive study and coordination with Federal and State agencies, this group recommended the 1-percent-annual-chance flood (also referred to as the 100-year or “Base Flood”) be used as the standard for the NFIP.

The 1-percent-annual-chance flood was chosen on the basis that it provides a higher level of protection while not imposing overly stringent requirements or the burden of excessive costs on property owners. The 1-percent-annual-chance flood (or 100-year flood) represents a magnitude and frequency that has a statistical probability of being equaled or exceeded in any given year, or, stated alternatively, the 100-year flood has a 26 percent (or 1 in 4) chance of occurring over the life of a 30-year mortgage.

In 1973, the Senate Committee on Banking, Housing and Urban Affairs, which had oversight responsibility for the NFIP, heard arguments on both sides on the appropriateness of the 100-year base flood standard. The Committee concluded that the 1-percent-annual-chance flood was reasonable and consistent with national objectives in reducing flood losses. In 1981, the Office of Management and Budget (OMB) directed FEMA to review the use of the 1-percent-annual-chance flood as part of the President’s 1981 Task Force on Regulatory Relief. In its report to OMB, FEMA reaffirmed the overwhelming support for the Base Flood standard in responses from the public and private sector.

The 1-percent-annual-chance flood is a regulatory standard used by Federal agencies, and most States, to administer floodplain management programs. The 1-percent-annual-chance flood standard has been used since the inception of the NFIP and is used for floodplain management purposes in all of the 19,200 participating communities that have been issued flood hazard maps.

Identifying and Mapping Flood-Prone Areas

To meet the objective that studies be conducted to accurately assess the flood risk within each flood-prone community, the 1968 Act called for: 1) the identification and publication of information within five years for all floodplain areas that have special flood hazards; and 2) the establishment of flood-risk zones in all such areas to be completed over a 15-year period following passage of the Act.

When the NFIP was initially established, communities had to have been mapped and have flood-risk zones established before they could participate in the Program. Within the first year of

NFIP's operation, it became evident that the time required to complete the detailed flood insurance studies would markedly delay implementation of the Program in many flood-prone communities. As a result, an interim means for more rapid community participation in the NFIP had to be provided. The Housing and Urban Development Act of 1969 expanded participation by authorizing an Emergency Program under which insurance coverage could be provided at non-actuarial, federally subsidized rates in limited amounts during the period prior to completion of a community's Flood Insurance Study (FIS).

Until an FIS could be conducted, Flood Hazard Boundary Maps, which delineated the boundaries of the community's SFHAs, were prepared using approximate methods. These methods identified on an approximate basis a 1-percent-annual-chance floodplain, but did not include the determination of Base Flood Elevations (BFEs) (100-year flood elevations), flood depths, or floodways. The Flood Hazard Boundary Map was intended to assist communities in managing floodplain development, and to assist insurance agents and property owners in identifying those areas where the purchase of flood insurance was advisable.

FISs that use detailed hydrologic and hydraulic analyses to develop BFEs and designate floodways and risk zones for developed areas of the floodplain were subsequently produced for most NFIP communities. Once more detailed risk data were provided to communities, the community could enter the Regular Program whereby the community is required to adopt more comprehensive floodplain management requirements and owners of structures could purchase higher amounts of insurance.

In producing and updating FISs, FEMA typically uses a combination of two study approaches (approximate and detailed) in identifying a community's flood hazards. Detailed study methods typically employ the use of engineering models and, at a minimum, result in the determination of BFEs or flood depths and floodways that will be displayed on the FIRM. In general, the decision whether to use the approximate method or detailed method is based on existing and anticipated development in and near the floodplain. Flood hazard information for flooding sources that affect developed or developing areas are based on detailed studies whenever possible; approximate study methods, which are less rigorous than detailed methods and do not determine BFEs or floodways, may be used for undeveloped or sparsely developed areas.

An FIS usually generates the following flood hazard information:

- BFEs are presented as either water-surface elevations or average depths of flow above the ground surface. These elevations and depths are usually referenced to either the National Geodetic Vertical Datum of 1929 (NGVD29) or the North American Vertical Datum of 1988 (NAVD88).
- Water-surface elevations for the 10-year (10-percent-annual-chance), 50-year (2-percent-annual-chance), 100-year (1-percent-annual-chance), and 500-year (0.2-percent-annual-chance) floods.
- Boundaries of the regulatory 100-year floodway. The regulatory floodway is defined as the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the entire Base Flood (100-year flood) discharge can be conveyed with no greater than a 1.0-foot increase in the BFE.

- The boundaries of the 100- and 500-year floodplains. The 100-year floodplain is referred to as the Special Flood Hazard Area (SFHA).

The results of the FIS are presented on a map, referred to as a Flood Insurance Rate Map (FIRM), and presented in the FIS report in a narrative and graphically as flood profiles attached to the narrative. FEMA determines the 1-percent-annual-chance flood, shown on the FIRMs as A Zones or V Zones, from information that obtained through consultation with the community, and from floodplain topographic surveys, detailed hydrologic and hydraulic analyses, and historic records. FEMA uses commonly accepted computer models and engineering methods that estimate hydrologic and hydraulic conditions to determine the 1-percent-annual-chance flood, to determine BFEs, and to designate flood-risk zones.

FEMA defines technical requirements, product specifications for Flood Hazard Maps and related NFIP products, and associated coordination and documentation activities in *Guidelines and Specifications for Flood Hazard Mapping Partners*, dated February 2002. The Guidelines, which are used to prepare FISs and restudies, provide information for the evaluation of riverine and alluvial fan flood hazards, coastal flooding and flood-related erosion, and flood hazards along the Great Lakes. The Guidelines also include procedures for conducting hydrologic and hydraulic analyses of a flooding source or sources in order to establish BFEs. Also, included in the Guidelines is information on process and products associated with the Cooperative Technical Partners initiative, digital Flood Insurance Rate Map (DFIRM) specifications, and the option of including a flood hazard zone reflecting future conditions on the FIRM when requested by the community.

Along rivers, streams, and lakes within the United States, FEMA computes flood elevations using computer models, statistical techniques, or both. These elevations are a function of the amount of water expected to enter a particular system by means of precipitation and runoff. The SFHAs in riverine areas are primarily identified as “A Zones” on the FIRM.

Along the coast, FEMA determines SFHAs by an analysis of storm surge, wind direction and speed, wave heights, and other factors. FEMA designates these areas along the coast as both V Zones and A Zones on the FIRM. V Zones are the more hazardous coastal flood zones because they are subject to high velocity wave action. FEMA applies the V-Zone designation to those areas along the coast where water depth and other conditions would support at least a 3-foot wave height. FEMA also considers other factors in identifying V Zones, such as wave run-up. FEMA usually designates A Zones in coastal areas landward of the V Zone. Coastal flood hazards areas mapped as A Zones can be subject to storm surge and damaging waves; however, the waves are less than 3 feet in height.

Flood Mapping Process

Over 10,000 communities have been provided detailed FISs and have been issued FIRMs that include BFEs for Zones AE, A1-30, AH, AO, AR/AE, AR/A1-30, AR/AO, AR/AH, VE, and V1-30. Most of these NFIP communities will have FIRMs that include a combination of SFHAs that have been studied in detail with BFEs and floodway data and SFHAs that have been studied

using approximate methods which have been designated Zone A without BFEs or floodway designations.

A draft FIS can be prepared by a study contractor to FEMA under the NFIP Regulations at 44 CFR Part 66 or by appellants under 44 CFR Part 65 for the purpose of establishing or revising BFE and floodway data. FEMA reviews and modifies, as appropriate, the draft FIS to ensure it complies with established NFIP criteria. Once FEMA has received and approved the draft FIS, FEMA releases the information to the public as a Preliminary FIS and FIRM for review and comment during a statutory 90-day appeal period before proposed elevations become effective.

During the appeal period, any owner or lessee of real property within the community where the proposed elevation determination has been made may file a written appeal. The appeal must be based on a demonstration that the elevations proposed by FEMA are scientifically and/or technically incorrect. Until such time as the 90-day appeal period is completed and the community is provided with a notice of final flood elevation determination, the BFE and floodway data in the FIS are considered preliminary and subject to change. During the preparation and review of the FIS and the appeals, FEMA coordinates closely with State and local officials and presents its findings at public meetings.

Depiction of Levee Systems and Floodwall Systems on NFIP Maps

FEMA does not design, construct, fund, or approve levee systems or floodwall systems. However, FEMA has developed stringent criteria that must be met before any system can be depicted as providing protection from the 1-percent-annual-chance flood on a FIRM. Once the criteria in the NFIP regulations have been met, FEMA will remove the property behind the levee or floodwall from the 1-percent-annual-chance floodplain. FEMA's review of a levee or floodwall system is for the sole purpose of establishing appropriate risk-zone determinations for NFIP maps and does not constitute a determination or warranty by FEMA as to how a structure or system will perform in a flood event. Because of the potentially devastating effects to life and property should a levee or floodwall fail or be overtopped, FEMA takes special care in considering the impacts of such structures on flood hazards.

FEMA recognizes only a levee system or floodwall system that meets, and continues to meet, minimum design standards that provide protection from the 1-percent-annual-chance flood. Specifically, the criteria established in 44 CFR §65.10 must be satisfied before a levee may be credited and mapped as providing protection from the 1-percent-annual-chance flood event. The criteria include:

- **Design criteria**, which address minimum freeboard above flood height, closure devices for any openings, embankment protection, embankment and foundation stability, settlement, and interior drainage. All data submitted to demonstrate compliance with these structural requirements must be certified by a registered professional engineer. In lieu of submitting these data, a Federal agency with responsibility for levee design may certify that the levee and/or levee system provides adequate protection against the 1-percent-annual-chance flood.

- **Operations plan and criteria**, which address operation of closures and interior drainage systems during a flood event. Operations for a levee system must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency established by a community participating in the NFIP.
- **Maintenance plans and criteria** require an officially adopted maintenance plan. At a minimum, the plan must specify the maintenance activities to be performed, the frequency of their performance, and the person responsible for their performance. All maintenance activities must be performed under the jurisdiction of a Federal or State agency, an agency created by a Federal or State law, or an agency of a community participating in the NFIP.

Changes to the Flood Maps

The flood risk information presented on the FIRM and in the FIS report forms the technical basis for the administration of the NFIP. FEMA exercises great care to ensure that the analytical methods employed in the FISs are scientifically and technically correct, that the engineering standards followed meet professional standards, and, ultimately, that the results of the FIS are accurate. Although the NFIP maps and FIS reports are prepared according to rigorous technical standards, FEMA recognizes that changes to the maps and reports may be necessary. Some reasons for the changes are due to improvements in the techniques used in assessing flood risks, changes in physical conditions in the floodplains or watersheds, and the availability of new scientific or technical data.

In addition, the limitations imposed by the scales at which the maps are prepared may result in individual properties being inadvertently included in SFHAs. FEMA has developed a process, referred to as a Letter of Map Amendment (LOMA), to correct these inadvertent inclusions. A LOMA results from an administrative procedure that involves the review of technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in an SFHA, thereby removing the Mandatory Flood Insurance Purchase Requirement.

FEMA has similarly established administrative procedures for changing effective maps based on new or revised scientific or technical data that reflect other changes to the floodplain including projects such as fill and flood control measures. The map actions are referred to as Letter of Map Revision based on Fill (LOMR-F) and Letter of Map Revision (LOMR) respectively.

The NFIP regulations allow FEMA to revise and amend maps and FIS reports, as warranted, or after it receives requests from community officials and individual property owners. To help FEMA ensure that the maps and reports present information that accurately reflects existing flood risks, the NFIP regulations require that each NFIP community inform FEMA of any physical changes that affect BFEs in the community and, within 6 months of the date that such data are available, submit those data that show the effects of the changes.

In making revisions and amendments, FEMA must adhere to the same engineering standards applied in the preparation of the original NFIP maps and FIS reports. Therefore, when

requesting changes to NFIP maps and reports, community officials and property owners are required to submit adequate supporting data. Those data enable FEMA to review and evaluate the requests and to carry out its responsibility of ensuring that the flood-risk information presented is scientifically and technically correct.

Because LOMAs, LOMR-Fs, and LOMRs officially amend or revise the flood maps, they must reflect existing conditions, such as an “as-built” project. Communities, developers, and property owners also frequently submit requests for proposed projects in floodplain areas to FEMA for review and comment. Such requests typically include data and analyses of the pre- and post-project conditions so that FEMA can ascertain the impact on flood hazards of the proposed project. FEMA reviews such requests using the same data and engineering standards that are used for “as-built” requests. FEMA’s response is provided in the form of a “conditional” LOMA, LOMR-F, or LOMR, which state whether the proposed project, if built as proposed, would justify a map revision. A conditional LOMA, LOMR-F, or LOMR does not constitute a building permit; the authority to approve projects and issue building permits lies with the local community and, in some instances, State agencies.

Mapping the Coastal Barrier Resource System or Otherwise Protected Areas

Congress passed the Coastal Barrier Resources Act in 1982 and the Coastal Barrier Improvement Act in 1990, defining and establishing a system of protected coastal areas (including the Great Lakes) and Otherwise Protected Areas (OPAs) known as the Coastal Barrier Resources System (CBRS). The Acts provide protection to CBRS areas by prohibiting most expenditures of Federal funds in CBRS areas, including the sale of flood insurance for buildings constructed or substantially improved after the effective date of the CBRS area. These prohibitions refer to "any form of loan, grant, guarantee, insurance, payment, rebate, subsidy or any other form of direct or indirect Federal assistance," with specific and limited exceptions.

Congress designated the initial CBRS areas in 1982 and is the only entity that may authorize a revision to CBRS boundaries. Revisions to CBRSs are typically authorized by Congress based on State and local requests as well as recommendations made by the U.S. Fish and Wildlife Service. Because of the prohibition on the sale of flood insurance for buildings constructed or substantially improved after the CBRS effective date, it is critical to depict these areas on FIRMs. Thus, FEMA, in cooperation with the U.S. Fish and Wildlife Service, transfers the boundaries from Congressionally-adopted source maps, titled “Coastal Barrier Resource System,” to FIRMs so that insurance agents will not inadvertently sell flood insurance policies for buildings not eligible for the purchase of flood insurance.

Map Modernization Program

Nationwide, approximately 75 percent of the FEMA flood maps are more than 10 years old. Because flood hazards are dynamic and usually increase over time as development occurs, old maps tend to understate actual, existing flood hazards. Additionally, most of the maps were produced using now antiquated manual cartographic techniques. The primary reason for the existing backlog of outdated maps has been inadequate program funding over the past 20 years.

As a result, in 1997, FEMA designed a plan to modernize the FEMA flood-mapping program. With implementation of the modernization plan, the flood hazard information provided to communities would be more accurate and extensive, resulting in safer communities. The plan proposes a 7-year upgrade to the flood map inventory and an enhancement of products, services, and process that entails:

- Converting Level-1 Flood Map Upgrades that entail converting the maps to a digital format for approximately 11,140 communities (55,700 map panels)—this includes resolving community-identified map maintenance needs for 16,500 map panels; upgrading existing digitally produced 20,700 map panels to the new digital FIRM specifications; and when feasible, cost-effectively enhancing the flood theme (e.g., redelineation of floodplain boundaries on updated topography or limited detailed studies to update approximate flood zones).
- Conducting Level-2 Flood Map Upgrades that entail all of the features of Level 1 Flood Map Upgrades plus incorporating updated detailed flood data through studies and restudies for approximately 4,700 communities with inadequate floodplain mapping (23,540 map panels);
- Flood map creations for approximately 2,700 flood-prone communities without flood maps (13,700 map panels);
- Integrating communities, States, and regional agencies into the mapping process through the Cooperating Technical Partners (CTP) initiative;
- Converting the maps to metric, as required by Executive Order 12770, and to the North American Vertical Datum of 1988; and
- Improving customer service to make the maps easier to obtain and use, including electronic and digital printing and distribution.

Over the proposed 7-year modernization period, the entire flood map inventory would be converted to a digital format. Additionally, approximately 13,700 new digital map panels would be created for flood-prone communities that do not currently have flood maps.

As a cornerstone of the plan, FEMA continues to fully integrate communities, States, and regional agencies in the flood mapping process through the Cooperating Technical Partners (CTP) program. To date, more than 115 partners have joined the CTP program, which includes two large remapping efforts for the States of New York and North Carolina. The program initiated for the State of North Carolina is the first statewide flood mapping initiative and includes 16 other Federal agencies. The CTP initiative allows partnering entities to perform all or portions of data collection and mapping tasks. Cooperating Technical Partners can use the *Guidelines and Specifications for Flood Hazard Mapping Partners* in performing supporting technical analyses and preparation of flood hazard maps.

To date, funding to implement the map modernization plan has not been made available.

Mapping Future Conditions

Historically, flood hazard information presented on NFIP flood maps has been based on the existing conditions of the floodplain and watershed. The primary reason is that future land-use development, such as urban growth, is uncertain and difficult to predict and has not, therefore, been considered in FISs.

In recent years, a number of communities that are experiencing urban growth have expressed interest in using hydrology based on future conditions to regulate floodplain development. FEMA conducted an extensive evaluation to determine whether future conditions flood hazard information could and should be placed on FIRMs and in the accompanying FIS. On November 27, 2001, FEMA issued a final rule that allows for floodplains that reflect future conditions hydrology to be shown on the FIRM at the request of the community.

The future conditions flood hazard information will be provided for informational purposes only and it is up to the community to decide whether to use the information to regulate floodplain development. When future conditions floodplains are included on the FIRM, both the existing conditions floodplain and the future conditions floodplain will be shown. The existing conditions data will continue to be used to establish flood insurance rates and to determine if flood insurance is required. The new procedure will allow FEMA to maintain national standards while at the same time providing additional information for use by the community.

Floodplain Management

Section 1315 of the 1968 Act prohibits FEMA from providing flood insurance to property owners unless the community adopts and enforces floodplain management criteria established under the authority of Section 1361(c) of the Act. These criteria are established in the NFIP regulations at 44 CFR §60.3. The community must adopt a floodplain management ordinance that meets or exceeds the minimum NFIP criteria. Under the NFIP, “community” is defined as:

“any State, or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska Native village or authorized native organization, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.”

The Program has served as an important impetus for the establishment of floodplain management programs nationwide in the approximately 19,700 participating communities and most States and territories. Community participation in the NFIP is voluntary. Prior to the creation of the 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. The power to regulate development in the floodplain, including requiring and approving permits, inspecting property, and citing violations, is granted to communities under a State’s police powers. FEMA has no direct involvement in the administration of local floodplain management ordinances. Since the Federal Government does not have land use authority, the NFIP is based

on the Federal government's power to spend under the Constitution rather than any Federal authority to regulate land use.

Minimum NFIP Floodplain Management Requirements

Under the NFIP, the minimum floodplain management requirements that a community must adopt depends on the type of flood risk data (detailed FIS and FIRMs with BFEs or approximate A Zones and V Zones without BFEs) that the community has been provided by FEMA. Under the NFIP regulations, participating NFIP communities are required to regulate all development in SFHAs. "Development" is defined as:

"any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."

Before a property owner can undertake any development in the SFHA, a permit must be obtained from the community. The community is responsible for reviewing the proposed development to ensure that it complies with the community's floodplain management ordinance. Communities are also required to review proposed development in SFHAs to ensure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, such as 404 wetland permits from the Army Corps of Engineers or permits under the Endangered Species Act.

Under the NFIP, communities must review subdivision proposals and other proposed new development, including manufactured home parks or subdivisions to ensure that these development proposals are reasonably safe from flooding and that utilities and facilities servicing these subdivisions or other development are constructed to minimize or eliminate flood damage.

In general, the NFIP minimum floodplain management regulations require that new construction or substantially improved or substantially damaged existing buildings in A Zones must have their lowest floor (including basement) elevated to or above the Base Flood Elevation (BFE). Non-residential structures in A Zones can be either elevated or dry-floodproofed. In V Zones, the building must be elevated on piles and columns and the bottom of the lowest horizontal structural member of the lowest floor of all new construction or substantially improved existing buildings must be elevated to or above the BFE. The minimum floodplain management requirements are further described below:

For all new and substantially improved buildings in A Zones:

- All new construction and substantial improvements of residential buildings must have the lowest floor (including basement) elevated to or above the BFE.
- All new construction and substantial improvements of non-residential buildings must either have the lowest floor (including basement) elevated to or above the BFE or dry-floodproofed to the BFE. Dry floodproofing means that the building must be designed and constructed to be watertight, substantially impermeable to floodwaters.

- Buildings can be elevated to or above the BFE using fill, or they can be elevated on extended foundation walls or other enclosure walls, on piles, or on columns.
- Because extended foundation or other enclosure walls will be exposed to flood forces, they must be designed and constructed to withstand hydrostatic pressure otherwise the walls can fail and the building can be damaged. The NFIP regulations require that foundation and enclosure walls that are subject to the 100-year flood be constructed with flood-resistant materials and contain openings that will permit the automatic entry and exit of floodwaters. These openings allow floodwaters to reach equal levels on both sides of the walls and thereby lessen the potential for damage. Any enclosed area below the BFE can only be used for the parking of vehicles, building access, or storage.

In addition, to the above requirements, communities are required to select and adopt a regulatory floodway in riverine A Zones. The area chosen for the regulatory floodway must be designed to carry the waters of the 1-percent-annual-chance flood without increasing the water surface elevation of that flood more than one foot at any point. Once the floodway is designated, the community must prohibit development within that floodway which would cause any increase in flood heights. The floodway generally includes the river channel and adjacent floodplain areas that often contain forests and wetlands, an area estimated at 5.8 million acres (or over 9,000 square miles) on the FIRMs. This requirement has the effect of limiting development in the most hazardous and environmentally sensitive part of the floodplain.

For all new and substantially improved buildings in V Zones:

- All new construction and substantial improvements of buildings must be elevated on piles and columns so that the bottom of the lowest horizontal structural member of the lowest floor is elevated to or above the BFE. No fill can be used for structural support.
- All new construction and substantial improvements of buildings must be properly anchored to resist flotation, collapse, and lateral movement.
- In V Zones, the velocity water and wave action associated with coastal flooding can exert strong hydrodynamic forces on any obstruction to the flow of water. Standard foundations such as solid masonry walls or wood-frame walls will obstruct flow and be at risk to damage from high-velocity flood forces. In addition, solid foundation walls can direct coastal floodwaters into the elevated portion of the building or into adjacent buildings. The result can be structural failure of the building. For these reasons, the area below the lowest floor of the elevated building in V Zones must either be free of obstruction, or any enclosure must be constructed with open wood lattice-panels or insect screening or, be constructed with non-supporting/non-load bearing breakaway walls which meet applicable NFIP criteria. Any enclosed area below the BFE can only be used for the parking of vehicles, building access, or storage.
- In order to further protect structures from damaging wave impacts, structures must be located landward of the reach of mean high tide. Furthermore, man-made alteration of sand dunes and mangrove stands, which would increase potential flood damage, are prohibited within V Zones.

In responding to the public's desire to have an enclosed area below an elevated building, but recognizing the potential risks to lives and property, the NFIP floodplain management regulations permit certain limited uses of enclosures below the lowest floor in A Zones or V Zones. Under the NFIP, the enclosed area below an elevated building in an A Zone or V Zone can only be used for the parking of vehicles, building access, or storage. The allowance of these uses below the BFE is permitted because the amount of damage caused by flooding to these areas can easily be kept to a minimum by following the performance standards for the design and construction of enclosures in A Zones and V Zones described above and by using flood-resistant building materials. To further minimize flood damages, mechanical, electrical, plumbing equipment, and other service facilities must be designed and/or located above the BFE so as to prevent damage during conditions of flooding.

The Program has led to a large reduction in potential average annual flood damages for new construction (Post-FIRM structures). The NFIP's loss experience indicates that \$1 billion in flood damages are avoided each year as a result of the NFIP floodplain management regulations for new construction. Structures built to NFIP criteria experience 80 percent less damage through reduced frequency and severity of losses.

On the other hand, there is still significant flood damage potential for existing flood-prone buildings (Pre-FIRM structures). According to estimates developed in a 1997 study, there are 6.6 million structures located in SFHAs identified on the FIRMs. These 6.6 million structures include 6.2 million residential structures (representing about 8 million housing units) and 0.4 million non-residential structures. Of the 6.6 million structures, 4.3 million Pre-FIRM structures were built prior to the issuance of a community's FIRM and the adoption of floodplain management regulations. The problem is not with the total universe of Pre-FIRM buildings. The 4.3 million Pre-FIRM structures have varying degrees of flood risk with just over half of these structures estimated to have their lowest floor below the BFE. Of those Pre-FIRM structures that have their lowest floor below the BFE, a smaller group of Pre-FIRM structures have their lowest floor well below the BFE and are subject to the severest risk.

The NFIP substantial improvement requirement and substantial damage requirement provides a mechanism to ensure that a significant increase in investment in existing Pre-FIRM buildings will receive needed protection from the flood risk. If a community determines that the cost of improvements to a home or business equals or exceeds 50% of the market value of the building, the building is considered a "substantial improvement". If a community determines that the cost of restoring a home or business equals or exceeds 50 of the market value of the building before the damage from any origin occurred, the building is considered "substantially damaged". A substantially improved building or substantially damaged building must meet the minimum requirements of the NFIP. It is the community's responsibility to make substantial improvement or substantial damage determinations

The substantial damage requirement of the NFIP has been difficult for some communities to enforce. One of the primary reasons for this has been that local officials find it difficult to enforce the requirement on property owners who do not have the financial resources to both repair and bring the buildings into compliance. In the last ten years, financial resources to mitigate substantially damaged buildings have improved. With passage of the National Flood Insurance Reform Act of

1994, activities that support reducing future damages to existing flood-prone buildings that have been substantially damaged now include: Increased Cost of Compliance coverage and the Flood Mitigation Assistance (FMA) program.

In addition, FEMA's Hazard Mitigation Grant Program (HMGP) under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Relief Act of 1988, as amended, also provides considerable resources in reducing or eliminating future flood damages to existing structures after a flood disaster. The Disaster Mitigation Act of 2000, which amended the Stafford Act, will provide additional resources for mitigation projects and planning. These activities are further described under "Other NFIP Activities" below. FEMA's resources combined with resources from other Federal agencies, such as the Department of Housing and Urban Development and the Small Business Administration, have improved the level of compliance with the substantial damage requirement by providing property owners with the financial help they need to meet Program requirements.

A number of the existing Pre-FIRM structures experience repeat flood damages and represent a significant problem for the Program. NFIP Repetitive Loss Properties have been generally defined as those that have had at least two losses of \$1,000 or more within any 10-year period. Currently there are about 45,000 insured repetitive loss structures in the country. These buildings represent a serious drain on the National Flood Insurance Fund and have accounted for nearly one-third of all paid losses. The NFIP Regulations do not include specific criteria to address repetitively damaged structures similar to the substantial damage requirement. However, FEMA has developed a Repetitive Loss Strategy to identify properties throughout the country that are most at risk for repeat flooding, and to reduce their exposure through targeted buyouts, relocation, and elevation. The strategy targets a subset of Repetitive Loss Properties that includes currently insured properties that have 2 or 3 losses where the cumulative flood insurance claim payments are greater than the building value or those properties that have had 4 or more losses. These represent around 10,000 buildings. FEMA's mitigation programs are being focused on these buildings, which will result in significant reductions in NFIP claims and overall flood damages as they are mitigated.

Ordinance Adoption

Once FEMA provides a community with the flood hazard information upon which floodplain management regulations are based, the community is required to adopt a floodplain management ordinance that meets or exceeds the minimum NFIP requirements. FEMA can suspend communities from the Program for failure to adopt once the community is notified of being flood-prone or for failure to maintain a floodplain management ordinance that meets or exceeds the minimum requirements of the NFIP. The procedures for suspending a community from the Program for failure to adopt or maintain a floodplain management ordinance that meets or exceeds the minimum requirements of the NFIP are established in the NFIP regulations at 44 CFR §59.24(a) and (d).

Since 1968, just over 2,300 communities have been suspended for failure to adopt. Most of these communities subsequently adopted a compliant ordinance and were eventually reinstated into the Program. A community either has or does not have a compliant ordinance. There are currently 261 communities suspended from the Program for failure to adopt floodplain

management regulations that meet or exceed the minimum NFIP requirements. These are generally small communities with little or no floodplain development.

In these suspended communities, flood insurance is not available to property owners. In addition, these communities are subject to limitations on Federal financial assistance in Section 202(a) of 1973 Act which prohibits Federal officers or agencies from approving any form of loan, grant, guaranty, insurance, payment, rebate, subsidy, disaster assistance loan or grant, for acquisition or construction purposes within SFHAs. For example, this would prohibit mortgage loans guaranteed by the Department of Veterans Affairs, insured by the Federal Housing Administration, or secured by the Rural Economic and Community Development Services. In the case of disaster assistance under the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, as amended, this prohibition only applies to assistance in connection with a flood.

Furthermore, Section 202(b) of the 1973 Act requires federally regulated lending institutions to notify the purchaser or lessee of improved real property situated in a SFHA whether Federal disaster assistance will be available when such property is being used to secure a loan that is being made, increased, extended or renewed.

Monitoring Community Compliance

FEMA monitors communities to ensure that they have adopted an ordinance that meets or exceeds the minimum NFIP floodplain management criteria and to ensure that they are effectively enforcing their ordinance. While the NFIP floodplain management criteria are administered by States and communities through their floodplain management regulations, FEMA's role is to provide technical assistance and to monitor communities for compliance with the minimum NFIP criteria. If communities do not adequately enforce their floodplain management regulations, they can be placed on probation and potentially suspended from the Program following probation.

FEMA or States on behalf of FEMA conduct Community Assistance Visits (CAVs) and Community Assistance Contacts (CACs) to monitor community floodplain management programs. A CAV is a scheduled visit to an NFIP community for the purpose of conducting a comprehensive assessment of the community's floodplain management program. The CAV is also used as an opportunity to provide technical assistance to the community. A CAV typically involves a tour of the floodplain, a meeting with local floodplain management officials, and an examination of the community's floodplain development permit and variance files. The visit is documented in a follow-up letter to the community. If any issues are identified during the CAV, such as a possible floodplain violation or program deficiency, these issues are also addressed in the follow-up letter. The community is responsible for resolving any program deficiencies or remedying any violations identified.

A CAC is used to establish a contact with a community for the purpose of determining if any problems or issues exist and to offer the community assistance if necessary. CACs can be conducted by means of a telephone call or brief visit. While CACs are a less comprehensive assessment of a community's floodplain management program, sufficient information about the

community's floodplain management program can be obtained in order to determine whether there are more serious floodplain management problems in the community.

Several thousand local officials are contacted annually through CAVs, CACs, and other activities such as workshops and formal floodplain management courses. Also, a number of local officials directly contact State or FEMA regional staff for technical assistance. Because of resource limitations in conducting CAVs and CACs in any given year, FEMA has established criteria in prioritizing which communities will be visited or contacted. Basically, a CAV should be conducted in communities with known or suspected program deficiencies or potential violations or communities experiencing development in the floodplain. CACs are not conducted in communities where more serious floodplain problems or issues are known or suspected. CACs are generally used as a screening tool for determining whether a community should receive the level of attention of a CAV. Together, they provide FEMA with an effective means of monitoring participating communities and providing technical assistance.

FEMA staff can also monitor enforcement by communities through applications for flood insurance policies, which often identify buildings that are potentially in violation of the NFIP minimum floodplain management requirements. In addition, FEMA can monitor enforcement by communities through the LOMR (Letter of Map Revision) process. Requests through the LOMR process to remove land from the floodplain designation based on fill may indicate that floodplain areas have been improperly filled such as in a floodway or in a coastal V Zone or that a building has its lowest floor below the BFE. The respective FEMA regional office will follow-up with the community to determine whether the building or floodplain development is in compliance with the community's floodplain management regulations and may conduct a CAV if warranted.

Actions Against Communities For Failure to Enforce

Most deficiencies in a community's floodplain management program or violations of local ordinances are generally due to lack of understanding of the NFIP requirements, lack of technical skills, failure to understand the rationales behind the NFIP requirements, or lack of an appreciation of the insurance implications and other consequences of a decision. Most problems that are identified can be solved through community assistance efforts. When this does not happen, FEMA has procedures in place to conduct an enforcement action in order to obtain compliance by the community. If a community does not adequately enforce its floodplain management regulations, it can be placed on probation or suspended from the Program.

Following a CAV, the community must be given reasonable time to demonstrate buildings are compliant with the ordinance or it must correct any program deficiencies and remedy any violations identified during the visit. This affords the community the appropriate due process. It also makes placing a community on probation, if necessary, and potentially suspending a community legally defensible. As long as a community is making adequate progress toward correcting program deficiencies and remedying violations, FEMA will not initiate formal probation. It is important that the community work toward resolving its problems to ensure that future flood damages and potential loss of life are mitigated. FEMA, however, will initiate probation in a community that does not make sufficient progress in resolving its floodplain management issues or chooses not to address them. The procedures for placing a community on

probation or suspending a community from the Program are established in the NFIP regulations at 44 CFR §59.24(b) and (c).

When it becomes necessary to initiate probation, FEMA notifies the community that it will be placed on probation upon 120 days if the community does not demonstrate it has corrected its program deficiencies and has remedied violations to the maximum extent possible. While probation has no effect on the availability of flood insurance, an additional charge of \$50 is added to the premium for each policy for a period of at least one year. A 120-day notice is provided to the community so that FEMA can then give policyholders adequate notification of the impending probation and the additional premium that will be charged. According to the NFIP regulations, FEMA must provide policyholders a notice at least 90 days before the probation is to begin. During the 120-day period, the community has the opportunity to avoid probation by demonstrating compliance with the NFIP requirements.

When a community is placed on probation, FEMA sends a letter to the community establishing new compliance deadlines. If the community fails to take remedial measures during the period of probation, the community may be suspended from the NFIP. When a community is suspended from the NFIP, flood insurance is no longer available. Also, the community is subject to limitations on Federal financial assistance described above under Ordinance Adoption.

As of July 23, 2002, there are 7 communities currently on probation nationwide. Since 1986, 107 communities have been sent a formal notice that they will be placed on probation if they do not address the program deficiencies or violations identified. Out of the 107 communities, 51 have actually been placed on probation. The remaining communities satisfactorily resolved their program deficiencies and violations before being placed on probation. Nine communities were eventually suspended from the Program for failure to enforce the community's floodplain management ordinance and 4 of those communities are currently suspended for noncompliance. The 5 remaining communities corrected their deficiencies and were reinstated into the NFIP.

Most communities comply with NFIP requirements prior to FEMA's issuing a probation notice. Communities often recognize that it is in everyone's best interest to bring the community into compliance before probation or suspension occurs. One of the primary reasons communities comply is to avoid disruptions in the real estate market that would result with the potential loss of flood insurance.

FEMA must follow its procedures for placing communities on probation or suspending communities from the Program to ensure that adequate notifications and due process are provided.

Actions Against Individual Properties For Failure to Comply

There are certain options that can be applied to individual structures that are determined to be in violation of the community's floodplain management ordinance. If an insured structure is identified as a violation of the community's floodplain management ordinance, FEMA can have the insurance company that insures the building review the information and possibly rerate the structure to reflect

the increased risk to the structure. This can result in significantly higher flood insurance rates on the structure, which may cause the property owner to bring the building into compliance.

In addition, Section 1316 of the 1968 Act provides for the denial of flood insurance coverage for any property which the Administrator of the FIMA finds has been declared by a duly constituted State or community to be in violation of State or community floodplain management regulations. Section 1316 can only be implemented in instances when an appropriate authority in the State or community submits a declaration to the Administrator of the FIMA specifically stating that the structure is a violation. Currently, there are over 500 structures that have been denied flood insurance coverage under Section 1316.

State Floodplain Management Role

States also have a role in the NFIP and many have established State floodplain management programs. Each State has designated an NFIP State Coordinating Agency as a point of contact for the NFIP. Generally, the State Coordinating Agency is the State environmental or natural resources agency or the State emergency management agency. Most States provide technical assistance to communities using FEMA funding under the Community Assistance Program (CAP) – State Support Services Element, their own funding, or a combination of the two. CAP was developed in recognition that there were not sufficient FEMA staff resources to provide technical assistance to or monitor compliance with all the participating NFIP communities (currently 19,700) and that other resources would have to be used.

Many States have adopted floodplain management statutes and regulations and have established and funded their own floodplain management programs. States must also have floodplain management regulations or executive orders in place that meet the minimum requirements of the NFIP for State-owned properties in SFHAs. Where a State requires that communities adopt more restrictive requirements than the NFIP minimum requirements, such as a more restrictive floodway or additional freeboard (requiring new construction to be elevated to a level 1 or more feet higher than the BFE), the State requirements take precedence over the NFIP minimum.

Post-Disaster Assessments

The Federal Insurance and Mitigation Administration (FIMA) and the FEMA Regional Offices conduct field investigations following major flood disasters to evaluate how well the NFIP floodplain management requirements performed. During these investigations, a team of experts inspect disaster-induced damages to residential and commercial buildings and other structures and infrastructure; conduct forensic engineering analyses to determine causes of structural and building component failures and successes; and evaluate local design practices, construction methods and materials, building codes, and building inspection and code enforcement processes. In addition, the teams make recommendations of actions that State and local governments, the construction industry, building code organizations, and individual property owners can take to reduce future damages and to protect lives and property in flood hazard areas.

Lessons learned by analyzing these building performance findings are also used by FIMA to fine-tune and improve NFIP Floodplain Management Regulations related to building

performance, designs, methods, and materials and to develop technical guidance. These assessments are documented by FIMA in Flood Damage Assessment Reports and Building Performance Assessment Team (BPAT) reports. The information and findings in these reports are distributed widely using a variety of methods including technical manuals, workshops, and the Internet, and through formal training courses.

Providing Technical Assistance

In addition to technical assistance provided to communities as part of a CAV or CAC, FEMA staff provides technical and planning assistance through workshops and other contacts with community officials, property owners, builders and developers, architects and engineers, surveyors, lenders, and other NFIP constituents. Following major flood disasters, FEMA staff work closely with communities in providing technical assistance on the NFIP floodplain management requirements, particularly the substantial damage requirement, and on developing a reconstruction strategy for property impacted by floods to determine appropriate mitigation measures, such as elevation, acquisition, or relocation of flood-damaged structures.

FEMA conducts extensive training of local and State officials responsible for administering floodplain management programs. FEMA conducts a weeklong Resident Floodplain Management Course at FEMA's Emergency Management Institute (EMI) several times a year. Through this course, FEMA has trained over 1,000 State and local floodplain management officials. An Independent Study Floodplain Management Course is also offered through EMI. FEMA also offers Resident Courses at EMI on mitigation, including a course on retrofitting flood-prone residential structures and a course on coastal construction. The FEMA regional offices and States deliver field-deployed versions of the EMI Floodplain Management Course as well as conduct throughout the year a number of floodplain management workshops that they develop.

Extensive publications have been produced on the NFIP, including mitigation measures that can be undertaken to minimize or eliminate future flood damages. Examples of these publications include:

- *Homeowner's Guide to Retrofitting: Six Ways to Protect Your House from Flooding*
- *Answers to Questions about Substantially Damaged Buildings*
- *Guidance for State and Local Officials on Increased Cost of Compliance Coverage*
- *Managing Floodplain Development in Approximate Zone A Areas*
- *Coastal Construction Manual*
- *Floodplain Management Bulletin 1-98 Use of Flood Insurance Study (FIA) Data as Available Data*
- Technical Bulletin series on NFIP building criteria, such as TB 1-93, *Openings in Foundation Wall* and TB 2-93 *Flood-Resistant Materials Requirements*. (Note: there are currently 11 Technical Bulletins published.)

A complete list of publications can be found on FEMA's website at www.FEMA.gov.

FEMA and the American Planning Association (APA) jointly developed a publication entitled *Subdivision Design in Flood Hazard Areas* that encourages use of innovative planning tools to limit development in the floodplain. This document was published in 1997 as part of their Planning Advisory Service series in an effort to use APA's distribution system to reach out to the planning community.

FEMA also promotes and coordinates governmental and non-governmental floodplain management activities and is a consulting agency to other Federal agencies on issues relating to implementation of Executive Order (E.O.) 11988, Floodplain Management. E.O. 11988 establishes a decision-making process for Federal agencies to avoid the long- and short-term adverse impacts on floodplains unless no practicable alternatives exist. If there is no practicable alternative, the Federal agency must mitigate to ensure that the action minimizes any loss of life and property and loss of natural and beneficial values.

Flood Insurance

Section 1304 of the 1968 Act authorizes the Director of FEMA to establish and carry out “*a national flood insurance program which will enable interested persons to purchase insurance against loss resulting from physical damage to or loss of real property or personal property*” resulting from flood. Flood insurance provides the mechanism by which floodplain occupants are compensated for flood damages. Flood insurance also provides a way for some of the financial burden of flood losses to be removed from taxpayers, such as for Federal disaster assistance and casualty loss deductions under Federal income taxes.

The number of policies in force in the United States has increased from about 95,000 before the Flood Disaster Protection Act of 1973, to 2.2 million in 1989, to over 4.3 million currently. Any property owner of insurable property may purchase flood insurance coverage, provided that the community in which the property is located is participating in the NFIP. The amount of flood insurance coverage in force as of March 31, 2002 is over \$606 billion.

The National Flood Insurance Fund (NFIF) is the instrument through which the Federal Government fulfills its financial responsibilities for the NFIP. In fiscal year 2001, FIMA took in about \$1.5 billion in revenue, mostly from insurance premiums and a \$30 Federal Policy fee on each policy sold or renewed. Revenues from insurance premiums are used to pay losses, pay interest to the Treasury, service the policies, and pay Increased Cost of Compliance claims that provide financial resources for protecting buildings from future flood damages. Revenue from the Federal Policy Fee supports almost all the flood mapping and floodplain management activities of the Program including the Flood Mitigation Assistance program.

Sale of Flood Insurance

FEMA works closely with the insurance industry to facilitate the sale and servicing of flood insurance policies. Flood insurance under the NFIP is sold to owners of property located in NFIP communities through two mechanisms: 1) through state-licensed property and casualty insurance agents and brokers who deal directly with FEMA; and 2) through private insurance companies with a program created in 1983 known as “Write Your Own” (WYO).

The WYO Program was started to increase the NFIP policy count and geographic distribution of policies by taking advantage of the private insurance industry's marketing channels and existing policy base to sell flood insurance. Eighty-six private insurance companies issue policies and adjust flood claims in their own names under the NFIP. The insurers receive an expense allowance and remit premium income in excess of this allowance to the Federal Government. FEMA pays losses through a letter of credit and sets the rates, coverage limitations, and eligibility requirements. The premium charged for NFIP flood coverage by a WYO Company is the same as that charged by the Federal Government through the direct program. Currently about 95% of the flood policies issued under the NFIP are written through the WYO Program.

The NFIP is not the only source of flood insurance. Businesses have been able to purchase flood insurance under Difference In Conditions policies from some insurance companies over the years. Flood coverage for residential homeowners has been more difficult to acquire from the private insurance market. The often-catastrophic nature of flooding has kept most insurers, outside of the NFIP, from writing this coverage. There are companies, such as Lloyds of London, that will, on a limited basis, provide flood insurance to some properties.

Flood Insurance Policy

The Standard Flood Insurance Policy (SFIP) specifies the terms and conditions of the agreement of insurance between FEMA or a WYO company as the Insurer and the Insureds. Insureds in NFIP communities include owners, renters, builders of buildings that are in the course of construction, condominium associations, and owners of residential condominium units.

"Flood" is defined in the SFIP, in part, as:

“A general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties (at least one of which is your property) from overflow of inland or tidal waters, from unusual and rapid accumulation or runoff of surface waters from any source, or from mudflow.”

The SFIP is issued on one of three available policy forms, depending on the occupancy of the building, to provide coverage for the peril of flood.

- The Dwelling Form is used to insure 1-4 family buildings and individual residential condominium units.
- The General Property Form covers residential buildings of more than 4 families as well as non-residential risks.
- The Residential Condominium Building Association Policy (RCBAP) Form insures associations under the condominium form of ownership.

Eligible Structures

Sections 1305 of the 1968 Act establishes the scope of the flood insurance program for eligible structures. As a priority, the 1968 Act requires that flood insurance be made available to 1-4 family residential buildings, small businesses, and churches. It gave permission after study to

extend flood insurance to other residential properties, other business properties, agricultural properties, properties occupied by private nonprofit organizations, and properties owned by State or local governments. Currently insurance is available for all these types of properties and their contents with limited exceptions. Property owners in NFIP communities may purchase flood insurance whether the building or its contents is located in or outside the floodplain.

In order to be eligible for flood insurance, a structure must have at least 2 solid walls and a roof, be principally above ground, and not entirely over water. This includes manufactured (i.e., mobile) homes that are anchored to permanent foundations and travel trailers without wheels that are anchored to permanent foundations and are regulated under the community's floodplain management and building ordinances or laws. Contents of insurable walled and roofed buildings are insurable under the policy as a separate coverage.

Buildings entirely over water or principally below ground, gas and liquid storage tanks, animals, birds, fish, aircraft, wharves, piers, bulkheads, growing crops, shrubbery, land, livestock, roads, machinery or equipment in the open, and generally motor vehicles are not insurable. Most contents and finishing building materials located in a basement are not covered. Similarly, this coverage limitation applies to enclosures below the lowest elevated floor of an elevated building constructed after the FIRM became effective.

Section 1316 of the 1968 Act authorizes FIMA to deny flood insurance *"for any property which the Director finds has been declared by a duly constituted state or local zoning authority, or other authorized public body, to be in violation of a state or local laws, regulations, or ordinances"*. Section 1316 is initiated when an appropriate authority in the State or community submits a declaration to the Administrator of the FIMA specifically stating that the structure is a violation. When the Administrator of the FIMA makes a finding of a valid declaration of a violation, flood insurance is not available and no new policy can be written to cover the building, nor can an existing policy be renewed.

Coastal Barrier Resources System

The purchase of flood insurance is also limited in the Coastal Barrier Resources System. Congress passed laws limiting Federal expenditures in certain coastal areas and designating them as a part of the Coastal Barrier Resources System (CBRS) or as Otherwise Protected Areas (OPAs). In these areas, there is a prohibition for the expenditure of most Federal funds. These prohibitions refer to "any form of loan, grant, guarantee, insurance, payment, rebate, subsidy or any other form of direct or indirect Federal assistance," with specific and limited exceptions.

Older buildings constructed before dates established by the Coastal Barrier Resources Act of 1982 and the Coastal Barrier Improvement Act of 1990 remain eligible for Federal flood insurance while new construction or substantially improved structures located within these designated areas are not eligible for flood insurance. If, at the time of a loss, it is determined that a policy has been inadvertently issued on new construction or substantial improvements located in a CBRS area, any claim will be denied, the policy canceled, and the premium refunded. The CBRS areas are located in nearly 400 communities on the Atlantic and Gulf coasts and along the Great Lakes shores, and are delineated on the communities' flood maps and cover an estimated 3 million acres.

Waiting Period

Unlike other property insurance, agents who write policies under the NFIP cannot “bind” coverage. A purchaser of flood insurance must wait 30 days from the date the application is completed and the premium presented before the policy becomes effective. A change in the waiting period from 5 days to 30 days was included as part of the National Flood Insurance Reform Act of 1994. This addressed a problem encountered where individuals with properties on larger rivers could wait until properties many miles upriver were flooding before purchasing coverage.

There are however a several exceptions to the 30-day waiting period. For example, the 30-day waiting period will not apply when a new flood insurance policy is required in connection with the making, increasing, extension, or renewal of a loan, such as a second mortgage. The 30-day waiting period will not apply when an additional amount of insurance is required during the 13-month period beginning on the effective date of a map revision. Also, the 30-day waiting period does not apply when a lender discovers that a loan that they have made is in a SFHA and is required to carry flood insurance under the Mandatory Flood Insurance Purchase Requirement.

Coverage Amounts

Under the NFIP there are maximum amounts of coverage available under the Emergency Program and the Regular Program. Under the Emergency Program, non-actuarial, federally subsidized rates in limited amounts are available prior to completion of a community’s Flood Insurance Study (FIS). Once more detailed risk data is provided to the community in the form of a FIRM and a FIS, the community is entered into the Regular Program and full limits of coverage are made available. Nearly all participating communities are in the Regular Program, and individuals can purchase flood insurance up to the following amounts.

- Residential 1-4 family unit buildings and individual residential condominium units are written under the Dwelling Form and are eligible for up to \$250,000 in building coverage and up to \$100,000 in personal property coverage.
- Residential buildings containing more than 4 units are eligible for up to \$250,000 in building coverage and up to \$100,000 on personal property.
- Non-residential buildings are eligible for up to \$500,000 in building coverage and up to \$500,000 on personal property written on the General Property Form.
- Under the RCBAP Form a condominium association can purchase coverage on a building, which includes all the units within the building and the improvements within the units, up to \$250,000 times the number of units within the residential building. Personal property coverage on the form is limited to \$100,000 per building.

The average amount of insurance coverage purchased under the NFIP is \$131,670, which includes coverage for the building and its contents.

Other Coverages

In addition to providing coverage for Building and Personal Property, the SFIP also provides Other Coverage for Debris Removal, Loss Avoidance Measures, and, under the Dwelling Form, coverage for Condominium Loss Assessments if the policy insures a condominium unit. The SFIP includes coverage for Pollution Damage if the damage results from a flood. All of these coverages are provided within the purchased policy limits.

All three policy forms provide Increased Cost of Compliance (ICC) coverage. ICC coverage provides for the payment of a claim to help pay for the increased costs to comply with State or community floodplain management laws or ordinances after a flood in which a building has been declared substantially damaged or repetitively damaged. When an insured building is damaged by a flood and the community declares the building to be substantially or repetitively damaged, thus triggering the requirement to comply with a community floodplain management ordinance, ICC will help pay for the cost to elevate, relocate, demolish, or floodproof (non-residential buildings only) up to a maximum of \$20,000. This coverage is in addition to the building coverage for the repair of actual physical damages from flood under the SFIP, but the total paid cannot exceed the maximum limit set by Congress for that type of building.

The maximum limit of \$20,000 will help property owners insured under the NFIP to pay for a portion or, in some cases, all of the costs of undertaking actions to protect homes and businesses from flood losses. In addition, an ICC claim payment can be used to complement and supplement funds under other mitigation programs such as the Flood Mitigation Assistance program and FEMA's Hazard Mitigation Grant Program to assist communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings insured under the NFIP. As of November 30, 2001, approximately 689 claims have been paid under the ICC coverage to elevate, relocate, demolish, or floodproof structures for just over \$7.5 million.

Ratemaking

The 1968 Act separated the flood insurance ratemaking process into two distinct categories: subsidized rates and actuarial rates. Congress authorized the NFIP to offer policies at subsidized rates (at less than full actuarial risk rates) to existing buildings constructed on or before December 31, 1974 or before the effective date of the initial FIRM, whichever is later. Congress concluded that these buildings were built without the occupants' full knowledge and understanding of the flood risk, and to rate them using the actuarial rates might make the flood insurance prohibitively expensive. FEMA estimates that risks in this class are paying on average only 35 to 40 percent of what the full risk premium should be to fund the long-term expectation of the flood losses to the building. Only such general rating factors as flood-risk zone, occupancy type, and building type are used to rate these buildings for flood insurance. Even though premiums for policies on existing buildings are subsidized, floodplain occupants pay for at least part of the cost of the insurance and no longer need most disaster assistance. (Note: Subsidized premiums mean that the insured is paying less than their full-risk premium. The difference between this full-risk premium and the amounts the insured pays is revenue that is foregone by the NFIP. There is no annual transfer from general taxpayer revenue.)

In exchange for this subsidized insurance, participating communities must require new construction and substantially improved structures to meet the minimum requirements of the NFIP. The 1968 Act requires that FEMA charge full actuarial rates reflecting the complete flood risk to buildings constructed or substantially improved on or after the effective date of the initial FIRM for the community or after December 31, 1974, whichever is later. Once FEMA identifies the flood risk and makes the information available to communities, actuarial rating assures that those located in such areas bear the full risks associated with buildings in flood-prone areas. The flood insurance rates take into account a number of different factors including the flood-risk zone shown on the FIRM, the elevation of the lowest floor above or below the BFE, the type of building, the number of floors, and the existence of a basement or an enclosure.

The flood-risk zone and the BFE are specific factors that can differentiate the flood risk in various areas of the country. For example, FEMA designates certain shallow flooding areas as AO and AH zones and some riverine areas as A and AE zones. FEMA designates areas subject to damage by waves and storm surge as V and VE zones and usually designates coastal areas landward of the V zone as A and AE zones. This difference reflects both the lower expectation of loss and our actual loss experience for these zones.

While FEMA prints rate tables showing all possible flood risk zones and uses them for the entire country, FEMA does not show the same zones on every FIRM. For example, communities in Utah or Kansas do not have V zones because they are not subject to wave action and storm surge. However, where the same zone designation is used in two different areas of the country, it is because our engineering studies have shown that the degree of risk is very similar. Policyholders in AE and VE zones in one State are paying the same rates as policyholders in another State, if the lowest floor elevation of buildings is the same in relation to the BFE. This is because their risk of flooding is statistically the same.

The insurance aspects of the NFIP have important implications for floodplain management. Buildings that comply with community floodplain management regulations pay premiums based on flood insurance rates that are in most cases significantly lower than the subsidized rates charged Pre-FIRM buildings. However, buildings constructed in violation of the community's floodplain management ordinance pay much higher rates, which can be thousands of dollars a year for buildings substantially below the required elevations. FEMA bases the flood insurance rates for Post-FIRM structures on a building's exposure to flood damage. Based on our loss experience on older structures built before establishment of NFIP minimum floodplain management requirements, FEMA can generally expect that they will suffer as much as 5 times the flood damage that compliant new structures experience. New buildings with non-compliant ground level enclosures in coastal areas can actually represent risks that are at least as poor as the average older Pre-FIRM buildings.

Claims

Claims under the NFIP require, as in other insurance, that the insured file a Proof of Loss. This must be submitted within 60 days of the loss, unless waived by the Administrator of the FIMA. Claims can be adjusted using either an independent adjuster or an adjuster employed by a WYO company. Under all NFIP policies, the insured pays a portion of the loss through the application

of a deductible. In FY 2001, the NFIP paid 43,525 claims with an average claim payment of \$26,079.

The largest loss payout from a single flood event occurred in June 2001 as a result of Tropical Storm Allison, the NFIP's first "billion dollar storm". The second largest flood event in dollars paid was in Louisiana in May 1995 with payments totaling \$583,952,604 and the third largest flood event in dollars paid resulted from Hurricane Floyd in September 1999 with payments totaling \$433,384,943.

The long-term goal of the NFIP is to be actuarially sound, including consideration for potential catastrophic loss years. In the near term, in establishing a fiscally sound program, the NFIP overall is intended to generate premium at least sufficient to cover expenses and losses relative to what is called the "historical average loss year". Since the NFIP's underwriting experience does not include truly catastrophic loss years, the historical average is less than the true long-term average. However, the premium income to the program is made up of two distinct pieces – Pre-FIRM policies charged less than full-risk premiums and Post-FIRM (and other) policies charged full-risk premiums including catastrophic loss considerations.

The NFIP's historical average loss year is approximately \$700 million in loss payments. At this level, FIMA can maintain a Program that is self-supporting for that year. The NFIP has not been capitalized, but generates surplus during less-than-average-loss years and has borrowing authority with the U.S. Treasury to cover losses in the event that policyholder funds and investment income are inadequate. It does not use taxpayer funds to pay claims, operating expenses, or offset any shortfalls in premium from policies paying a subsidized flood insurance rate. Having twenty-six percent of policyholders paying significantly less than full-risk premiums impedes the ability to generate surplus or to repay borrowed funds, which depends on levels of annual losses that are highly variable.

However, the possibility of borrowing funds from the Treasury would be present even if all NFIP policyholders paid full-risk premiums should a catastrophic or a series of catastrophic flood events occur. When the NFIP borrows money, it pays the Treasury back with interest. The NFIP paid off the Treasury debt in June 2001 from a high of \$922 million in 1999. However, because of the extent of the flooding from Tropical Storm Allison in Texas and Louisiana resulting in over 30,000 claims, FEMA had to borrow funds from the Treasury.

Since 1969, the NFIP has paid \$11.9 billion in losses that would otherwise have been paid by taxpayers through disaster assistance or borne by home and business owners themselves. Moreover, NFIP floodplain management and hazard identification activities have significantly reduced the frequency and severity of flood damages to buildings built in compliance with NFIP standards. Structures built to NFIP criteria experience 80% less damage through reduced frequency and severity of losses. The NFIP floodplain management requirements are estimated to save \$1 billion per year.

Marketing

Today, many Americans are either unaware that flood damage is not covered by their homeowner's insurance policy or they are in denial about the serious flood risks to which they are exposed. Definitive figures on the potential market for flood insurance are difficult to obtain. A conservative estimate is that only one-third to one-half of those in SFHAs have coverage. For a number of flood disasters in the past few years, only 10-20% of the victims in SFHAs had flood insurance coverage. The remaining 80-90% must rely on taxpayer-funded Federal disaster assistance, which is very limited, loans which must be paid back, tax write-offs, or savings to help them recover.

The insurance industry, which has been the major mechanism for the sale of flood insurance since the Program's inception, has repeatedly stated that the key to selling flood insurance is public awareness on a national scale. Working with them, FEMA has designed and continues to refine flood insurance advertising and promotional activities to educate consumers, heighten awareness, and make the insurance agent's job easier.

FEMA's strategy for increasing the number of Americans insured against flood damage includes:

- Financial incentives for WYO insurance companies to increase and retain policyholders.
- Cover America II—a public awareness and education campaign primarily targeting consumers to stimulate interest in buying flood insurance. (The campaign also reaches insurance agents and lenders, encouraging their active involvement in flood insurance.)
- Facilitating lender compliance with statutory flood insurance requirements through training, guidance materials, and regular communication with lending regulators, government sponsored enterprises, and lender trade associations.
- NFIP training for insurance agents via live seminars and on-line training modules.
- Simplifying NFIP processes to make it easier for agents to sell and consumers to buy.
- Improving retention of policies.

Mandatory Flood Insurance Purchase Requirement

From 1968 until the adoption of the Flood Disaster Protection Act of 1973, the purchase of flood insurance was voluntary. Property owners could make their own decision whether to purchase flood insurance. Unfortunately, the response nationwide to purchasing flood insurance voluntarily was less than enthusiastic. Just over 95,000 policies were in force in 1972, and very few victims from Tropical Storm Agnes that hit that same year had flood insurance.

The 1973 Act mandated flood insurance coverage for many properties. For the first time, regulated lending institutions could not make, increase, extend, or renew any loan secured by improved real estate located in a SFHA in a participating NFIP community unless the secured building and any personal property securing the loan were covered for the life of the loan by flood insurance. Congress established this requirement because, after major flood disasters, it became evident that relatively few individuals in eligible communities who sustained flood damage had purchased flood insurance.

Also, Federal officers or agencies could not approve any form of loan, grant, guaranty, insurance, payment, rebate, subsidy, disaster assistance loan or grant, for acquisition or construction purposes within a SFHA in a participating community unless the building and any personal property to which such financial assistance relates were covered during the life of the property.

The Housing and Community Development Act of 1977, which amended section 202(b) of the 1973 Act, permitted regulated lending institutions to make conventional loans in a SFHA of a non-participating community. It required them to notify the purchaser or lessee of improved property situated in a SFHA of a non-participating community and used to secure a loan being made, increased, extended, or renewed, whether Federal disaster assistance for flood damage will be available.

Furthermore, Section 202(a) of the 1973 Act prohibits Federal officers or agencies from approving any form of loan, grant, guaranty, insurance, payment, rebate, subsidy, disaster assistance loan or grant, for acquisition or construction purposes within SFHAs of non-participating communities. For example, this would prohibit mortgage loans guaranteed by the Department of Veterans Affairs, insured by the Federal Housing Administration, or secured by the Rural Economic and Community Development Services. In the case of disaster assistance under the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, as amended, this prohibition only applies to assistance in connection with a flood.

Following the multi-billion dollar flood disaster in the Midwest in 1993, Congress enacted the National Flood Insurance Reform Act of 1994. One of the purposes of the 1994 Act is to improve compliance with the mandatory purchase requirements of the NFIP by lenders, servicers, and secondary-market purchasers. Congress was concerned over the low level of insurance participation among eligible property owners and resulting increases in Federal disaster relief payments. While FEMA administers the NFIP, it has no responsibility or authority under either the 1973 Act or 1994 Act with respect to lender compliance with the Mandatory Flood Insurance Purchase Requirement – this responsibility falls on the Federal agency lender regulators and secondary-market purchasers though FEMA prepares guidance materials with respect to the NFIP and the Mandatory Flood Insurance Purchase Requirement.

The law requires Federal agency lender regulators to develop regulations to direct their federally regulated lenders not to make, increase, extend, or renew any loan on applicable property unless flood insurance is purchased and maintained. The law also addresses the responsibility of regulated lending institutions and Government-Sponsored Enterprises (GSEs) (i.e., Fannie Mae and Freddie Mac) in providing a notice of and requiring flood insurance coverage for the term of the loan on buildings located in any SFHA in participating NFIP communities.

The 1994 Act significantly tightens the 1973 Act by imposing important new obligations on both mortgage originators and servicers, including mandatory escrow requirements for flood insurance and mandatory provisions for “forced placement” of insurance. Specifically, the 1994 Act requires the force placement of flood insurance if a lender or servicer determines that the building securing the loan is not adequately insured. Also, the 1994 Act grants statutory authority to a lender or servicer to purchase flood insurance for the building and charge a

premium to the borrower if the building is in an SFHA. In addition, Congress designated for the first time in the 1994 Act a specific range of regulatory civil monetary penalties that may be imposed administratively when it is found that a “pattern or practice of committing violations” has occurred by regulated lenders.

It is the responsibility of the lender to:

- Determine whether the building offered as security for a loan is, or will be located in an SFHA;
- Document the determination using the Standard Flood Hazard Determination Form;
- Require flood insurance to the appropriate amount when necessary;
- Ensure that flood insurance is maintained during the life of the loan; and
- Ensure that flood insurance is purchased and maintained if the lender becomes aware that the building involved subsequently is located in an area that has been remapped as a SFHA.

Although the intent of the 1994 Act is to require borrowers to purchase flood insurance, the Act’s directives and prohibitions are directed to federally-regulated primary lenders and to secondary market entities involved in mortgage loan transactions. The flood insurance requirement does not apply to lenders or servicers that are not federally regulated or do not sell loans to GSEs such as Fannie Mae and Freddie Mac or other GSEs.

It is a prerequisite that a designated loan have flood insurance as a condition of closing. If a borrower will not voluntarily obtain coverage and a lender is unable to force place coverage, the lender must deny the loan or exercise the sanction provisions of the loan document if the loan already has been made. A lender cannot accept a borrower’s assurance that he or she will obtain insurance coverage in the future or grant the lender indemnity while seeking coverage. Closing a designated loan without flood insurance coverage in place constitutes a violation of the regulation implementing the Mandatory Purchase Requirement.

Lenders on their own initiative may require the purchase of flood insurance even if a structure is located outside the SFHA. A decision to require coverage under such circumstance is not compelled by statute. Lenders have this prerogative to require flood insurance to protect their investments.

Other NFIP Activities

Community Rating System

The NFIP’s Community Rating System (CRS) provides discounts on flood insurance premiums in those communities that establish floodplain management programs that go beyond NFIP minimum requirements. Under the CRS, communities receive credit for more restrictive regulations, acquisition, relocation, or floodproofing of flood-prone buildings, preservation of open space, and other measures that reduce flood damages or protect the natural resources and functions of floodplains.

The CRS was implemented in 1990 to recognize and encourage community floodplain management activities that exceed the minimum NFIP standards. Section 541 of the 1994 Act amends Section 1315 of the 1968 Act to codify the Community Rating System in the NFIP, and to expand the CRS goals to specifically include incentives for reducing the risk of flood-related erosion and for encouraging measures that protect natural and beneficial floodplain functions. These goals have been incorporated into the CRS and communities now receive credit towards premium reductions for activities that contribute to them.

Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the three goals of the CRS:

- (1) Reduce flood losses, i.e.,
 - Protect public health and safety,
 - Reduce damage to property,
 - Prevent increases in flood damage from new construction,
 - Reduce the risk of erosion damage, and
 - Protect natural and beneficial floodplain functions;
- (2) Facilitate accurate insurance rating; and
- (3) Promote the awareness of flood insurance.

There are 10 CRS classes: Class 1 requires the most credit points and gives the largest premium reduction; Class 10 receives no premium reduction. CRS premium discounts on flood insurance range from 5 percent for Class 9 communities up to 45 percent for Class 1 communities. The CRS recognizes 18 creditable activities, organized under four categories: Public Information, Mapping and Regulations, Flood Damage Reduction, and Flood Preparedness.

For example, credits are provided for use of future conditions hydrology and more restrictive floodway standards, prohibiting fill in the floodway, and adopting compensatory storage regulations, innovative land development criteria, stormwater management regulations, other higher regulatory standards, and local floodplain management plans. Credits are also provided in the CRS for preserving open space in their natural state and for low-density zoning and for acquiring and clearing buildings from the floodplain and returning the area to open space. The 2002 *CRS Coordinator's Manual* includes a new section, "Land Development Criteria," which specifically credits community land development regulations that limit development in the floodplain or provide incentives to limit floodplain development. Communities receive credits for adopting smart growth land development criteria and for creating open space through their land development process.

There are now over 900 communities receiving flood insurance premium discounts based on their implementation of local mitigation, outreach, and educational activities that go well beyond minimum NFIP requirements. Although premium discounts are one of the benefits of participation in the CRS, these communities are carrying out important activities that save lives, reduce property damage, and protect the natural and beneficial functions of floodplains. These 900-plus communities represent a significant portion of the nation's flood risk as evidenced by

the fact that they account for over 66% of the NFIP's policy base. Communities receiving premium discounts through the CRS cover a full range of sizes from small to large, and a broad mixture of flood risks, including coastal and riverine.

The CRS – its development and implementation – has benefited from the advice and effort of Federal, State, and local officials, professionals with expertise in floodplain management and insurance, and academics. A multidisciplinary approach led to successful implementation of the program and this same approach has been employed in reviewing and refining the CRS over the last 10 years.

Flood Mitigation Assistance Program

The Flood Mitigation Assistance (FMA) program provides funding to assist States and communities to accomplish flood mitigation planning and implement measures to reduce future flood damages to structures. This program is authorized under the 1994 Act. These funds can be used before disaster strikes.

The FMA program provides funding up to \$20 million a year with a 75/25 cost share. Examples of eligible activities for planning grants include conducting local planning meetings to obtain citizen input; contracting for engineering or planning technical assistance; surveying structures at risk of flooding; and assessing repetitive losses. Only projects for mitigation activities specified in an approved Flood Mitigation Plan are eligible for project grants. For example, a community may determine in its plan that acquisition of structures would be the preferred alternative for floodway areas, while elevation may be more appropriate solution in other areas of the floodplain.

The purpose of FMA project grants is to assist States and communities in implementing flood mitigation projects to reduce the risk of flood damage to NFIP-insurable structures. Examples of eligible types of projects include:

- Elevation of NFIP-insured residential structures and elevation or dry-floodproofing of non-residential structures in accordance with 44 CFR §60.3.
- Acquisition of NFIP-insured structures and underlying real property.
- Relocation of NFIP-insured structures from acquired or restricted real property to sites not prone to flood hazards.
- Demolition of NFIP-insured structures on acquired or restricted real property.
- Beach nourishment activities that focus on facilitating natural dune replenishment through the planting of native dune vegetation and/or the installation of sand fencing. Placement of sand on beach is not eligible.
- Minor physical flood control projects that do not duplicate the flood-prevention activities of other Federal agencies that address localized flood problem areas such as stabilization of stream banks, modification of existing culverts, creation of small stormwater retention basins. Major structural flood control structures, such as levees, dams, and seawalls are not eligible.

To be eligible for funding, a project must be:

- Cost-effective;

- Conform with applicable Federal and State regulations and executive orders;
- Be technically feasible;
- Conform with the Flood Mitigation Plan; and
- Be located physically in a participating NFIP community that is not on probation.

The 1994 Act directs FEMA to “make every effort to provide mitigation assistance for mitigation plans proposing activities for repetitive loss structures and structures that have incurred substantial damage.” FEMA is focusing the FMA program on repetitive loss properties. The NFIP’s Repetitive Loss Strategy is to identify properties throughout the country that are most at risk for repeat flooding, and to reduce their exposure through targeted buyouts, relocation, and elevation. Approximately 45,638 repetitive loss properties are currently insured. These buildings are projected to cost the program \$200 million per year in claims. New repetitive loss properties continue to emerge each year. FEMA has identified target buildings that are currently insured and have the greatest risk. There are 8,753 buildings with four or more losses, and 1,160 buildings with two or three losses that exceed building value. Most of these target buildings are single-family residences. The limited FMA program funds (\$20 million) are a key resource toward achieving this goal.

For projects that directly affect individual structures, such as elevation, acquisition, or relocation, each structure must have a flood insurance policy in force. FMA will be available to States and communities for mitigation activities that may benefit insurable properties not insured under the NFIP. For minor structural flood control projects, the effectiveness of the project can be based on benefits provided to insurable structures not insured under the NFIP.

Since 1996, FMA program funds have been used to acquire 484 flood-prone structures, relocate 16 flood-prone structures, elevate 491 flood-prone structures, and dry-floodproofed 8 flood-prone non-residential structures. To date, FEMA has allocated through FMA \$97.6 million for projects; \$9 million for plans; and \$10.8 million for technical assistance.

The predecessor to the FMA program was Section 1362 of the 1968 Act, which was also intended to address existing flood-prone structures. This provision authorized the NFIP to purchase certain insured properties that had been either substantially or repetitively damaged and transfer the land to a public agency for open space. Funds were appropriated for Section 1362 annually from 1980 until 1994, when the FMA program replaced the Section 1362 program. Over the period during which funds were available, approximately 1,400 properties were purchased at a total cost of about \$51.9 million.

Other FEMA Programs

The following are other FEMA programs and activities that provide mitigation assistance and planning assistance in reducing the Nation’s flood losses.

Hazard Mitigation Grant Program

The Hazard Mitigation Grant Program (HMGP) was created in 1988 by Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended (amendments

include the Hazard Mitigation and Relocation Assistance Act of 1993 and the Disaster Mitigation Act of 2000). The HMGP assists States and communities in implementing long-term hazard mitigation measures for all hazard types following a major disaster declaration. A key purpose of the HMGP is to ensure that the opportunity to take critical mitigation measures to protect life and property from future disasters is not lost during recovery and reconstruction process following a disaster.

HMGP funds are made available based on 15% of the estimated Federal funds to be spent on the Public and Individual Assistance programs (minus administrative expenses) for each disaster. States whose mitigation planning process meets enhanced criteria will be able to receive 20% funding under the regulations implementing the Disaster Mitigation Act of 2000. As of September 2001, 5,560 projects have been approved at a total Federal expenditure of approximately \$2.6 billion.

Eligible mitigation measures under the HMGP include acquisition or relocation of flood-prone structures, elevation of flood-prone structures, seismic rehabilitation of existing structures, and strengthening of existing structures against wildfire. Additionally, up to seven percent of the HMGP funds may be used to develop State and/or local mitigation plans.

The State, as grantee, is responsible for administering the HMGP. Communities develop HMGP project applications and apply for funds through the State. The State notifies potential applicants of the availability of funding, defines a project selection process, ranks and prioritizes projects for funding, and forwards projects to FEMA for approval. The applicant, or subgrantee, carries out approved projects. The State or local government must provide a 25 percent match, which can be from a combination of cash and in-kind sources.

In response to flood hazards, FEMA's primary emphasis is on nonstructural hazard mitigation measures. Nonstructural measures include the acquisition and demolition, relocation, elevation, or floodproofing of flood-damaged or flood-prone properties.

Since the program's inception to September 2001, FEMA has permanently eliminated or significantly reduced future flood damages for over 25,801 at-risk structures through nonstructural measures as follows: acquisition of 22,564 properties; relocation of 733 properties; and elevation of 2,504 properties. The total Federal expenditure for these measures was \$826,943,785.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act (DMA) of 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988. The DMA authorizes the creation of a pre-disaster mitigation program to make grants to State, local and tribal governments. It also includes a provision that defines mitigation planning requirements for State, local and tribal governments. This new section (Section 322) establishes a new requirement for local and tribal mitigation plans; authorizes up to 7 percent of the HMGP funds available to a State to be used for development of State, local and tribal mitigation plans; and provides for States to receive an increased percentage of HMGP funds from 15 percent to 20 percent if, at the time of the disaster

declaration, the State has in effect a FEMA approved State Mitigation Plan that meets the criteria established in regulations.

Planning Initiatives

In addition to providing pre-and post-disaster planning assistance to States and communities, FEMA has undertaken a number of other initiatives to encourage communities to undertake mitigation planning and to incorporate natural hazards into their comprehensive land use planning. FEMA and the American Planning Association (APA) jointly developed a publication entitled *Planning for Post-Disaster Recovery and Reconstruction* that encourages use of planning tools to guide the rebuilding process for a safer and more sustainable community. This document was published in 1998 as part of their Planning Advisory Service series in an effort to use APA's distribution system to reach out to the planning community.

FEMA also participated in and provided financial support to HUD's *Growing Smart* initiative working with APA to develop a natural hazards element for a local comprehensive or general plan. FEMA has prepared a publication on "sustainability," *Planning for a Sustainable Future, The Link Between Hazard Mitigation and Livability*. A series of "how-to" manuals on natural hazards planning is being developed for publication in Fall 2002. One of the "how-to" manuals, *Understanding Your Risks: Identifying Hazards and Estimating Losses*, was published in August 2001. FEMA expects to encourage State and community planning through the new pre-disaster mitigation provisions of Disaster Mitigation Act of 2000. Information on mitigation planning programs and guidance can be found at www.fema.gov/fima/planning.shtm.

A Key To The Acronyms Used In This Document

APA	- American Planning Association
BFE	- Base Flood Elevation
BPAT	- Building Performance Assessment Team
CAC	- Community Assistance Contact
CAP	- Community Assistance Program
CAV	- Community Assistance Visit
CBRS	- Coastal Barrier Resources System
CFR	- Code of Federal Regulations
CRS	- Community Rating System
CTP	- Cooperative Technical Partners
DFIRM	- Digital Flood Insurance Rate Map
DMA	- Disaster Mitigation Act of 2000
EMI	- Emergency Management Institute
E.O.	- Executive Order
FEMA	- Federal Emergency Management Agency
FIA	- Federal Insurance Administration
FIMA	- Federal Insurance and Mitigation Administration
FIRM	- Flood Insurance Rate Map
FIS	- Flood Insurance Study
FMA	- Flood Mitigation Assistance program
GSE	- Government-Sponsored Enterprise
HMGP	- Hazard Mitigation Grant Program
HUD	- Housing and Urban Development (Department of)
ICC	- Increased Cost of Compliance
LOMA	- Letter of Map Amendment
LOMR	- Letter of Map Revision
LOMR-F	- Letter of Map Revision based on Fill
NFIP	- National Flood Insurance Fund
NFIP	- National Flood Insurance Program
NFIRA	- National Flood Insurance Reform Act
OMB	- Office of Management and Budget
RCBAP	- Residential Condominium Building Association Policy
OPAs	- Otherwise Protected Areas
SFHA	- Special Flood Hazard Area
SFIP	- Standard Flood Insurance Policy
TB	- Technical Bulletin
WYO	- Write-Your-Own