Locally Operated Levees: Issues and Federal Programs

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Summary

Locally operated levees and the federal programs that assist and accredit them are receiving increasing congressional attention. Congressional authorization of the National Flood Insurance Program (NFIP), managed by the Federal Emergency Management Agency (FEMA), expires on September 30, 2011. The pending reauthorization has increased congressional awareness of the link between the condition of locally operated levees, FEMA's Flood Insurance Rate Maps (FIRMs) and levee accreditation (which determine which NFIP requirements and premiums apply in an area), and programs providing federal disaster assistance for these levees. Congress is considering whether and how to change current programs, federal funding, and the existing division of levee responsibilities. Options are complicated by the desire to promote state, local, and individual decisions and investments that reduce flood risk; concerns about the local costs associated with NFIP purchase and levee accreditation requirements; and consideration of whether to expand federal responsibilities and potential liability. Even though similar issues also exist for some of the federally operated levees, this report focuses on locally operated levees since these dominate the national levee portfolio.

Approximately 22% of U.S. counties across the country, representing almost half of the U.S. population, contain levees. Economic damage from floods in leveed areas ranges between $5 billion and $10 billion annually. Levees play an important role in protecting property against flood damage. More than 100,000 miles of levees may exist, with the federal government operating roughly 2,100 miles. One estimate puts the five-year level of investment needed for new construction or maintenance of the nation's levees at $50 billion.

FEMA is updating FIRMs and deciding whether to accredit levees which will determine whether they appear on those maps. There is some debate regarding the extent to which FEMA should assist with levees investment through its hazard mitigation programs. FEMA often cites overlap with activities of the U.S. Army Corps of Engineers (Corps) and the Natural Resources Conservation Services (NRCS) in the U.S. Department of Agriculture as justification for not funding levee activities.

The Corps is the main federal partner for construction of locally operated levees. Pursuant to congressional authorizations, the Corps participates in cost-shared planning and construction of levees. No general federal authorities exist for the Corps to assist with the regular operation and maintenance of locally operated levees; that is, local levee owners are responsible for operation, maintenance, and improvement. However, there are multiple authorities enacted by Congress for flood fighting, flood mitigation, and levee repair of damages caused by natural events. Since 2005, the Corps has had limited involvement in the data collected and certified to inform FEMA accreditation of locally operated levees. The Corps has limited authority to assist local levee owners in obtaining NFIP levee accreditation. Policymakers in recent years have considered whether to expand the Corps' role in NFIP data certification and post-construction improvements for locally operated levees. NRCS has limited authority to assist in the construction of smaller levees and to repair small, mostly rural levees damaged by a natural event.

Congressional options for assisting with levees include, but are not limited to, maintaining the status quo, adopting the recommendations of the National Committee on Levee Safety (such as federal support to develop new state levee safety programs), modifying federal programs, or creating new federal programs.

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Introduction

Congressional awareness of issues associated with locally owned and operated levees is increasing, largely because of the nationwide remapping of floodplains by the Federal Emergency Management Agency (FEMA) and efforts to reauthorize the FEMA's National Flood Insurance Program (NFIP) which expires on September 30, 2011.[1] Floodplain remapping can result in owners of mortgaged structures located in areas protected by levees being required to purchase flood insurance if the levees cannot satisfy FEMA's levee accreditation requirements. Many communities and levee owners struggle with the expense and effort of data collection, repairs, and improvements needed to obtain levee accreditation and have approached Congress for assistance.[2] Multiple federal agencies have roles in levee accreditation and federal levee assistance. Most notably, FEMA coordinates updates to Flood Insurance Rate Maps (FIRM) and issues levee accreditations that waive the mandatory purchase requirement for homeowners who reside in areas protected by levees. In certain limited situations discussed later in this report, the U.S. Army Corps of Engineers (Corps) may certify the data submitted to FEMA for accreditation purposes. However, existing federal actions to assist locally operated levees are limited, particularly in the scope of eligible activities. Limitations stem from constraints on federal funding and from levee operation, maintenance, and improvements generally being the responsibility of the levee owner.[3]

Levees are structures, either earthen embankments or concrete and steel floodwalls, built along rivers, or other bodies of water, to prevent water from flooding bordering land.[4] Levees are located throughout the country and are found in approximately 22% of U.S. counties, where almost half of the U.S. population resides. Nationally, average economic damage from floods in leveed areas ranges between $5 billion and $10 billion annually. The full extent and specific conditions of the nation's levees are unknown, but the National Committee on Levee Safety, which was created by Congress, estimates that more than 100,000 miles of levees may exist.[5] The federal government through the Corps built less than 15,000 miles of these levees.[6] The Corps operates roughly 2,100 miles of the 15,000 it constructed. That is, local levee owners operate and maintain the estimated 85,000 miles of locally constructed levees and almost 13,000 miles of

[1] For more on the authorization of the National Flood Insurance Program, see CRS Report R40650, *National Flood Insurance Program: Background, Challenges, and Financial Status* , by (name redacted).

[2] Local levee owners can include a wide variety of stakeholders. There are private levees (e.g., individual farmers, businesses, and homeowners) and publicly owned levees (e.g., levee districts, water control or improvement districts, municipalities, and states). Anyone can own a levee.

[3] The operation and maintenance of levees generally involves mowing the grass on and around the levee, removing trees, and repairing damage done by animals.

[4] In this report, the term *levees* is used broadly to encompass both levees and floodwalls. Levees often are broad, earthen structures, while floodwalls are concrete and steel walls, built atop a levee or in lieu of a levee. Floodwalls are often used in urban areas because they require less land than levees.

[5] National Committee on Levee Safety, *DRAFT Recommendation for a National Levee Safety Program*, January 2009, p. 13, available at http://www.iwr.usace.army.mil/ncls/docs/NCLS-Recommendation-Report_012009_DRAFT.pdf.

[6] Other federal entities also own and maintain some levees or structures that at times may be viewed as functioning like levees. These include the International Boundary and Water Commission (IBWC), the Tennessee Valley Authority (TVA), and the Department of the Interior's Bureau of Reclamation (Reclamation). The IBWC operates roughly 610 miles of levee (IBWC, *Rio Grande Flood Control System Rehabilitation Project*, http://www.ibwc.gov/Recovery/RGF.html, visited March 2011). No official estimates of levee miles operated by TVA or Reclamation are avilable.

Corps constructed levees. One estimate puts the five-year level of investment for new construction or maintenance needed for the nation's existing levees at $50 billion.[7]

Congress has considered in recent years whether and how to change the current division of levee responsibilities and their costs, and whether to modify existing levee-related federal programs. Some stakeholders seek to expand flood hazard mitigation activities eligible for federal funds to include levees, while others are concerned that the federal government might assume more of the costs and liability for levee investments that they consider a local responsibility. Another aspect of the debate is whether to change FEMA's risk assessment, remapping, and timelines for obtaining levee accreditation. These changes are raised in the context of climate change and a broader rethinking of flood risk management and control structures (like levees) following Hurricane Katrina and recent floods.

This report covers the federal role in locally operated levees. It does not address federally owned and operated levees, which are less common and are concentrated in a few areas of the United States (e.g., along the Mississippi River).

The report first discusses the role of levees in flood risk reduction, the shared responsibilities for levees in the United States, and the role of three agencies: FEMA, the Corps, and the Natural Resources Conservation Service (NRCS) of the U.S. Department of Agriculture (USDA). Next, it discusses federal assistance for levees starting with their study and construction, then levee-related flood fighting and levee repair, rehabilitation, and inspection. It also describes the debate about whether levees investments have a role in federal flood mitigation programs. Corps, FEMA, and NRCS activities and authorities are compared. Finally, the report outlines policy options for locally operated levees that might be considered by the 112th Congress. Legislative proposals in the 111th Congress are discussed in an **Appendix**.

Flood Risk Reduction and Levees in a Federal System

In the United States, flood-related roles and responsibilities are distributed within a regulatory framework designed to permit the responsible development of the nation's floodplains. Local governments generally are responsible for land use and zoning decisions that shape floodplain and coastal development, but the federal and state governments also influence decisions on managing flood risk. State and local governments make decisions that allow or prohibit development in flood-prone areas. Local, private, and sometimes state entities construct, operate, and maintain most levees and have initial flood-fighting responsibilities. Agencies of the federal government operate flood control dams, offer crop insurance, support hazard mitigation, and provide emergency response and disaster aid for recovery from floods. The federal government constructs some of the nation's levees, but most often does in partnership with local project sponsors who are responsible for operation and maintenance.

No federal program specifically regulates the design, placement, construction, or maintenance of nonfederal levees. While federal and state agencies often have their own policies and criteria for

[7] American Society of Civil Engineers, *2009 Report Card for America's Infrastructure*, March 2009, p. 7, available at http://www.infrastructurereportcard.org/.

levee design, construction, and maintenance, there are no national engineering standards[8] or policies for levee design or level-of-protection standards for different floodplain uses.

Many levees protecting today's communities and agricultural investments originally were constructed more than 50 years ago by local interests reclaiming land for agriculture and other uses. Rather than each landowner building separate levees, landowners often consolidated their resources by forming a levee district. As a consequence of this history, many of today's physical constructions and configurations, as well as institutional arrangements for flood protection, have roots distinct from their current use as flood protection for development. For the most part, municipalities serving concentrated urban populations have assumed flood control responsibilities, while special levee districts remain active in rural and agricultural areas.

Prior to the Lower Mississippi River Flood of 1927, the federal role in flood control was limited. In addition to authorizing the Corps to design and construct significant flood control projects along the Mississippi River (and on the Sacramento River (CA)), the Flood Control Act of 1928 reiterated the sense of Congress, at the insistence of President Coolidge, that there should be local contribution toward flood control works.[9] The act also provided that the federal government generally could not be held liable for flood damage. From 1928 to 1936, there was considerable debate about the need for national planning for flood control and a national water resources program, and the proper roles of Congress and the Executive Branch in this planning and selection of construction projects.[10] The Flood Control Act of 1936 (49 Stat. 1570) declared some flood control a "proper" federal activity:

> It is hereby recognized that destructive floods upon the rivers of the United States, upsetting orderly processes and causing loss of life and property, including the erosion of lands and impairing and obstructing navigation, highways, railroads, and other channels of commerce between the States, constitute a menace to national welfare; that it is the sense of Congress that flood control on navigational waters or their tributaries is a proper activity of the Federal Government in cooperation with States, their political sub-divisions and localities thereof; that investigations and improvements of rivers and other waterways, including watersheds thereof, for flood-control purposes are in the interest of the general welfare; that the Federal Government should improve or participate in the improvement of navigable waters or their tributaries including watersheds thereof, for flood-control purposes if the benefits to whomsoever they may accrue are in excess of the estimated costs, and if the lives and social security of people are otherwise adversely affected.

Since 1936, Congress has authorized the Corps to construct hundreds of miles of levees.

Today the federal role in flood risk management goes beyond assisting with the construction of dams and levees. For instance, some federal actions attempt to modify individual and community behavior to reduce flood vulnerability; the NFIP and FEMA's hazard mitigation programs are examples. Congress established the NFIP with the 1968 passage of the National Flood Insurance

[8] The Corps published a *Design and Construction of Levees Engineering Manual*, which is currently in the process of being updated. The current version from April 2000 is available at http://140.194.76.129/publications/eng-manuals/em1110-2-1913/toc.htm. The manual presents basic principles of earthen levee designs to be used as a guide for Corps engineers, rather than as a code or minimum design standard for the broader engineering community.

[9] 42 Stat. 596.

[10] Jamie W. Moore and Dorothy P. Moore, *The Army Corps of Engineers and the Evolution of Federal Flood Plain Management Policy* (Boulder, CO: University of Colorado, 1989), pp. 8-13.

Act.[11] Prior to the program's establishment the federal government relied on a "levee-only" policy that permitted unrestricted development of the floodplains along with an emphasis on structural flood control systems. Making federally subsidized flood insurance available to property owners signaled a shift in federal policy towards a flood control strategy that was less dependent on structural measures. The new policy had the intended consequence of regulating the development of flood-prone areas. The NFIP's multi-pronged regulatory system consists of flood risk assessment and mapping, flood insurance, and land use and building construction measures that restricted development in vulnerable areas. The NFIP allows for residential construction in known floodplains, with the proviso that construction must follow building code regulations that include flood-proofing requirements. FEMA's hazard mitigation programs fund mitigation activities such as elevating properties, acquiring properties and converting them to open space, retrofitting buildings, and implementing limited flood control systems.

Divided Federal Responsibilities

Federal agencies play various roles in planning, construction, maintenance and operation, repair and rehabilitation of levees and related flood insurance and mapping.[12] Three agencies are authorized to provide federal assistance for locally owned or maintained levees—FEMA, Corps, and NRCS. FEMA has responsibility for NFIP flood risk assessment, mapping, and levee accreditation. The Corps performs some levee construction and damage repair and has the largest federal appropriations for these activities. NRCS provides some funds for repair of damaged levees through its Small Watershed Program. The levee-related roles of the three agencies are discussed below and in **Table 1**.

Table 1. FEMA, Corps, and NRCS Authorities for Locally Operated Levee Work

Federal Agency	Study and Construction	Operation and Maintenance	Emergency Flood Fighting	Repair of Damage	Improvements	NFIP Data Certification
FEMA	Authority unclear[a]	No authority	Stafford Act (42 U.S.C. 5170a)	Authority unclear[a]	Authority unclear[a]	No authority
Corps	Congressionally authorized actions (33 U.S.C 701n)	No authority	Emergency response authority (33 U.S.C. 701n)	Rehabilitation and Inspection Program (33 U.S.C. 701n)	No authority	Limited authority
NRCS	Small Watershed Program (33 U.S.C. 701b-1) and (16 U.S.C. 1001. et seq.)	No authority	No authority	Emergency Watershed Program (33 U.S.C. 701b-1) and (16 U.S.C. 2203)	No authority	No authority

[11] P.L. 90-448. The NFIP was broadened and modified with the passage of the Flood Disaster Protection Act of 1973 (P.L. 93-234), and other major reform legislation in 1977 (P.L. 95-128), 1994 (P.L. 103-325), and 2004 (P.L. 108-264).

[12] Among them, for example, are regulatory entities such as the Tennessee Valley Authority, the Bureau of Reclamation, the International Boundary and Water Commission, and agencies such as the U.S. Geological Survey that provide data used in assessing flood risk.

Source: CRS analysis of FEMA, Corps, and NRCS programs.

a. 42 U.S.C. 4104c provides FEMA with the authority to undertake flood mitigation activities. It is unclear to what extent such authority would extend to locally operated levees within the regulatory constraints of the prohibition on duplication of federal programs, including Corps and NRCS programs.

Federal Emergency Management Agency

FEMA is responsible for flood risk assessment and mapping, flood insurance, and federal hazard mitigation. Much of the congressional attention concerning locally operated levees derives from concerns about insurance expenses under the NFIP. FEMA uses FIRMs to delineate flood risk zones and the applicable insurance premiums to be charged for properties covered by federally backed mortgages. FEMA is updating the nation's inventory of FIRMs and requiring verification, through accreditation, that all levees currently depicted on FIRMs meet design, operation, and maintenance standards for protection against the 1%-annual-chance flood. FEMA activities have generated a number of questions. Some communities and stakeholders have raised questions about the development and accuracy of the updated FIRMs. Some levee owners have questioned the costs and documentation requirements associated with levee accreditation. Questions concerning liability in the event of a levee failure have been raised, most notably by representatives of engineering firms.

FEMA also operates various flood hazard mitigation grant programs that assist in removing repetitively flooded structures from floodplains, and conducts other activities to reduce flood impacts. Policy discussions surrounding these programs have questioned to what extent levee work should be eligible for FEMA mitigation funds. While some communities and levee owners want levee work to be funded by these programs, FEMA argues that funding levee projects would duplicate other federal programs and that appropriate provisions have not been made to address levee liability.[13]

Under FEMA regulations, hazard mitigation funds cannot replace project or program funding available under other federal authorities, unless there exists an extraordinary threat to lives, public health or safety, or improved property.[14] This provides FEMA officials with discretion to determine whether other federal programs are more appropriate to fund levee projects. Because certain levee activities receive funding from the Corps or NRCS, FEMA has determined that these agencies have the primary authority for the repair of flood control works such as levees.[15] As a result, FEMA hazard mitigation assistance grants have not been used for levee projects for at least the last decade.[16] While FEMA officials cite program duplication as justification for denying levee projects mitigation funding, it can be argued that FEMA has not consistently applied the same standard regarding duplication of authorities. That is, FEMA officials have allowed Hazard Mitigation Grant Program (HMGP) funds to be used for disaster housing projects that were eligible for funding under the Community Development Block Grant (CDBG) program,

[13] U.S. Department of Homeland Security, Federal Emergency Management Agency, *Rehabilitation Assistance for Levees and Other Flood Control Works*, Disaster Assistance Policy 9524.3, February 25, 2009.

[14] 44 C.F.R. § 206.434(g).

[15] FEMA *Rehabilitation Assistance for Levees and Other Flood Control Works*, Disaster Assistance Policy 9524.3, February 25, 2009.

[16] E-mail correspondence between (name redacted) and FEMA Office of Legislative Affairs, May 4, 2010.

administered by the Department of Housing and Urban Development (HUD).[17] In fact, in some instances CDBG funds were used to augment HMGP-funded projects.

Army Corps of Engineers

The U.S. Army Corps of Engineers is responsible for much of the federal construction of flood control and storm protection infrastructure. At the direction of Congress, the Corps is authorized to participate in the cost-shared planning and construction of flood damage reduction projects, such as levees and floodwalls to reduce damages from riverine and coastal flood hazards. Appropriations for these Corps construction projects have not kept pace with authorizations, and there is a significant backlog of congressionally authorized studies and construction projects. Interest in expanding Corps levee responsibilities raises questions about how to prioritize the federal funds Congress appropriates for the Corps, given the competing demand for its water resources projects.

As shown in **Table 1**, the Corps has a limited role in the regular operation, maintenance, and improvement of locally operated levees. After construction, levees built by the Corps generally are turned over to a local entity for operation, maintenance, repair, and rehabilitation.[18] Congress has authorized the agency to fight flooding at locally operated levees during emergencies in order to protect life and improved property (i.e., not levees protecting agricultural lands). The Corps can repair damage caused by a natural event at a levee that participates in the Corps' Rehabilitation and Inspection Program (RIP, also known as the P.L. 84-99 program). The Corps currently has no general authority, responsibility, or funding to assist local levee owners in assembling their NFIP levee accreditation packages, unless the levee is part of an ongoing Corps study or project.[19] However, expanding the Corps' role in NFIP data certification and post-construction improvements of locally operated levees is being discussed as part of the policy debate on how to manage flood risk and promote risk reduction nationally.

Natural Resources Conservation Service

NRCS also funds levee projects, but on a smaller scale than the Corps. Most of these levees protect agricultural areas and typically do not provide a level of protection that can withstand large-scale flood events. Therefore, the NRCS role is often not raised in the context of the NFIP remapping and levee accreditation debates. NRCS programs, however, are part of the discussion regarding federal assistance for levees because FEMA often points to these programs as a rationale for denying levee projects under its hazard mitigation programs.

[17] Telephone conversation between (name redacted) and Keith Turi, FEMA Mitigation Directorate, and Vince Fabrizio, FEMA Legislative Affairs, September 9, 2008. For additional information on use of CDBG funds in disasters, see CRS Report RL33330, *Community Development Block Grant Funds in Disaster Relief and Recovery*, by (name redacted).

[18] Corps maintained levees are primarily those along the Mississippi River and those that the Corps constructed prior to the early 1970s. It also operates numerous multi-purpose dams that provide flood damage reduction benefits.

[19] U.S. Army Corps of Engineers, *USACE Process for the National Flood Insurance Program (NFIP) Levee System Evaluations*, EC 1110-2-6067, Washington, DC, August 31, 2010, http://140.194.76.129/publications/eng-circulars/ec1110-2-6067/.

Levee Liability Issues

Liability risk for levee services (e.g., design, construction, maintenance, inspection, and data certification) may limit interest among public and private entities in providing such services and participating in levee projects. For public entities, this concern stems in part from the uncertainty related to the implications of *Paterno v. State of California,* which held the State of California liable for a levee it did not build, but operated as part of a state-sponsored levee system.[20] Anecdotal evidence suggests that some engineering firms have declined to perform levee work because of liability concerns; however, other anecdotal information suggests that levee owners generally have found a firm or some other means to perform the needed work (e.g., city engineers signing NFIP levee data certifications). The additional cost to levee owners from efforts of private engineering firms to cover their potential liability for the levee services is unknown.

To some extent, federal agency liability for federally funded levee projects has been addressed through congressional action.[21] One source of the federal government's immunity is the exception under the Federal Tort Claims Act for actions that constitute a discretionary function.[22] A second source of immunity for the federal government is the Flood Control Act of 1928, which prevents the government from being sued for damages resulting from federally supported damage reduction projects or from floodwaters.[23] However, as discussed in the later section "Policy Options for Assisting Locally Operated Levees," some questions remain as to whether the immunity applies to all federal actions and agencies.

National Flood Insurance Program

FEMA's NFIP plays a significant role in federal levee policy and promotes interaction between FEMA and the Corps on levee accreditation. As discussed earlier, the 1968 National Flood Insurance Act established the NFIP. Federal flood insurance currently is available in participating communities to help individuals and small businesses recover from flood damage. FEMA officials point out that the NFIP has realized significant savings both to itself and to property owners by reducing the cost of disaster relief. The basic requirement of the flood management program (and access to federal flood insurance) is that communities adopt and enforce minimum land use and building code regulations to prevent new development from increasing the flood risk and to protect new and existing buildings. Property owners obtaining loans from federally regulated lending institutions, or receiving federal assistance for acquisition or construction in special flood hazard areas (SFHAs) in communities that participate in the NFIP, are required to purchase flood insurance for their outstanding mortgage balance, up to a maximum of $250,000 in coverage for single-family homes. The mandatory purchase requirement applies only to certain properties in floodplains. Levees that protect a community from a 1%-annual-chance flood can reduce the NFIP mandatory purchase requirement.

[20] See *Paterno v. State of California*, 2003 Cal. App. LEXIS 1771 (2003), pet. for rev. denied, 2004 Cal. LEXIS 2253 (March 17, 2004); see also *Arreola v. County of Monterey*, 2002 Cal. App. LEXIS 4319 (2002), pet. for rev. denied, 2002 Cal. LEXIS 6194 (September 18, 2002).

[21] The issue of federal liability for damages is discussed in CRS Report RL34131, *Federal Liability for Flood Damage Related to Army Corps of Engineers Projects*, by Cynthia Brougher.

[22] For additional information on levee liability issues, see CRS Report 95-717, *Federal Tort Claims Act (FTCA)*, by (name redacted).

[23] Ibid., pp. 8-11.

Levees in NFIP Flood Risk Assessment and Mapping

FEMA is required to identify special flood, mudslide or flood-related erosion hazards within the community, establish appropriate risk zone determinations, and reflect these determinations accurately on FIRMs.[24] Flood maps generally delineate both high-risk zones and low-to-moderate risk zones (with a less than 1%-annual-chance of flooding). Flood maps have many uses, including local land-use planning, emergency preparedness and response, and natural resource management. Lending institutions and insurance companies also use FIRMs to calculate flood insurance rates and determine who is required to comply with mandatory purchase requirements. Therefore, how a levee is depicted on the FIRM has multiple consequences.

In 2003, at the urging of Congress and in collaboration with state and local partners, FEMA launched a five-year public awareness and map modernization program (Map Mod) to convert existing paper FIRMs into more accurate digital flood insurance rate maps (DFIRMs). As part of the Map Mod, FEMA initiated a nationwide flood insurance study (FIS) to update flood-hazard data used to identify the flood hazard risk in "levee-impacted" areas (i.e., areas protected by levees) on DFIRMs. According to FEMA, the primary goals of the FIS and DFIRMs are to:

- incorporate available flood hazard information;
- convert the base flood elevation data from the National Geodetic Vertical Datum of 1929 to the North American Vertical Datum of 1988; and
- upgrade the FIRMs to a geographic information system (GIS) database format.

As part of FEMA's Map Mod, FEMA also implemented a policy requiring verification that all levees currently depicted on FIRMs meet design, operation, and maintenance standards for protection against the 1%-annual-chance flood. FEMA reviews compliance with design, operation, and maintenance standards during the levee accreditation process.[25] This process has increased congressional interest in federal assistance for compiling the accreditation package materials and for investments in levee improvements to meet FEMA's accreditation requirements.

FEMA Levee Accreditation

As of November 2010, FEMA has accredited approximately 4,800 levees (which includes both locally and federally operated levees).[26] It is unclear what percentage of levees this represents since it is unknown how many levees exist nationwide. FEMA reviews levees for accreditation at the request of the entity that owns and operates the levee. The levee accreditation applications are reviewed as they are submitted. The regulatory requirements for accrediting levees as providing base flood protection are found in Title 44 of the *Code of Federal Regulations*, Section 65.10. On August 22, 2005, FEMA issued Procedure Memorandum No. 34 to clarify that while FEMA

[24] See 42 U.S.C. 4012(c), 4022, and 4102.

[25] For more information and an evaluation of the current process, U.S. Government Accountability Office, *FEMA Flood Maps: Some Standards and Processes in Place to Promote Map Accuracy and Outreach, but Opportunities Exist to Address Implementation Challenges*, GAO-11-17, Dec. 2010.

[26] U.S. Department of Homeland Security, Federal Emergency Management Agency, email correspondence from Vince Fabrizio, FEMA Legislative Affairs, to (name redacted), Congressional Research Service, Feb. 2, 2011. The approximate number of levees combines accredited levees and provisionally accredited levees (PALs), as detailed in Table 2.

accredits the levees, it is the community or levee system owner's responsibility to provide data and documentation to show that a levee system meets the requirements of 44 C.F.R. § 65.10.[27] A levee accreditation allows development in the "levee-impacted" area to be exempt from the NFIP mandatory purchase requirements and land use restrictions.

Technical Criteria for Levee Accreditation

In its process for deciding whether to accredit a levee, FEMA does not conduct a detailed physical levee inspection to determine whether, and how, the levee will perform in a flood. Rather, officials from FEMA's regional office typically meet with county and local community officials to put together a levee accreditation plan outlining a process and timeline to submit a certification of the levee data to FEMA. The certified levee data must document that:

- the levee is designed to withstand forces from the 1%-annual-chance flood based on its height, stability, foundation stability, and embankment protection;
- the levee has adequate freeboard (e.g., the levee height is at least three feet above design flood state);[28]
- all closure devices function properly;
- operation and maintenance plans are adequate and in place; and
- interior drainage systems (pumps and canals) are functioning.

FEMA's accreditation is not a levee performance guarantee. It is only a statement that data and documentation submitted to the agency comply with FEMA guidelines.[29] If a levee that was previously accredited is found to no longer comply with FEMA standards, it is de-accredited.

Costs of Obtaining Levee Accreditation

Owners of locally operated levees are responsible for the costs associated with seeking and maintaining FEMA's levee accreditation. The costs of obtaining accreditation include producing the information necessary to certify that the levee provides protection from the 1%-annual-chance flood event, and making improvements to the levee to enhance its functioning so that it meets FEMA's accreditation requirements.[30] Data on how much levee owners are investing in levee improvements and in data certification in order to obtain FEMA accreditation are not available.

Some levee owners have expressed concerns about the costs and process for obtaining accreditation. The effectiveness and efficient functioning of FEMA's levee accreditation process have not been the subject of an independent assessment to date. Without an assessment, and its supporting data, it is difficult to identify whether, and how, the accreditation process could be improved.

[27] See http://www.fema.gov/library/viewRecord.do?id=2367.

[28] The freeboard is the distance between normal water level and the top of a structure.

[29] 44 C.F.R. § 65.2(b).

[30] Supporting data could include analyzing samples of levee construction materials and modeling flood flows. Improvements may include increasing levee height, hardening the levee, protecting the base (also known as the toe) of the levee, and removing encroachments.

Data Certification

FEMA requires that a professional engineer certify that a levee complies with all requirements established in 44 C.F.R. § 65.10(b) before it can appear on a FIRM; this process is known as levee data certification. The levee data certification package is used by FEMA as the basis of its determination for whether or not to accredit a levee.

In 2005, FEMA increased the information requirements needed to accredit a levee. FEMA now requires more data on the structural integrity of the levee and the hydrology and hydraulics to which the levee is exposed than in the past.[31] As a result, local owners of some levees that previously were accredited by FEMA are having trouble obtaining and paying for reaccreditation. In many cases, they face a lack of readily available data on their levees' construction, materials, and structural integrity and confront assessments that indicate a lower level of protection than previously thought.

To complete the levee data certification, a professional engineer must sign a statement that the levee is designed in accordance with sound engineering practices to provide protection from the 1%-annual-chance event. Defining what constitutes sound engineering practices is complicated by the absence of a national levee model design for engineers to turn to as the professional standard for levee design parameters. Some engineering firms and their insurers have been concerned about liability if a firm certifies levee data and the levee later fails. Proposals for addressing this concern include providing immunity for the firms and clarifying that the professional engineer is certifying that the data comply with FEMA's requirements, rather than attesting to the levee's safety. Whether a federal agency certifying levee data would be immune from similar liability concerns is unclear and may be an issue if Congress considers increased Corps participation in data certification.

Prior to the 2005 increased information requirements, FEMA accepted the Corps' inspection of levees that participated in the Corps' Rehabilitation and Inspection Program (RIP) as sufficient for the data certification for levee accreditation. Since 2005, Corps RIP inspections are insufficient to meet the current FEMA data certification requirements.[32] The purpose of RIP inspections is to assess compliance with the requirements of RIP ─ that the levee owner is performing the maintenance required for RIP participation. The RIP inspections do not evaluate a levee's level of protection and structural integrity as required by FEMA for levee accreditation. In August 2010, the Corps released new guidance on how the agency will conduct the NFIP levee data certifications (which it calls levee system evaluations) that it has the authority to perform (see box "Limited Corps Role in Levee Data Certification").[33] The Corps process complies with the FEMA NFIP requirements under 44 C.F.R. § 65.10(b), but uses a different approach. The Corps approach is more focused on an evaluation of flood risk with the levee in place, while the 44 C.F.R. § 65.10(b) requirements are more focused on the level of protection provided by the levee.

[31] 44 C.F.R. § 65.10(b).

[32] National Committee on Levee Safety, *Draft: Recommendations for a National Levee Safety* Program, January 15, 2010, p. 90, at http://www.nfrmp.us/ncls/docs/NCLS-Recommendation-Report_012009_DRAFT.pdf. The inspections performed by the Corps for inclusion and active status in RIP do not include engineering assessments for project performance or stability, which are among the factors evaluated by FEMA when accrediting a levee.

[33] See footnote 19.

Limited Corps Role in Levee Data Certification

Some levee owners have looked to the Corps to assist with levee data certification. The Corps does perform data certification for federally operated levees, for locally operated levees that are part of a larger ongoing Corps study or project, and at the request of another federal agency. The Corps currently has no general authority to perform NFIP-compliant data certifications using discretionary appropriations for locally operated levees and is restricted from performing FEMA data certification on a reimbursable basis for nonfederal entities if the work can be provided by the private sector. This restriction is established for all Corps civil works activities of §211 of the Water Resources Development Act (WRDA) of 2000 (P.L. 106-541, 31 U.S.C. 6505), commonly known as the Thomas Amendment.

Whether the Corps should be authorized to perform NFIP levee data certifications for locally operated levees, and who would bear (or share) the costs, are matters of active debate. Some stakeholders have expressed interest in having the Thomas Amendment waived to allow the Corps to perform levee data certification. If such a change were enacted, the Corps would conduct the data certifications on a 100% reimbursable basis.

It is unknown whether the cost for the Corps to perform the certification would be less than if a private sector firm performed the certification. The Corps may be able to perform the data certification at a lower cost if it already has some of the data (e.g., for Corps-constructed projects) and if the private sector's cost is significantly influenced by liability protection.

Some stakeholders have questioned whether §5004 in WRDA 2007 (P.L. 110-114), titled "Structural Integrity Evaluations," provides the Corps with authority that could be used to undertake some of the work needed to obtain levee data certification and levee accreditation. That section included the following authority:

> Upon request of a non-Federal interest, the Secretary shall evaluate the structural integrity and effectiveness of a project for flood damage reduction and, if the Secretary determines that the project does not meet such minimum standards as the Secretary may establish and absent action by the Secretary the project will fail, the Secretary may take such action as may be necessary to restore the integrity and effectiveness of the project.

Congress has not appropriated funds for the Corps to implement this authority, and the Corps has not produced implementation guidance for this provision. The congressional reports accompanying WRDA 2007 did not provide further clarification. There are many uncertainties about how the authority might be implemented or interpreted, including what types of projects are eligible, what types of action are authorized, what constitutes project failure, what basis the Secretary is to use for establishing minimum standards, and what the federal funding limitations may be. Therefore, the ways in which this authority might be used, especially if the provisions of the Thomas Amendment were waived for levee certification work, remain uncertain.

S. 3109 (111th Congress), the Rural Community Flood Protection Act of 2010, which is discussed in more detail in **Appendix**, would have authorized the Corps to compile the data for levee accreditation as part of its civil works program; that is, rather than the costs being reimbursable, the work would generally be cost-shared at a 65% federal and 35% nonfederal split, except for a 0% nonfederal cost share for small communities and volunteer levee operators.

Provisionally Accredited Levees

As discussed above, levee classifications on DFIRMs are determined by the FEMA levee accreditation process. The process of collecting and submitting data that document compliance with the criteria set forth in 44 C.F.R. § 65.10 may be time-consuming and expensive for communities. FEMA can offer to accredit levees provisionally while the accreditation documentation is collected and reviewed. Provisionally accredited levees (PALs) are shown on the DFIRMs as providing protection from the 1%-annual-chance event. As discussed above, the DFIRMs are used to determine flood insurance rates and purchase requirements.[34] As shown in

[34] For additional information on flood insurance issues related to PALs, see CRS Report R41056, *Mandatory Flood Insurance Purchase in Remapped Residual Risk Areas Behind Levees*, by (name redacted).

Table 2, there are 295 PALs, which represent over 14% of all levees for which FEMA accreditation has been sought since mid-2006. Once a levee is provisionally accredited, the community has 24 months to submit documentation showing compliance with 44 C.F.R. § 65.10. If a community fails to produce documentation, the levee is de-accredited.

As shown in **Table 2**, as of November 2009, there were 687 levees that were provisionally accredited but for which documentation of compliance could not be produced within the required 24 months. FEMA has established guidelines for notifying communities that a PAL will be de-accredited.[35] Prior to the expiration of the PAL designation, FEMA notifies the levee system owners, the community, and other stakeholders such as congressional offices of the possible de-accreditation. Once the 24-month period expires, the PAL designation is removed, the levee system is de-accredited, and FEMA initiates a mapping project in the impacted areas. From this point, the mapping phase takes roughly 18 months; if the levee owner submits information sufficient to obtain accreditation during this period, the levee may be accredited before the updated map goes into effect. A significant portion of the recent interest in federal levee assistance has come from PAL owners struggling to assemble their accreditation packages and make levee improvements to meet FEMA's requirements. Similarly, owners of levees that have been de-accredited have shown strong interest in federal assistance for levee improvements.

Table 2. FEMA Provisional Levee Accreditation Actions

(June 2006-January 2011)

Levee Category	Number of Levee Systems[a]
Accredited[b]	3,650
Accredited, PAL[c]	1,150
De-accredited[d]	300
De-accredited, PAL[e]	687
Non-accredited[f]	8,339
Total	**14,126**

Source: Federal Emergency Management Agency, Mitigation Directorate, February 2011.

Notes:

a. May include non-levee embankments and similar flood structures.

b. These levees were accredited but do not include Provisionally Accredited Levees (PALs). Therefore, the DFIRM will show the levees as providing protection from the base (1%-annual-chance) flood.

c. These levees went through the Provisionally Accredited Levee (PAL) process and were accredited. The data and documentation indicating compliance with 44 C.F.R. § 65.10 were received and reviewed, and met the NFIP regulations. Therefore, the DFIRM will show the levees as providing protection from the base flood.

d. These levees were de-accredited due to noncompliance with 44 C.F.R. §65.10. Therefore, the DFIRM will show the levees as not providing protection from the base flood.

e. These levees went through the Provisionally Accredited Levee (PAL) process and were de-accredited. Either 44 C.F.R. § 65.10 data and documentation were received, but did not meet the NFIP regulations, or

[35] U.S. Department of Homeland Security, Federal Emergency Management Agency, *Procedural memorandum 53: Guidance for Notification and Mapping of Expiring Provisionally Accredited Levee Designations*, April 24, 2009.

data and documentation were not received to comply with 44 C.F.R. § 65.10. Therefore, the DFIRM will show the levees as not providing protection from the base flood.

f. These levees were inventoried, but were never previously accredited or Provisionally Accredited Levee (PAL)-eligible. Therefore, the DFIRM will show the levees as not providing protection from the base flood.

Levee Study and Construction

The Corps is the primary federal agency involved in the study and construction of levees. The NRCS provides limited assistance for small-scale levees. FEMA has had little involvement in levee planning and construction.

Corps Flood Damage Reduction Projects

As previously noted, the Corps, at the direction of Congress, is authorized to participate in the cost-shared planning and construction of flood damage reduction projects, such as building levees and floodwalls to reduce damages from riverine and coastal flood hazards. Corps involvement is predicated on the project being in the national interest, which is determined by the likelihood of widespread general benefits of the investment, a shortfall in the local ability to solve the water resources problem, and precedent and law.

The standard process for Corps participation in a levee project requires two separate congressional authorizations—one for investigation and one for project construction—as well as annual appropriations.[36] The investigation phase starts with Congress authorizing a study; if it is funded, the Corps then conducts an initial reconnaissance study followed by a more detailed feasibility study, which informs the congressional decision about whether to authorize the project for construction. The feasibility study analyzes whether it is in the national interest for the Corps to participate in the project and identifies the federally preferred alternative, if any. Since the mid-1980s, local project sponsors (often local governments or special levee and drainage districts) generally share construction cost of federal flood control projects and are fully responsible for their operation and maintenance. The cost-sharing for construction is 65% federal and 35% nonfederal for most flood control projects.[37] The construction cost of these projects can range from a few million dollars to more than a billion dollars. The authorized cost is generally included as part of the enacted legislative language providing congressional authorization for project construction.

NRCS Assistance for Small-Scale Levees

NRCS has authority under two programs—the Watershed and Flood Prevention Operations Program (often referred to as the Small Watershed Program)[38] and the Emergency Watershed

[36] One exception is for small projects. Congress has given the Corps limited authorities to undertake small projects (e.g., less than $7.0 million) without project-specific congressional authorization. For more information, see Corps' Continuing Authorities Programs in CRS Report R41243, *Army Corps of Engineers Water Resource Projects: Authorization and Appropriations*, by (name redacted) and (name redacted).

[37] For more on Corps flood control studies and construction projects, see CRS Report R41243, *Army Corps of Engineers Water Resource Projects: Authorization and Appropriations*, by (name redacted) and (name redacted).

[38] The Small Watershed Program is authorized by P.L. 83-566 and P.L. 78-534. Both authorities have similar objectives and are implemented following similar procedures. The vast majority of the projects have been built under the authority (continued...)

Protection (EWP) program—to conduct small-scale levee work on private land. It is called the Small Watershed Program because no project may exceed 250,000 acres, and no structure may exceed more than 12,500 acre-feet of floodwater detention capacity, or 25,000 acre-feet of total capacity. The Small Watershed Program authorizes NRCS to provide technical and financial assistance to state and local organizations to plan and install measures to prevent erosion, sedimentation, and flood damage and to conserve, develop, and utilize land and water resources. While projects can include levees, they are on a much smaller scale compared with other federal projects.[39] Operation, maintenance, and rehabilitation of every levee built under the Small Watershed Program is the responsibility of the local project sponsor upon completion. The Small Watershed Rehabilitation Program, also administered by NRCS, is authorized to rehabilitate only dams, not levees, built under the Small Watershed Program.[40]

Levee Related Flood Fighting

The Corps and FEMA have several programs that authorize the agencies to assist with flood fighting in response to an imminent or occurring flood event. These flood fighting actions can include assisting with existing levees that are locally operated (e.g., temporary reinforcement measures) or the construction of temporary levees to manage floodwaters.

Corps Flood Emergency Response Activities

In P.L. 84-99 (33 U.S.C. § 701n), Congress gave the Corps emergency response authority that allows the agency to fight floods and other natural disasters. The law authorizes disaster preparedness, advance measures, emergency operations (disaster response and post-flood response), rehabilitation of flood control works threatened or destroyed by floods, protection or repair of federally authorized shore protection works threatened or destroyed by coastal storms, emergency dredging, and flood-related rescue operations. These activities are limited to actions to save lives and protect improved property (i.e., public facilities and services, and residential or commercial developments), and appropriations for flood related programs vary (see **Table 3**).[41]

(...continued)

of P.L. 83-566, the Watershed Prevention and Flood Protection Act of 1954. Only 11 projects are specifically authorized under the Flood Control Act of 1944, and are much larger and more expensive than P.L. 83-566 projects.

[39] For more information, see CRS Report RL30478, *Federally Supported Water Supply and Wastewater Treatment Programs*, coordinated by (name redacted).

[40] According to 16 U.S.C. § 1012(a)(3), only a structural measure defined as "a physical improvement that impounds water, commonly known as a dam, which was constructed as part of a covered water resource project, including the impoundment area and flood pool" is eligible for the Small Watershed Rehabilitation Program.

[41] Although the Corps' account paying for these activities may receive some appropriations in the annual Energy and Water Development appropriations acts, the initial appropriation is often supplemented with emergency appropriations specific to the emergency being addressed.

Table 3. Appropriations for Corps Flood Control and Coastal Emergency Response

(in millions)

Corps Action Under P.L. 84-99 Authority	FY2005	FY2006	FY2007	FY2008	FY2009	Total	5-Year Average
Flood fighting[a]	$32	$113	$25	$55	$50	$275	$55
RIP, Non-Katrina	$0	$57	$562	$187	$44	$850	$170
RIP, Katrina	$200	$4,828	$2,926	$0	$439	$8,393	$1,679
Total	**$232**	**$4,998**	**$3,513**	**$242**	**$533**	**$9,518**	**$1,904**

Source: Corps fiscal year data provided to CRS in April and May 2010.

Notes: These figures combine funding for both locally operated and federally operated levees and flood control works; data on spending only for locally operated projects are not currently available.

a. This includes work performed under the Corps' flood-fighting authority; it does not include the work performed as part of FEMA's emergency response activities.

FEMA's Public Assistance Program

When a disaster occurs and a state is granted federal disaster assistance under the Stafford Act, funding under the Public Assistance program may be available to reimburse communities for flood-fighting activities and emergency repairs made to eligible levees.[42] FEMA averages about $1.3 billion in PA program obligations per year.[43] Although seven categories of projects are eligible for PA funding, most levee projects are funded under the Debris Removal and Water Control Facilities categories.[44] Under the statutory provisions of the Stafford Act, the PA program does not have a funding cap, which means that all eligible projects receive federal funding for at least 75% of the project cost.[45] Regulations establish eligible levee projects under the PA program.[46] Eligible PA projects may include:

- emergency and permanent repairs to restore the levee to its pre-disaster condition;
- removal of debris in a flood control work;[47]
- placement and removal of flood-fighting measures if such activity is necessary to eliminate a public health and safety threat; and
- dewatering of areas behind the levee if there is a threat to public safety or structures.[48]

[42] 42 U.S.C. § 5172(b).

[43] U.S. Department of Homeland Security, Federal Emergency Management Agency, *Average Total Obligations by Year and by Declaration*, January 2009, available at http://www.fema.gov/government/grant/pa/stat2.shtm.

[44] 44 C.F.R. § 206.226(a). The public assistance categories include Category A (Debris Removal), Category B (Emergency Protective Measures), Category C (Roads and Bridges), Category D (Water Control Facilities), Category E (Buildings and Equipment), Category F (Utilities), and Category G (Parks, Recreational, and Other).

[45] 42 U.S.C. § 5172(b).

[46] 44 C.F.R., §206.220-206.228.

[47] The debris must be the result of the disaster and must pose an immediate threat to life, public health, or property.

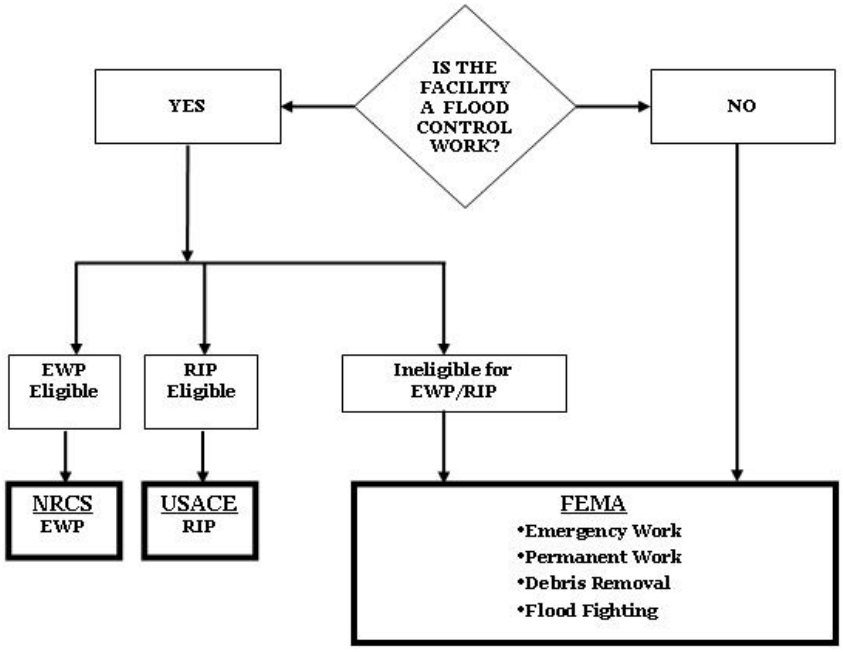
[48] U.S. Department of Homeland Security, Federal Emergency Management Agency, *Rehabilitation Assistance for* (continued...)

Ineligible levee activities under the PA program include:

- repair of levees that are in the Corps' Rehabilitation and Inspection Program or have a pending RIP application deemed eligible;
- repair of eligible levees under NRCS programs;
- dewatering of areas behind levees for the purpose of drying land;
- repair of secondary levees riverward of a primary levee, unless protecting human life; and
- increasing the height of a levee.[49]

Generally, PA program funds are limited to restoring a structure to its pre-disaster condition; projects to construct new levees or enhance existing levees are not eligible. In some instances, locally operated levee projects are deemed ineligible because of potential funding from other federal sources. In order to prevent duplication of programs, FEMA utilizes a decision tree for PA levee project requests, as shown in **Figure 1**.

Figure 1. Levee Eligibility for FEMA Public Assistance in Presidentially Declared Disasters



Source: U.S. Department of Homeland Security, Federal Emergency Management Agency, *Rehabilitation Assistance for Levees and other Flood Control Works*, Disaster Assistance Policy 9524.3, February 25, 2009.

(...continued)

Levees and other Flood Control Works, Disaster Assistance Policy 9524.3, February 25, 2009. Eligible dewatering activities may include a deliberate breach or pumping.

[49] The regulations provide only a general prohibition of increasing the height of a levee under the PA program eligibility guidelines. It would appear that the policy allows the FEMA Administrator some discretion in approving levee projects that would increase the height of eligible levees.

Discretion to determine levee project eligibility for PA lies with the FEMA Administrator. Disagreement occasionally arises between FEMA officials and state officials, especially regarding the need to restore a levee to its pre-disaster condition. The Stafford Act states that federal disaster assistance, administered by FEMA, is available to restore a structure to its pre-disaster condition.[50] It can be argued that, in some cases, the most cost-effective use of federal funds would be to enhance the level of flood protection of a levee that is already undergoing repair after a disaster, rather than just restoring it to the pre-disaster level of protection.

Levee Repair, Rehabilitation, and Inspection

FEMA, the Corps, and NRCS have programs that can fund disaster related emergency levee repairs. While some of the flood fighting activities discussed above may overlap with disaster related repairs, such as the FEMA Public Assistance program, most activities covered by repair and rehabilitation assistance discussed below do not occur during a flood event. Rather, repair and rehabilitation activities are undertaken after the peak of a flood event has occurred and the extent of damage from the flood event can be determined.

Corps Rehabilitation and Inspection Program

Through its Rehabilitation and Inspection Program, the Corps provides for rehabilitation of damaged flood control works and federally constructed hurricane or shore protection projects and related inspections. To be eligible for rehabilitation assistance, the levee must be in active status at the time of the damage by wind, wave, or water action of an other than ordinary nature.[51] The following types of levees are eligible for inclusion in RIP:

- non-federally or federally constructed, locally maintained levees and floodwalls; and
- federally authorized and constructed hurricane and shore protective structures.

Eligibility is also limited to locally constructed and maintained levees must provide a minimum of a 10-year level of flood protection with two feet of freeboard to an urban area, or a minimum of a five-year level of protection with one foot of freeboard to an agricultural area. Local levee owners request that the Corps consider their levee to be included in the RIP.

To keep an active RIP status, the levee owner is required to maintain the levee properly; the sufficiency of the maintenance is determined during an annual or semi-annual inspection by the Corps, and the levee owner making taking actions to address any identified deficiencies.[52] Approximately 2,000 projects, representing 14,000 miles of levees, participate in RIP—2,250

[50] 42 U.S.C. § 5172(e).

[51] 33 U.S.C. 701n. For more information on RIP, see USACE, Engineer Regulation 500-1-1, *Emergency Employment of Army and Other Resources Civil Emergency Management Program*, available at http://140.194.76.129/publications/eng-regs/.

[52] An aspect of RIP implementation receiving attention is the Corps' guidance on vegetation on levees. Some levee owners are having difficulty conducting regular maintenance and emergency repairs while also complying with environmental laws, such as the Endangered Species Act. In some areas, the vegetation on and near levees provides species habitat and other environmental benefits. This and other environmental issues associated with levee maintenance are beyond the scope of this report.

miles of locally constructed and operated levees; 9,650 miles of Corps-constructed, locally operated levees; and 2,100 miles of Corps operated levees.[53] The Corps issued in January 2009 a policy for the temporary extension of RIP to locally operated levees with deficient conditions if the owner is undertaking system-wide improvements.[54]

For locally constructed projects, the cost to repair the damage is paid 80% by the Corps and 20% by the levee owner; for federally constructed projects, the repair cost is entirely a federal responsibility (except for the costs of obtaining the sand or other material used in the repair). For damage to be repaired, the repair must have a favorable benefit-cost ratio. Rehabilitation assistance is limited to repair or restoration of the project to its pre-disaster level of protection; no betterments or levee setbacks are allowed. Local sponsors are required to assume any rehabilitation cost of damage to an active project that is attributable to deficient maintenance. For larger floods or natural disasters resulting in the need for significant RIP-funded repairs, Congress has often used supplemental appropriations to fund eligible repairs. For smaller RIP repairs, the Corps often attempts to fund repairs within its existing funding; at times, some eligible repairs have been delayed due to limitations on the availability of funds.

A common issue that arises under RIP (as well as for FEMA mitigation programs discussed later) is interest in not only repairing levees but also improving them. Congress expressly restricted RIP funds to repair. The program is not designed to evaluate the federal interest in investments to further reduce the flood risk at a location. If federal participation is sought to increase protection, the typical route would be to pursue a study by the Corps to initiate a separate flood damage reduction project.

NRCS Emergency Repair Assistance

NRCS also has authority, under the Emergency Watershed Program, to conduct emergency levee work (among other activities) to relieve imminent hazards to life and property in the event of a natural disaster.[55] Similar to the Small Watershed Program, EWP may work only on small levees within watersheds of 400 or fewer square miles. Emergency repairs to projects designed and constructed by either the Corps or NRCS may only be made by the respective agency (i.e., NRCS cannot repair a structure built by the Corps or vice versa). For nonfederal structures, however, the division of responsibility is based on a 1986 memorandum of agreement between the Corps and NRCS.[56] Under the agreement, the Corps is responsible for repair of flood damage to projects installed for the purpose of controlling floodwaters in watersheds larger than 400 square miles. NRCS, on the other hand, is responsible for flood damage to projects built for the purpose of flood prevention in small watersheds (400 or fewer square miles). If damage is caused by a natural disaster other than a flood (e.g., fire, tornado, or earthquake) and assistance from the Corps (under P.L. 84-99) is not authorized, such assistance becomes an NRCS responsibility. Levees that qualify for EWP assistance must have a local project sponsor and benefit more than

[53] Corps data provided to CRS on April 30, 2010.

[54] The policy is available at http://www.iwr.usace.army.mil/nfrmp/docs/HQS-ECOPY3I50-Exchange-01132009-162045.pdf.

[55] Authorized under Section 216, P.L. 81-516 (33 U.S.C. § 701b1) and Sections 403-405, P.L. 95-334 (16 U.S.C. §§ 2203-2205).

[56] *Memorandum of Agreement Between the Soil Conservation Service, Department of Agriculture and the Department of the Army*, May 20, 1986, signed by Robert K. Dawson, Assistant Secretary of the Army and Wilson Scaling, Chief of the Soil Conservation Service.

one person or interest. This restriction usually precludes assistance to many of the nonfederal levees near cropland.

Flood Hazard Mitigation

Activities that save lives and reduce damage to property are generally considered flood mitigation activities. FEMA hazard mitigation grant programs provides funding for flood mitigation activities. Hazard mitigation can reduce federal costs by decreasing the level of damage from future disasters. Since 1989, Congress has appropriated over $135.6 billion for FEMA disaster assistance programs.[57] As shown in **Table 4** and discussed in further detail below, over $8.9 billion has been made available for hazard mitigation in the last five years. Certain flood damage reduction projects are eligible under FEMA's Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation grant program (PDM).

There is debate regarding the extent to which FEMA hazard mitigation assistance programs can be used for levee construction and betterment, if at all. FEMA hazard mitigation assistance programs cannot duplicate the activities of other federal agencies or be part of a larger flood control system. It is thus critical to understand the extent to which FEMA and Corps programs (and to a lesser extent NRCS programs) may or may not fund similar flood reduction projects.

Table 4. Funding for FEMA Hazard Mitigation Programs

(in millions)

FEMA Program	FY2005	FY2006	FY2007	FY2008	FY2009	Total	5-Year Average
HMGP[a]	$157	$229	$269	$533	$750	$1,938	$387
PDM[b]	$100	$50	$100	$114	$90	$906	$181
PA[c]	$1,351	$2,406	$842	$427	$1,539	$6,565	$1,313
Total	**$1,608**	**$2,685**	**$1,211**	**$1,074**	**$2,379**	**$8,957**	**$1,791**

Source: FEMA, Office of the Chief Financial Officer, May 2010.

Notes: This list includes only FEMA hazard mitigation programs that are specifically addressed in this report. It does not include other FEMA mitigation programs, such as the Flood Mitigation Assistance, Repetitive Flood Claims, and Severe Repetitive Loss programs.

a. Funding amounts for the Hazard Mitigation Grant Program (HMGP) are based on actual obligations by fiscal year. Appropriations for HMGP are part of a larger appropriation to the FEMA Disaster Relief Fund. Levels of funding for HMGP are determined by a formula for individual disasters. Funding levels for HMGP vary widely based on the number of FEMA disaster declarations in each fiscal year.

b. Funding amounts for the Pre-Disaster Mitigation (PDM) program are based on congressional appropriations to the PDM account.

c. Funding amounts for Public Assistance (PA) include Category A and Category D types of projects (see footnote 44). Many of the project categories may not provide any funding for flood control projects.

[57] For additional information on FEMA disaster program appropriations, see CRS Report R40708, *Disaster Relief Funding and Emergency Supplemental Appropriations*, by (name redacted) and (name redacted).

FEMA's Hazard Mitigation Grant Program[58]

The purpose of the HMGP is to reduce loss of life and property damage in future disasters. The HMGP provides grants for long-term hazard mitigation projects after a major disaster declaration. A major disaster declaration is issued by the President under the authority of the Stafford Act.[59] Once a presidential declaration has been made, hazard mitigation assistance is available and project applications can be submitted. The maximum federal cost share for hazard mitigation projects is 75%. The amount of HMGP assistance available to a state is based on a percentage of total federal disaster grants made for that declaration, with total contributions not to exceed 15% of the aggregate amount of the grants.[60]

Long-term mitigation projects may include elevating properties, acquiring properties and converting them to open space, retrofitting buildings, and constructing floodwall systems to protect critical facilities.[61] Levee repair, maintenance, and enhancement projects could possibly be considered mitigation activities and might potentially be considered eligible under the HMGP. While statutory language does not expressly prohibit funding for certain types of levees, such projects have historically not been funded under hazard mitigation assistance except when there is an immediate risk to public safety. It may be argued that failure to fund levees to enable them to maintain FEMA accreditation does create an "immediate risk to public safety." Under this view, FEMA acknowledges the public safety risk when it designates a levee for de-accreditation due to a lack of compliance with levee standards.

One possible explanation for denial of levee projects relates to the risk of duplication of programs discussed earlier in this report. Another reason may be the low prioritization of levee projects under HMGP as effective flood mitigation measures. According to the Association of State Floodplain Managers, levees should be used as a mitigation activity of last resort, because they provide limited flood protection.[62] Since communities can undertake several other flood mitigation measures, competition for flood mitigation funding may preclude funding of levee projects. Other mitigation projects that would likely receive higher prioritization than levee projects include elevation of properties, retrofitting existing structures,[63] and stormwater management.[64] One of the most effective flood mitigation activities is to buy out homes and businesses in a floodplain and convert the land to open space. Property acquisition and relocation projects are eligible under the HMGP and would most likely be funded before levee projects because removing a structure from the floodplain is more effective in reducing flood damages.

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[58] For more information, see CRS Report R40471, *FEMA's Hazard Mitigation Grant Program: Overview and Issues*, by (name redacted).

[59] 42 U.S.C. § 5170. For additional information on disaster declarations, see CRS Report RL34146, *FEMA's Disaster Declaration Process: A Primer*, by (name redacted).

[60] 42 U.S.C. § 5170c(a). HMGP assistance shall not exceed 15% for amounts up to $2 billion, 10% for amounts between $2 billion and $10 billion, and 7.5% for amounts more than $10 billion but not more than $35.3 billion total (less any associated administrative costs).

[61] U.S. Department of Homeland Security, Federal Emergency Management Agency, *Fact Sheet: Hazard Mitigation Grant Program* (Washington, DC, June 2007), p. 1.

[62] Association of State Floodplain Managers, *National Flood Policy Challenges: Levees, The Double-Edged Sword*, white paper, April 17, 2007.

[63] Retrofitting existing buildings can include activities such as adding shutters to protect against high winds, attaching reinforcing clips to roofing, or using earthquake-resilient building materials to replace older portions of a structure.

[64] U.S. Department of Homeland Security, Federal Emergency Management Agency, *Hazard Mitigation Grant Program Desk Reference* (Washington, DC, October 1999), p. 7-1.

FEMA's Pre-Disaster Mitigation Grant Program[65]

The Pre-Disaster Mitigation (PDM) program funds structural and nonstructural mitigation projects prior to a disaster occurring in a community.[66] Eligible projects are similar to those funded under the HMGP: property acquisition and relocation, structural elevation, and other, non-flood related mitigation. There is a 25% state/local cost-share requirement for PDM grants. Because of the costly nature of levee projects, the cost-share provision may make the PDM program a less viable option than HMGP for communities considering such projects, assuming the other barriers to using HMGP, such as duplication of programs, can be overcome. As shown in **Table 5**, the PDM state/local cost-share is still lower than the Corps' Flood and Coastal Storm Damage Reduction Studies and Construction program.

Comparison of FEMA, Corps, and NRCS Levee Programs and Authorities

Table 5 summarizes information on the Corps, FEMA, and NRCS programs previously described; it presents an overview of the federal programs that are most often discussed as potential sources of funds for locally operated levees. The table clarifies that the Corps is the main federal partner in the construction of locally operated levees. What it does not show is that, as previously discussed, the process for obtaining this federal construction assistance is a lengthy multi-step process, and there is significant competition for available federal funds among congressionally authorized projects. **Table 5** shows that there are no general federal authorities for assistance with the regular operation and maintenance of locally operated levees. It further shows that there are multiple possible authorities for federal assistance for levees damaged by natural events and that each authority has its own cost share; which of these authorities is appropriate depends on the type of event (e.g., declared disaster) and the type of levee (e.g., small).

[65] For more information, see CRS Report RL34537, *FEMA's Pre-Disaster Mitigation Program: Overview and Issues*, by (name redacted) and (name redacted).

[66] 42 U.S.C. § 5170(c).

Table 5. Role of Locally Operated Levees under Select Corps, FEMA, and NRCS Programs and Authorities

Federal Program or Activity	Eligible Locally Operated Levee Projects	Disaster-Related Timing of Levee Work	Max. Federal Cost Share	Type of Levee Work Eligible	Significance of Levees' Current Role in Program	Action Required for Levee Project to Access Program	Avg. Program Funding for FY2005-FY2009 (in millions)
Corps—Flood and Coastal Storm Damage Reduction Studies and Construction	Congressionally authorized[a]	None	65%	Design and construction	Significant, but not the only work funded	Congressional study and construction authorization, and annual congressional appropriations	$857[b]
Corps—Operation and Maintenance[c]	None	—	—	—	—	—	—
Corps—Emergency Flood Fighting	Levees protecting life and improved property	Imminent disaster or during disaster	100%	Emergency, temporary strengthening	Significant, but not the only work funded	Governor or nonfederal project sponsor requests assistance; Corps uses its discretion to perform the work deemed necessary and within its authority	$55
Corps—RIP	RIP active levees and well-maintained levees	Post-disaster	100% for federally constructed, 80% for locally constructed	Repair of damage from a natural event	Significant, majority of work funded	Owner applies; Corps evaluates the eligibility and performs the work when funds become available	$1,849
FEMA—HMGP	Projects ineligible under Corps and NRCS programs	After a declared disaster	75%	Design and construction projects ineligible under Corps or NRCS programs	Insignificant, usually not eligible	FEMA approves and selects from eligible projects based on prioritization criteria	$387
FEMA—PDM	Projects ineligible under Corps and NRCS programs	Before a declared disaster	75%[d]	Design and construction projects ineligible under Corps or NRCS programs	Insignificant, usually not eligible	FEMA approves and selects from eligible projects based on prioritization criteria	$181

Federal Program or Activity	Eligible Locally Operated Levee Projects	Disaster-Related Timing of Levee Work	Max. Federal Cost Share	Type of Levee Work Eligible	Significance of Levees' Current Role in Program	Action Required for Levee Project to Access Program	Avg. Program Funding for FY2005-FY2009 (in millions)
FEMA—PA	Projects ineligible under Corps and NRCS programs	After a declared disaster	75%	Emergency repairs ineligible under Corps or NRCS authorities	Insignificant, small percentage of project funded	FEMA approves and selects from eligible projects based on prioritization criteria	$1,313
NRCS—Small Watershed Program	Small levee projects as part of small watershed protection	None	100%	Design and construction	Insignificant, projects rarely funded	Selected by NRCS from eligible projects based on prioritization criteria	$58
NRCS—Emergency Watershed Program	Small levee projects that reduce threats to life and property	Post-disaster[e]	75%	Repair of damage from a natural event	Insignificant, projects rarely funded	Owner applies; NRCS distributes funds to eligible projects	$191

Source: Congressional Research Service.

a. The Corps also has limited authorities and funding to undertake small levee projects (less than $7 million in federal funds) without project-specific congressional authorization.

b. This figure represents all Corps flood and coastal storm damage reduction funding through annual appropriations, except for the Mississippi River and Tributaries budget account. (The Corps funding for the Mississippi River and Tributaries projects could not be calculated because the data do not include supplemental appropriations.) This figure includes the funds for projects that would be operated by the Corps and by local levee owners.

c. Although the Corps lacks general authority and funding to perform maintenance of locally owned levees, the agency received on average $632 million annually between FY2005 and FY2009 for operation and maintenance of Corps-operated levees and for its Mississippi Rivers and Tributaries Project.

d. There is a maximum federal cost share of 90% for communities meeting the eligibility criteria for small and impoverished communities.

e. The levee owner must apply to NRCS within 10 days after the disaster for exigency situations and within 60 days for nonexigency situations.

Policy Options for Assisting Locally Operated Levees

As previously noted, Congress is debating whether and how to change the current division of levee responsibilities and their costs. Some stakeholders seek expansion of activities eligible for federal assistance, while others are concerned with the federal government assuming more of the cost and liability for levee investments that they consider a local responsibility. This section discusses some of the options available for congressional consideration. These include, but are not limited to, maintaining the status quo, adopting the recommendations of the congressionally established National Committee on Levee Safety, creating a new grant program, supplementing existing grant programs, or reducing the federal role in levee funding.

Maintain the Status Quo

As discussed in this report, there is debate about whether existing federal programs align with the appropriate federal role and whether such programs adequately address locally operated levee needs. One driver prompting the maintenance of the status quo is that most of the alternatives being discussed likely would increase federal responsibility, might increase federal liability concerns, and would require additional federal funding to implement.

Implement Recommendations of the National Committee on Levee Safety

In § 9003 of the Water Resource Development Act of 2007 (P.L. 110-114), Congress created a National Committee on Levee Safety (NCLS) to study and make recommendations for a national levee safety program. The NCLS is comprised of sixteen members, each with expertise in some aspect of levee safety. One member is from the Corps, one from FEMA, eight from state levee safety agencies, two from the private sector, two from local/regional governments, and two from Indian tribes. In 2009, the NCLS completed a draft report, including 20 recommendations embracing three main concepts:

- the need for national leadership through a National Levee Safety Commission that would advise on national technical standards, risk communication, and coordination of environmental and safety concerns,
- the creation of a levee safety program in all states with responsibilities for oversight and regulation, and
- the need for an alignment of federal agency programs.[67]

[67] National Committee on Levee Safety, *Draft: Recommendations for a National Levee Safety* Program, January 15, 2010, at http://www.nfrmp.us/ncls/docs/NCLS-Recommendation-Report_012009_DRAFT.pdf. The NCLS uses the term "alignment" without providing clarity on which programs and agencies would be involved and what is meant by "alignment."

Legislation is needed to implement 12 of the 20 recommendations fully and nationally. The report remains in draft form; that is, it has not been formally transmitted from the Administration to Congress. The House Transportation and Infrastructure Committee, Subcommittee on Water Resources and the Environment, received testimony on the recommendations in May 2009.[68]

The NCLS contends that states, not the federal government, should have primary authority for implementation of a national levee safety program. Ten states keep a list of levees within their borders, and 23 states have an agency with some levee safety responsibilities. The recommendation is to create a new commission that will establish a national levee safety standard for use by state programs. The NCLS draft proposes, among other investments:

- a new levee safety grant program to assist states in achieving strong levee safety programs, at $113 million annually in federal appropriations;
- a National Levee Rehabilitation, Improvement, and Flood Mitigation Fund to address both structural and nonstructural levee rehabilitation needs,[69] at $600 million annually in federal appropriations; and
- authority for the Corps to perform a one-time inspection of all locally operated levees (not only federally constructed levees or those participating in RIP) to support the development of the National Levee Database, at $125 million annually for the next five years.[70]

The cost to implement the full suite of recommendations in the report for the first five years would amount to $1.238 billion annually—$878 million in federal funds and $360 million in nonfederal funds according to the draft report. Most of the federal funding would be directed toward new federal activities—that is, activities that the federal government generally does not currently fund.

Elements of the legislation discussed in the next section of this report and **Appendix** may run counter to the NCLS recommendations. There has not been uniform acceptance of the draft recommendations; for instance, some view implementation of the recommendations as creating an unfunded mandate for levee safety that falls too heavily on the states and levee owners. Others are concerned about the creation of a new bureaucratic entity.

Create a New Program

Another option is to create a new grant program that would provide targeted funding to assist with aspects of locally operated levees that are not addressed by current programs (see **Table 5**). The new grant program would be distinct from the new levee safety program recommended by the NCLS because the project eligibility could be more extensive. Creating any new program requires many policy decisions to define such criteria as eligible activities, prioritization of activities, funding sources, nonfederal cost shares, the party responsible for performing the work, and the form of assistance (e.g., loan or grant). An additional consideration is where to house the

[68] The video of the May 19, 2009 hearing is available at http://transportation.house.gov/hearings/hearingDetail.aspx?NewsID=887.

[69] The fund is intended for locally operated levees for pre-disaster funding; it is not intended to replace FEMA's mitigation programs.

[70] The database and NCLS authority are currently capped at $20 million annually from 2008 to 2013.

program; Congress may consider the advantages and disadvantages of selecting various agencies to administer the new program.

Supplement Appropriations for Existing Programs

Congress could expand existing programs, either by expanding their authorization or by increasing appropriations. For example, FEMA arguably has the authority to fund locally operated levee repair and rehabilitation projects when there is no risk of duplicating benefits or activities of other federal agencies.[71] Where program duplication is unclear, a memorandum of understanding with appropriate agencies would assist the agency personnel in making eligibility determinations. However, as discussed in this report, funding is limited under existing programs. Congress may consider supplementing existing FEMA or Corps programs to provide additional funding for locally operated levee projects.

Reduce the Federal Role

Congress may assess whether the current federal role in locally operated levees is justified, in particular whether the current federal role provides incentives for floodplain use consistent with the national interest. Current federal programs are often rooted in historical concerns about public safety and reducing property damage. Local governments are traditionally responsible for activities such as land use and zoning, which influence flood risk. States also influence floodplain development decisions in an oversight role. It could be argued that if local and state governments choose to allow development in a floodplain, the cost of leveraging the flood risk to structures through structural flood control projects such as levees should fall exclusively on the local and state governments. Congress may consider reducing the federal role in locally operated levees by reducing appropriations for programs that fund such levees.

Legislative Developments in the 112th Congress

The 112th Congress has expressed interest in the mapping methodology used by FEMA in updating the FIRMs. On February 3, 2011, 27 U.S. Senators sent a letter to FEMA Administrator Craig Fugate requesting that FEMA discontinue its "without levee" analysis for determining FIRMs for areas where existing levees have not obtained FEMA accreditation if the community in the affected area objects.[72] Members of Congress also have introduced legislation to address issues with updates to FIRMs and the impact of new maps on the purchase requirements for the NFIP. In addition to the legislation discussed below, efforts to address the challenges facing locally owned levees may be pursued through efforts to reauthorize the NFIP. Addressing local levee issues in a reauthorization or other bill raises a budgetary consideration. Increases in the authorizations or appropriations in federal assistance for locally owned levees would increase the demands on federal fiscal resources. Congress, the Administration, and the public are carefully scrutinizing actions that would expand federal activities given the current federal fiscal climate.

[71] 44 C.F.R., §206.434(g).

[72] U.S. Senate, letter to FEMA Administrator Craig Fugate, Feb. 3, 2011, available from the authors.

Legislation on NFIP Mapping and Flood Insurance

H.R. 764, Fair Treatment of Existing Levees Act of 2011

H.R. 764 would prohibit the FEMA Administrator from assuming that an existing levee or flood control structure does not exist (i.e., the use of a "without levee analysis") when determining the FIRM for an area if it results in the area having a new flood hazard designation. The bill would provide an exception to the prohibition if no affected community has notified FEMA within 90 days of enactment of this act of objections to the hazard modeling processes, and provided that the affected communities have provided sufficient notification to affected residents prior to the implementation of the provision.

H.R. 898, To Suspend Flood Insurance Rate Map Updates in Geographic Areas in Which Certain Levees Are Being Repaired

H.R. 898 would prohibit the FEMA Administrator from updating the floodplain designation or flood risk zone for areas behind levees determined by the Corps to have a design deficiency and where the responsible entities have implemented a plan that meets certain criteria to repair the levee. In addition, state and local governments with jurisdiction over the area must have implemented a surveillance and operations plan, an evacuation plan, and an outreach and communication plan, except where the flood protection system provides protection from the 1% annual chance flood or where the FEMA administrator has suspended the updates to the floodplain areas or flood risk areas for seven consecutive years.

Concluding Remarks

While considering NFIP reauthorization, which expires September 30, 2011, and during other legislative deliberations, Congress may decide whether, and if so how, to address locally operated levees having difficulty obtaining and maintaining FEMA accreditation, and whether to change the current federal assistance provided to locally operated levees. Congressional action may clarify federal authorities for activities assisting locally operated levee and may reduce the risk of duplication of programs. Although levee issues have become a more prominent subject of congressional interest in recent years, consensus on how federal policy, programs, and funding should evolve remains elusive.

Appendix. Levee Legislation Considered in the 111th Congress

Legislation on Levee Accreditation

Two bills related to levee accreditation were introduced in the 111th Congress. In a March 2010 letter to the FEMA Administrator and the Assistant Secretary of the Army for Civil Works, 16 Senators in the 111th Congress requested a meeting to discuss levee accreditation and flood mapping processes.[73] Also during the 111th Congress, roughly 40 Members were part of the Congressional Levee Caucus; the Caucus chair announced levee certification as its chief priority.

H.R. 4935, PAL Extension

Referred to the House Committee on Financial Services, H.R. 4935 would have provided the FEMA regional office directors with the authority to grant a PAL extension not to exceed 24 months for communities making a "good faith effort" to comply with the FEMA levee accreditation requirements. The good faith effort would include documentation that a community has adequate funding for levee rehabilitation and has retained a private contractor or appropriate federal agency to verify the certification of the levee.

S. 3109, Rural Community Flood Protection Act of 2010

Referred to the Senate Committee on Environment and Public Works, S. 3109 would have authorized the Corps to perform NFIP data certification as part of the agency's civil works program rather than as a reimbursable activity. The certification would be cost-shared, with a 65% federal and 35% local split, except that nonfederal interests representing fewer than 10,000 people and volunteer levee operators would have no local cost-share. The bill would not have authorized a specific level of appropriations. Data on the average costs of data certification are not currently available.

The bill also would have addressed levee owners' concerns about the financial burden of obtaining data certification by authorizing the Corps to perform at full or partial federal expense work that under the NFIP is considered the levee owners' responsibility. Under the provisions of the bill, the federal government would assume all of the cost associated with levees protecting smaller communities and run by volunteers; most likely, these would be in rural areas. It is unclear how many such levees exist, since few rural levees provide protection from a 100-year flood. Furthermore, it is unclear whether such rural levees represent the greatest risk to life and property and therefore should receive a greater share of federal investment. The greater federal cost share in the bill for rural levees appeared to be based on a perception of a lower ability among these levee owners to pay for data certification, rather than on a greater federal stake in these levees.

[73] The text of the letter is available at http://durbin.senate.gov/showRelease.cfm?releaseId=323237.

Legislation on NFIP Mapping and Flood Insurance

S. 3285, Suspension of Flood Map Modernization Updates

Referred to the Senate Committee on Banking, Housing, and Urban Affairs, S. 3285 would have required that the FEMA Administrator suspend any map updates under Map Mod for seven years for counties with a flood protection structure built or maintained by the Corps. The proposed legislation would not have suspended map updates for counties protected by locally operated levees.

H.R. 3415 and S. 3051, Suspension of Flood Insurance Rate Maps in Areas Where Certain Levees Are Being Repaired

H.R. 3415 and S. 3051 are identical bills that would have suspended flood insurance rate map updates for up to seven consecutive years in communities that contain levees with a design deficiency, if the community has a repair plan that was developed by the Corps or a licensed professional engineer, was approved by FEMA or the Corps, is based on reasonably current design data, and includes an adequate financing mechanism for implementing the plan. The repair plan must also ensure that once the repairs are completed, the levee would provide protection from a 100-year flood. H.R. 3415 was referred to the House Committee on Financial Services, and S. 3051 was referred to the Senate Committee on Banking, Housing, and Urban Affairs.

Legislation on FEMA's Hazard Mitigation Programs

H.R. 1746 (P.L. 111-351) and H.R. 3377, Authorizations for the Pre-Disaster Mitigation Grant Program

Passed by the House and the Senate in December 2010, H.R. 1746 (P.L. 111-351) reauthorized the PDM program for three fiscal years beginning in FY2011, with authorization for $180 million in fiscal year 2011, $200 million for fiscal year 2012, and $200 million in FY2013. The legislation increased the minimum award amount for each state by providing the lesser of $575,000 or 1% of total program appropriations, with a maximum per state award not to exceed 15% of the fiscal year appropriation. The enacted legislation also included a prohibition on congressionally directed spending for the PDM program.

While H.R. 3377 would have authorized an annual appropriation of $250 million for three years, beginning in FY2010, the bill did not receive further consideration because H.R. 1746 was passed by both the House and the Senate.[74] The PDM program is a potential source of funding to address the levee issues presented in this report. Appropriations for PDM have fluctuated significantly since initial program authorization, ranging from $150 million for FY2003 and FY2004 to $50 million in FY2006.

[74] In December 2010, H.R. 1746 became public law (P.L. 111-351).

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