

# Building Blocks for a Multi-Hazard Approach to Mitigation

Congress has provided FEMA with a broad legislative mandate that consists of programs to address floods, earthquakes, dam safety, and other hazards. FEMA links these programs together in a multi-objective approach that when used to their full advantage can help communities build a foundation for disaster resistance. These programs are briefly described below.

## The Robert T. Stafford Disaster Relief and Emergency Assistance Act

When a disaster is imminent, or has occurred, local governments take immediate steps to warn and evacuate the public, alleviate suffering, and protect life and property. If they need additional help to respond to the situation, communities may call upon the emergency assistance authorities of their State. When the magnitude of a disaster is beyond state and local capabilities, the President may declare an emergency or a major disaster. The Stafford Act is the Federal authority for the President's disaster relief program, and authorizes a range of assistance programs. While all of the assistance provided under the Act contributes ultimately to

the sustainability of affected communities, the following two programs are especially helpful links between hazard mitigation and sustainability.

**Hazard Mitigation Planning.** As a condition of receiving any Federal disaster grant or loan funds under the Stafford Act, States are required to evaluate the impact of natural hazards within the area affected by the disaster, and to take appropriate action to mitigate such hazards. To fulfill this intent of the Act, FEMA requires States to prepare and implement a hazard mitigation plan. FEMA encourages all States and local governments, however, to have a hazard mitigation plan in place before the occurrence of a disaster, so that hazard management capabilities and programs become a part of normal governmental functions. While the Stafford Act currently does not explicitly require local governments to have an approved mitigation plan before receiving disaster assistance, some States do require local mitigation plans. FEMA strongly believes that because mitigation fundamentally occurs at the community level, it is in the best interest of local governments to have such a plan. FEMA and your State government can provide technical assistance to your community whether or not you have suffered a disaster when you are ready to develop a mitigation plan.

**Hazard Mitigation Grant Program (HMGP).** The HMGP is a powerful resource in the combined effort of Federal, State, and local government as well as the private sector to end the cycle of repetitive disaster damage. HMGP funds provide States and local governments with the incentive and capability to implement cost-effective, environmentally sound long-term mitigation measures that previously may not have been feasible. A key purpose of the program is to ensure that the opportunity to take critical mitigation measures to protect life and property from future disasters is not lost during the recovery and reconstruction following a disaster. Communities apply for HMGP funding through their State, which assists in the preparation and prioritizing of the applications, and the management of approved projects. FEMA can fund up to 75 percent of the eligible costs of approved projects.



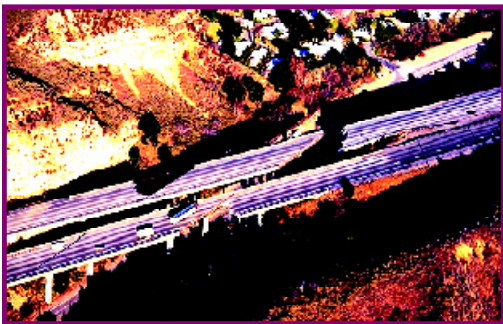
## National Flood Insurance Program (NFIP)

Communities participating in the NFIP agree to enforce floodplain management regulations in identified flood hazard areas. In return, citizens in these communities are eligible to purchase flood insurance that is not normally available through private insurance companies. Flood insurance may be purchased to cover structures (e.g., homes and businesses) as well as the contents of these buildings. Nationwide, only one in five homeowners living in flood hazard areas participates in the NFIP, so encouraging greater participation in the program is an excellent way for your community to facilitate recovery following floods. FEMA initiated a Community Rating System (CRS) to reward communities that exceed the NFIP's minimum floodplain management requirements. Under CRS, communities that have implemented flood loss reduction activities can apply for a classification that gives residents lower flood insurance premiums.

**Flood Mitigation Assistance Program (FMA).** Under the NFIP, grants are provided to State and local governments for planning assistance and projects that reduce the risk of future flood damages, including elevating homes, conversion of property to open space, and minor drainage improvements. Funds also can be used to undertake comprehensive watershed management planning to identify land use changes and prioritize recommendations to reduce impacts of future flooding.

## National Earthquake Hazards Reduction Program (NEHRP)

Earthquakes represent the largest single potential for casualties and damage from a natural hazard facing this country – all but seven States are at some level of risk to earthquake damage. The NEHRP is the Federal Government's approach to addressing earthquake risks, involving the closely coordinated efforts of four Federal agencies – FEMA, the United States Geological Survey (USGS), the National Science Foundation (NSF), and the National Institute of Standards and Technology (NIST). The NEHRP's premise is that while earthquakes may be inevitable, earthquake-related damages are not. Activities of the program include basic and applied research; technology development and transfer; and training, education, and advocacy for seismic risk reduction measures. FEMA administers a program of grants and technical assistance to States to increase awareness of earthquake hazards, foster plans, and implement mitigation actions to reduce seismic vulnerability.



*Some regions have not been subject to any recent earthquakes, yet have substantial seismic risk.*

## National Dam Safety Program (NDSP)

The more than 75,000 dams in the United States form a critical part of our national infrastructure. From the Hoover Dam in Nevada to a small earthen dam in Virginia, dams store water for crop irrigation and public water supplies. They generate inexpensive and safe hydroelectric power, create recreational opportunities, and provide flood control. However, dams can also pose a significant risk if they are not maintained properly. Potential costs to local communities can be significant. When a dam fails, the potential energy of the water stored behind it – even for a small dam – can cause extensive property damage and loss of life downstream.

The NDSP provides a grant assistance program to States to improve their dam safety programs. The NDSP offers funds for research and training, and its National Dam Safety Review Board monitors the State assistance program. The NDSP also funds the National Inventory of Dams that is conducted by USACE.

## Project Impact: Building Disaster Resistant Communities Initiative

The *Project Impact* initiative is an excellent delivery mechanism that your community can use to move towards a more sustainable future and take full advantage of the FEMA programs described in this section. Whether your community has recently experienced a major disaster or if your community is concerned about the natural hazards you may face in the future, *Project Impact* can help your community reduce the personal and economic costs of disasters. To date, over 200 communities have been designated as *Project Impact* communities. FEMA has provided technical assistance and seed money to help implement this initiative, however, the success of this initiative is due to the concerted

efforts of the *Project Impact* communities and the local partnerships they have created. Contact your State office of emergency management for more information.

Your community does not need to be formally designated as a *Project Impact* community to adopt this approach. FEMA can provide you with more information about how to become a disaster resistant community. *The Project Impact Guidebook and Community Tool Kit*, described in the Resources Section, provides direction on the initial steps to implement this initiative in your community. Other resources include a *Project Impact* video to build support in your community, prevention and preparedness brochures, and technical assistance from *Project Impact* Coordinators located in each of the ten FEMA Regional Offices.

*Project Impact* communities across the nation have targeted a wide range of hazard mitigation initiatives; from strengthening building codes to address natural hazards, enacting land use and zoning measures to discourage building in floodplains or other high risk areas, and retrofitting structures to better withstand hurricane-strength winds or seismic risk. The range and variety of the *Project Impact* initiatives are as varied as the participating communities. This success reflects FEMA's belief that implementing hazard mitigation is most effective when it is locally driven and conducted with broad community participation.

### Shelby County, Tennessee

Shelby County is located within the New Madrid Seismic Zone. The water supply system that provides water to the area is owned by Memphis Light, Gas, and Water. The company has initiated a seismic retrofit project to protect its pumping station and enhance the survivability of the connections between the water distribution lines. Retrofit plans include reinforcement and anchorage of masonry walls; strengthening of steel frames; improved connection of concrete wall and roof, secured anchorage of pipes and valves, and bracing of pipelines; bracing of treatment and control equipment; and protection of an overhead crane. The estimated cost to replace the pumping station in the event of a large earthquake exceeds \$17 million. Each day the station is not in service costs an additional \$1.4 million. Total projected savings are expected to be \$112 million with a total project cost of \$968,800.