Making the NFIP Work for Taxpayers and Policy Holders:
Reducing Flood Losses and NFIP Premiums through Mitigation

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Flooding is the most common natural disaster in the United States, affecting communities in each of the fifty states and territories. Across the nation, states and municipalities have worked diligently to reduce the frequency and impact of flooding in their communities even while resources to reduce flood losses remain limited.

Effective flood mitigation is a multi-faceted enterprise. The federal and state governments share significant responsibilities in the planning, design, construction, and maintenance of major flood control projects that protect hundreds of millions of homes and businesses. At the community level, particularly those communities participating in the National Flood Insurance Program (NFIP), governments adopt and enforce floodplain management standards and building codes. County and parish governments that adopt stronger standards and participate in the Community Rating System (CRS) achieve a greater level of flood protection for the community that is reflected in reduced flood insurance premiums.

Property owners have a key responsibility to reduce flood damage and secure resources to comply with floodplain management and building code requirements. Property owners may fulfill this responsibility to protect property by purchasing flood insurance and Increased Cost of Compliance (ICC) coverage. Appropriate flood insurance and ICC coverage ensures flood damage is repaired and that damaged structures are restored to a higher level of flood protection if required by current floodplain management standards and building codes. Property owners further have the obligation to work through local, state, and federal programs to mitigate high-risk structures having sustained repetitive flood loss events.

Despite this coordinated, multi-layered approach to flood mitigation, substantial sums of taxpayer funds are appropriated each year in response to disaster damage caused by flooding. This raises important questions about the efficacy of the national flood loss mitigation strategy and the efficiency of deploying substantial taxpayer funds for disaster response while making limited investments in disaster mitigation by comparison. Aggressively addressing flood risks at the regional and community levels, while providing homeowners options and resources to lower flood risks will save lives and property, reducing flood damage, flood insurance claims, and flood insurance premiums.

Federal policymakers must work with state and local governments and individual property owners to reduce the frequency and expense of flood losses. This necessarily requires allocating resources for disaster prevention and flood loss mitigation. Reducing the exposure of our communities, homes, and businesses to flood losses is a more efficient and effective use of taxpayer resources and will reduce future disaster costs and preserve flood insurance affordability.
Response over Prevention—Are We Doing this in Reverse?

In 2016, the Congressional Budget Office (CBO) identified $209 billion in federal disaster appropriations solely for hurricane response from 2000 through 2015. The increase in hurricane-related disaster expenditures was dramatically demonstrated in the surge of supplemental appropriations for the Army Corps of Engineers (USACE or Corps). From 2003 to 2013, Congress enacted supplemental appropriations for USACE of $32.2 billion with $27.5 billion appropriated to facilitate Corps response to flooding. The largest amounts appropriated were in response to the 2005 hurricanes (Katrina, Rita, Wilma) and Hurricane Sandy—$16 billion and $5.35 billion, respectively.

Figure 1: Federal Hurricane-Related Disaster Expenditures by Agency—FY2000–2015

<table>
<thead>
<tr>
<th>Agency</th>
<th>FEMA/DRF</th>
<th>HUD</th>
<th>USACE</th>
<th>Other Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Allocation</td>
<td>44%</td>
<td>20%</td>
<td>11%</td>
<td>26%</td>
</tr>
<tr>
<td>Total</td>
<td>~$92 billion</td>
<td>~$42 billion</td>
<td>~$23 billion</td>
<td>~$54 billion</td>
</tr>
</tbody>
</table>

Source: Congressional Budget Office (rounding causes totals to exceed appropriations identified by CBO)

Other Agencies includes DOT, DOD (non-USACE), ED, SBA

To add context to the $27.5 billion in supplemental appropriations, annual appropriations for the USACE civil works program have ranged between $4.5 billion and $5.5 billion from fiscal year 2003 through fiscal year 2013. One analysis of USACE funding determined that supplemental appropriations were equal to almost half of regular USACE appropriations from 2003 through 2013.

While the 2005 hurricanes and Hurricane Sandy were high cost disasters, supplemental funding for the Corps remains consequential when appropriations for these disasters are not included. Congress provided an estimated $6.15 billion in supplemental appropriations for non-catastrophic losses from 2003 through 2013. This amount is slightly higher than the average annual USACE civil works program budget over the past decade.

Deploying valuable resources outside of a prioritized mitigation investment strategy could be an inefficient use of funds. Policymakers should bring discipline to this process, identifying areas most at risk for flood damage and funding flood control projects in these areas. Congress will routinely be called on to appropriate emergency funding to respond to tropical weather events and aberrant localized inland flooding events. A considered and methodical approach to use emergency supplemental appropriations to improve the resilience and effectiveness of damaged facilities will reduce future damages and limit federal, state, and local government expenditures.

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3 Ibid., p. 6-7.
4 Congressional Research Service, Army Corps of Engineers: Water Resource Authorizations, Appropriations, and Activities, R41243 (Washington, D.C., February 9, 2016), p. 3, Figure I.
Coordinating Federal and State Resources to Construct and Improve Flood Control Systems
The Water Infrastructure Improvements for the Nation (WIIN) Act of 2016 mandates USACE expedite certain flood control projects, which will benefit impacted communities. It is important that flood control systems, many of which will protect against inland flooding, be funded through the annual appropriations process. A challenge congressional appropriators and USACE must overcome is the current backlog of authorized projects, which is estimated to be $62 billion. The importance of moving authorized flood control projects to completion in such an underfunded and competitive budget environment is difficult to understate.

A 2013 study found the Corps required approximately $10 billion to complete flood control projects authorized at that time. Over the past decade, Congress has failed to appropriate sufficient amounts to begin construction or to complete these projects, resulting in numerous stalled projects. Allowing flood control projects that have completed the USACE reconnaissance, preconstruction engineering, and design phases to languish likely leads to significant private losses and federal disaster expenditures. In certain flood events, private and public losses that could have been limited if a project had been completed will likely exceed the total cost of the delayed flood control project. Policymakers should undertake a benefit to cost analysis to determine the impact on communities and taxpayers of underfunding and delaying construction to completion of authorized flood control projects.

The WINN Act takes an important step toward identifying at-risk communities and developing effective resilience and mitigation strategies. The Act establishes a coastal resilience council to coordinate development of data and research and federal investments in coastal communities. The Corps is also directed to undertake regional assessments of coastal and back bay flood protection systems. Importantly, the WIIN Act directs USACE to “give priority” to projects that will protect threatened coastal communities and infrastructure and reduce future costs. Such directives can form the basis of a reasoned flood loss mitigation strategy that will reduce the exposure of whole communities to devastating flood losses. Congressional oversight of USACE implementation of this provision will be required to focus attention on resilience and make appropriate flood protection for coastal communities a reality.

Section 1176 of the WIIN Act furthers a reasoned approach to flood control by permitting the Corps to increase the level of protection provided by damaged flood control systems being repaired or restored under emergency authorities, provided the project’s non-Federal partner funds the enhancements. Pursuant to this new authority, a non-Federal sponsor may request enhancements to a damaged project or pumping station to increase the level of protection over levels the system was originally designed to provide. The Corps must determine the improvements will significantly decrease future flood damages and increase the system’s long-term resilience.

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6 P.L. 114-322: Section 1322(b) directs the Secretary of the Army to prioritize certain projects having flood damage reduction and flood risk management as a primary purpose.
8 Congressional Research Service, R42841, p. 11.
9 P.L. 114-322, Section 1183(a)(3) directs USACE to “give priority to projects in communities the existence of which is threatened by rising sea level, including projects relating to shoreline restoration, tidal marsh restoration, dunal habitats to protect coastal infrastructure, reduction of future and existing emergency repair costs, and the beneficial use of dredged materials.”
10 P.L. 114-322, Section 1176.
This is a positive development for a flood mitigation investment strategy. The requirement that the project’s non-federal partner fund the full difference between the cost of repairing or restoring the system to its original design and achieving improved levels of protection may be a limiting factor. If the federal government will receive a direct benefit from the project enhancements in the form of reduced repair costs and lower disaster response expenses, the federal government should contribute to the cost of the improvements.

Strong congressional oversight will be required to ensure effective deployment of all available resources to improve resilience and flood control systems. Prudent exercise of WIIN Act Section 1176 authority may be useful if such authority leads to greater coordination of all available mitigation funds, including Public Assistance (PA) made available under Section 406(e) of the Stafford Act.\textsuperscript{11}

Section 406(e) permits the USACE to increase the efficacy of a damaged flood control system with federal funds when repairing damaged facilities. Section 406 funds are limited to enhancing only those portions of a damaged flood control system that incurred disaster damage leaving open the possibility that only the damaged portion of a facility will be improved, leaving other portions exposed to future damage and providing lower levels of protection. Combination of Section 406(e) mitigation authority with other mitigation funding, be it through Section 1176 of the WIIN Act or different federal mitigation programs (Section 404 of the Stafford Act\textsuperscript{12}), or state and local programs will improve the impact and benefit of these mitigation efforts.

Federal government sponsored research has determined investments in disaster risk mitigation preserve human life, health, and safety, protects public and private property, and reduces federal, state, and local government costs. Coordinating various income streams from federal and non-federal sources will assist in completion of prioritized projects and justify investments in flood prevention.

Ensuring maximum levels of protection are achieved when restoring damaged facilities is also a critical component of stabilizing the NFIP and ensuring flood insurance policies remain affordable and available. This is the case if the facility is a school or a pumping station. Enhanced flood protection will reduce flood insurance claims through more damage resistant and resilient communities and is a more effective and efficient use of federal, state, and local resources.

\textsuperscript{11} 42 U.S.C. §172
\textsuperscript{12} 42 U.S.C. §170c
**Using Supplemental Appropriations to Enhance Protection, Resilience**

Research funded by FEMA concluded every $1 spent on disaster mitigation saves almost $4 in recovery costs.\(^\text{13}\) A CBO examination of the Pre-Disaster Mitigation (PDM) Program corroborated these findings, establishing that PDM projects lowered disaster recovery costs at a rate of approximately 3 to 1.\(^\text{14}\)

Over the past 10 years, Congress has made available substantial amounts of taxpayer funds through supplemental appropriations to respond to natural disasters. Policymakers should ensure that supplemental appropriations are used to enhance flood control systems when practicable. Considering FEMA study data on the impact of mitigation, policymakers have a clear financial incentive to fund work that reduces future losses and repairs to essential facilities.

Congress took this policy approach with USACE supplemental appropriations for Hurricane Sandy under the civil works construction account designated for use in Sandy impact areas. The Disaster Relief Appropriations Act, 2013, provided—

> ...$2,902,000,000 of the funds provided under this heading shall be used to reduce future flood risk in ways that will support the long-term sustainability of the coastal ecosystem and communities and reduce the economic costs and risks associated with large-scale flood and storm events in areas along the Atlantic Coast within the boundaries of the North Atlantic Division of the Corps that were affected by Hurricane Sandy...\(^\text{15}\)

In a constrained budget environment, securing new appropriations for disaster mitigation will remain a significant challenge. Adopting the policy approach of the 2013 disaster supplemental appropriation is a responsible means to achieve enhanced flood protection in disaster areas until policymakers opt to provide additional resources for flood control and disaster mitigation through the regular appropriations process.

If supplemental appropriations continue at a similar pace to that of the past 13 years (even in the absence of catastrophic losses), substantial sums will be made available to repair damaged flood control systems. Repairs funded by supplemental appropriations should result in improved levels of protection within impact areas—coastal and inland—enhancing the resilience of affected communities and damaged flood control systems.

**Funding Flood Control through Annual Appropriations is the Optimal Choice**

Funding USACE flood control projects through annual appropriations is the more efficient mechanism to achieve hazard mitigation plans. This process is more conducive to vetting and prioritization of flood control projects to offer maximum projection to critical infrastructure and communities. Additionally, funding new projects or improving existing projects through regular appropriations preserves cost-sharing requirements that may be waived in an emergency.

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\(^{13}\) Multihazard Mitigation Council, *Natural Hazard Mitigation Saves—Vol. One*, (Washington, D.C., 2005), p. 5. The MMC study was funded by FEMA.

\(^{14}\) Congressional Budget Office, *Potential Cost Savings from the Pre-Disaster Mitigation Program*, (Washington, D.C., September 2007), p. 2. CBO was unable to determine a link between the use of grants for mitigation planning as any cost savings are dependent on funding and completion of mitigation projects or activities that would not have otherwise occurred.

\(^{15}\) P.L. 113-2, Title X, Chapter 4, Construction.
Cost-sharing means that non-Federal partners have a direct financial stake in floodplain management, which serves as a powerful incentive to retain and maximize the benefits of floodplain management. The interests of government and stakeholders become aligned with all benefitting from the long-term savings of flood control systems and all having a shared interest in protecting the efficacy of mitigation investments.

This alignment of interests extends to property owners, who may accept an increase in property taxes or creation of a special taxing district if revenues are dedicated to flood control and will reduce NFIP premiums. However, property owners may become reticent to provide a local match for flood control projects through property taxes if the federal government fails to consistently fund approved projects.

Studies have demonstrated that flood insurance affordability has a significant impact on both the number of flood insurance policies and the amount of coverage purchased. High flood insurance premiums lead to fewer policies and lower coverage amounts. When the federal government fails to fund authorized flood control projects through the annual appropriations process, property owners may come to view the Corps as an unreliable partner and, facing higher flood insurance premiums, some will elect to drop NFIP coverage.

Using federal resources, combined with state and local contributions, to improve protection offered by damaged flood control facilities will prevent future disaster expenditures and preserve flood insurance affordability. Policymakers must coordinate and combine resources as appropriate to ensure that flood control systems are resilient and improved when practicable. To ensure that flood control systems provide maximum protection and mitigation investments are made in an effective and efficient manner, policymakers should reduce reliance on supplemental appropriations and adequately fund construction and rehabilitation of flood control systems through the annual appropriations process.

Improving and Funding Federal Mitigation Grants

Apart from the USACE civil works program, most federal flood mitigation funding is made available to states, territories and recognized tribal governments through three FEMA-administered grant programs. The Hazard Mitigation Grant Program (HMGP) is available to eligible grantees affected by a major disaster, awarding mitigation funds based on a percentage of damage sustained in disaster impact areas. The PDM program is available annually to grantees on a competitive, nationwide basis and is not dependent on declared disasters. The Flood Mitigation Assistance (FMA) Program is funded annually through allocations from the National Flood Insurance Fund (the Fund) and is available on a nationwide basis. FMA is unique in that the program’s sole focus is flood loss mitigation, with a special emphasis on mitigating structures having incurred repetitive flood losses. Collectively, these grant programs are known as FEMA Hazard Mitigation Assistance (HMA).

Communities and property owners leverage HMA resources for pre-disaster mitigation planning as well as mitigation activities, including elevation of at-risk buildings, demolishing or relocating structures and

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dedicating land for use as open space, improving localized watershed drainage, and other flood mitigation actions. In general, HMA funding may be used to reduce damage from the broad scope of natural disasters, including flood. Only FMA resources are dedicated to flood risk mitigation. Despite the considerable benefits of the federal suite of hazard mitigation programs and the high demand for these valuable resources, funding levels can be haphazard and limited. In some instances, mitigation may not be adequately reflected in flood insurance premiums.

**Timely Access to HMGP Funds**

Following a presidential disaster declaration, the amount of federal disaster funding made available to the impact area directly correlates with available HMGP funding for disaster mitigation activities. HMGP regulations and guidance authorize a broad range of mitigation activities, with funding allocated on a sliding scale based on aggregate disaster assistance a jurisdiction receives and the form of mitigation plan a state has adopted.

States with a FEMA-approved Standard State Mitigation Plan may receive up to 15 percent of the first $2 billion of aggregate disaster assistance, up to 10 percent for disaster assistance amounts between $2 billion and $10 billion, and up to 7.5 percent for amounts between $10 billion and $35.3 billion. If a state has in place a FEMA-approved Enhanced State Mitigation Plan prior to a disaster declaration, as much as 20 percent of aggregate disaster assistance up to $35.3 billion is available through HMGP.

Following a presidentially-declared disaster, FEMA provides eligible grantees estimates of HMGP assistance in three time intervals. In general, an initial estimate of disaster expenses will be determined within 35 days of a disaster declaration. An interim estimate will be determined 6 months after the disaster declaration and a final determination 12 months after the disaster.

These estimates and final determination serve as a “lock-in ceiling” for both the total amount of HMGP assistance available to an eligible grantee and as a limit on management costs for grant administration. In general, an eligible grantee must submit its HMGP application or funding requests for newly identified programs within 12 months of a disaster declaration.

Prior to the 12-month lock-in determination, FEMA will permit grantees to obligate up to 75 percent of estimated HMGP funds. Only after the final lock-in ceiling is determined, 12 months after the disaster, are states permitted to obligate the full projected amount of HMGP funding. Compared to the PA program or insurance claims, the HMGP 12-month lock-in timeframe may delay the availability of funds for eligible projects. Some HMGP grantees have indicated that delay in accessing the full amount of available funding is a problematic element of the grant program.

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18 44 CFR 206.432(b)(1) and (2) establish HMGP funding formulas to guide amounts available to state and tribal governments following a federally-declared disaster and serve to incentivize states to craft and obtain FEMA approval for Enhanced Mitigation Programs. FEMA data show 12 states with approved enhanced mitigation plans as of October 2016. See [https://www.fema.gov/hazard-mitigation-plan-status](https://www.fema.gov/hazard-mitigation-plan-status) (accessed January 16, 2017). Further, the Stafford Act provides the president significant discretion in awarding HMGP funds and the president is not bound by statute to allocate the maximum percentage of aggregate disaster expenditures authorized by the Stafford Act.
19 44 CFR 207.5(b)
20 44 CFR 206.436(d)
Notwithstanding the overall flexibility of HMGP, program rules limiting obligation of a state’s full HMGP award prior to the 12 month lock-in may complicate the combination of HMGP funds with other mitigation funds to improve the resilience of certain flood control facilities. Policymakers should strive to remove unnecessary programmatic restrictions on the use of mitigation funds if the net result will be a positive benefit to cost ratio and enhancement of flood control systems.

This may be the case in instances where the USACE determines Section 406(e) PA funds for restoration of damaged facilities may be used to enhance protection of a damaged facility and states wish to use HMGP funds to simultaneously enhance non-damaged portions of the facility. In such instances a state may be forced to wait 12 months post-disaster for access to the full amount of HMGP funding to complete mitigation these mitigation activities.

The amount of PA funding for mitigation and enhancement of damaged facilities is not inconsequential. A review by the Congressional Research Service identified an estimated $1.7 billion in PA mitigation work performed under Section 406(e) authority, excluding amounts related to Hurricane Sandy in 2013. If the Hurricane Sandy amounts are included total PA mitigation funds used in rehabilitation and restoration of damaged facilities amounted to $3.7 billion from 2000 to 2013.22

If programmatic limitations prevent the efficient use or combination of total mitigation resources to maximum impact, these limitations should be identified and eliminated. This is particularly if such limitations prevent or delay the reasoned deployment of HMGP funds.

*Use of HMA Funds at the Property Level*

FEMA HMA funds constitute the greatest pool of federal funds to reduce flooding risk and flood insurance premiums at the property level. Flexibility in mitigation strategies to reduce flood losses and have this lower risk reflected in flood insurance premiums is imperative.

In general, mitigation activities such as elevation and relocation of equipment and machinery or structure elevation, relocation, and demolish and rebuild achieve the greatest reductions in flood insurance premiums. This places certain regional housing types and housing models at a clear disadvantage, particularly if the regional housing stock is not suited to elevation or where elevation is cost prohibitive. These property owners must have access to alternative mitigation measures that reduce flood damage risk and receive a commensurate reduction in flood insurance premiums for mitigating risk. In general, such alternative mitigation measures are eligible HMA activities.

The Homeowner Flood Insurance Affordability Act (HFIAA)23 requires that NFIP premiums reflect mitigation activities undertaken by property owners. Specifically, HFIAA Section 14 directs that NFIP premiums be based on consideration of actuarial principles and “*the flood mitigation activities that an owner or lessee has undertaken on a property, including differences in the risk involved due to land use measures, floodproofing, flood forecasting, and similar measures...*”24 Notwithstanding this, NFIP does

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22 Congressional Research Service Report R43990, p. 36 (Figure 6).
23 P.L. 113-89
24 42 U.S.C. 4014(a)(1)(ii)
not appear to have undertaken efforts to examine the full range of authorized mitigation activities, assess the effectiveness of such mitigation activities, or determine how to reflect the full range of mitigation options in NFIP premiums.

In 2015, FEMA published an informational booklet on alternative mitigation measures for structures not suited for elevation. The booklet provides an overview of certain mitigation options, but notes that for many mitigation options flood insurance premiums will not be adjusted. For example, FEMA notes that additional study is required to determine the rate impact of certain wet floodproofing techniques.

FEMA should expedite completion of these studies and related, ongoing projects to establish a suite of mitigation options for structures not suited for elevation or where elevation is cost prohibitive. FEMA actuaries should examine the specific mitigation techniques identified and determine rate impacts for single mitigation actions or combinations of mitigation actions. Further, FEMA building and engineering requirements should be updated to facilitate compliance with eligible alternative mitigation actions and certification that flood proofing requirements have been fulfilled.

Providing options, clear guidance, and premium rate information will allow property owners a wider variety of permissible mitigation options, assist owners in determining the most impactful mitigation activities to pursue, and provide rate discount certainty. Given the trajectory of flood insurance premiums across all risk classifications, prompt completion of FEMA’s mitigation options review and establishing premium discounts for effective mitigation is imperative.

**Stabilizing and Increasing Disaster Mitigation Funding as a Cost-Savings Investment**

HMGP is the largest source of disaster mitigation funds within the FEMA HMA toolkit. FEMA data show during 2003 to 2014 HMGP funded disaster mitigation projects with total costs of an estimated $8.6 billion—approximately $6.6 billion in federal funds and $1.99 billion in state and local match funding. HMGP funds were used over this period to mitigate flood risk, bury powerlines to avoid damage in ice storms, purchase emergency generators for critical facilities, strengthen buildings against earthquake damage, stabilize earth to reduce mudslide risk, and other actions to reduce wildfire risks.

While HMGP is the largest source of mitigation funding at the state and local level, HMGP funds are not awarded on a national, competitive basis—an eligible jurisdiction must be included in the impact area of a declared natural disaster. In contrast, the PDM program, which offers grantees significant flexibility in developing mitigation plans and funding mitigation activities, is provided limited funding that is distributed on a nationwide basis.

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Appropriations for PDM have ranged from $63 million in fiscal year 2014 to $30 million in fiscal year 2015 to $90 million in fiscal year 2016. In fiscal year 2013, the Obama administration criticized PDM as duplicative, overfunded compared to demand, and proposed to eliminate PDM altogether.

To the contrary, PDM funds appear to be actively sought by eligible grantees. Through December 6, 2016, pre-disaster mitigation projects in the amount of $1,301,975,695.64 have been funded through PDM. This is a substantial investment in disaster mitigation despite PDM grants accounting for less than 1 percent of federal hurricane-related disaster spending from 2000 to 2015.

Applying FEMA and CBO benefit to cost factors for mitigation funding, PDM projects reduced disaster costs by an estimated range of $3.9 billion to $5.2 billion. Program funding should be stabilized and consistent to ensure that state and local partners have confidence in the federal government’s only nationwide program dedicated to mitigation planning and a broad spectrum of mitigation activities. At a minimum, policymakers should strive to provide a steady level of annual appropriations for PDM.

FEMA datasets further demonstrate the impact of the Flood Mitigation Assistance (FMA) program. FMA is dedicated funding for mitigation of structures that have multiple or repetitive flood losses and to mitigate the risk for flood losses to insured structures. Historically, repetitive loss properties have accounted for a substantial portion of NFIP claims despite comprising a very small percentage of NFIP policies. FMA addresses this critical subset of properties, which are a source of financial instability for NFIP.

FEMA data indicates, from 2003 through December 2016, that FMA grants totaling $632,920,241.91 have been awarded to address high flood risk properties. Policymakers should consider a measured increase in funds made available for FMA, which are drawn from NFIP premium income. Alternatively, policymakers may consider making such additional resources available through a second competitive grant process open to jurisdictions with an established record of obligating and successfully closing FMA grants and a demonstrated capacity to successfully manage additional FMA resources.

Combined, the federal government has allocated an approximate $9.2 billion in funding to reduce future disasters through HMA over the prior 13 years. If FEMA and CBO benefit to cost estimates are applied, these funds have prevented $23 billion to $31 billion in future disaster costs. Notwithstanding these

28 FEMA: FY 2016 Pre-Disaster Mitigation Grant Program Fact Sheet; FY 2015 Pre-Disaster Mitigation Grant Program Fact Sheet; FY 2014 Pre-Disaster Mitigation Grant Program Fact Sheet (available at www.fema.gov).
31 CBO identified $209 billion in discretionary expenditures responding to hurricanes from 2000-2015 (see footnote 1). Author’s calculations show total PDM grants awarded are approximately 0.006 percent of such funds.
32 FEMA Hazard Mitigation Assistance Pre-Disaster Mitigation Assistance dataset and author’s calculations. CBO research estimated a 3 to 1 benefit to cost ratio for PDM funding (see footnote 10) and FEMA funded research estimated a 4 to 1 benefit to cost ratio for disaster mitigation funding (see footnote 9).
33 ‘Repetitive Loss Structure’ is defined in 42 U.S.C. § 4121(a)(7) as an NFIP-insured structure that has incurred flood damage on 2 occasions and the cost of repairs on average, equal or exceed 25 percent of the value of the structure; at the time of the second flood event, the structure must have carried Increased Cost of Compliance coverage. Pursuant to 42 U.S.C § 4104c(h)(3) a ‘severe repetitive loss property’ is NFIP-insured structure for which 4 or more claims payments exceeding $5,000 each or exceeding $20,000 cumulatively or for which 2 separate claims payments have been paid and the cumulative value of such payments exceeds the value of the structure.
costs savings, the cumulative estimated amount of disaster mitigation grant funding made available to states, tribal governments, and local communities remains approximately 4 percent of hurricane disaster expenditures over the same time period. Increasing or stabilizing funds for mitigation grant programs will reduce future flood losses thereby impacting flood insurance premium affordability.

Incentives for Property Owner-Funded Mitigation

Government has a vital role in flood control and disaster mitigation, but this role does not remove or diminish the fundamental obligation of property owners to protect their homes and businesses from flood damage. Engaged, responsible homeowners and businesses must actively seek out means and partnerships with government and private capital to reduce flood risks.

Most federal and state flood mitigation programs require property owners to make a financial contribution to receive mitigation assistance. This investment ensures property owners have a financial stake in protecting their property and leverages federal, state, and local tax dollars. It is in the interest of taxpayers at every level of government to ensure that property owners devote resources to reduce flood risks. It is appropriate for policymakers to explore new mechanisms that will facilitate property owner-funded mitigation or partnerships to leverage new sources of capital for hazard mitigation programs.

Disaster Savings Accounts
In the 114th Congress, U.S. Rep. Dennis Ross (R-FL) proposed a tax incentive for property owners to set aside funds for disaster mitigation and response. H.R. 2230, the “Disaster Savings Accounts Act of 2015” permits property owners to make up to $5,000 in pre-tax contributions to a disaster savings account on an annual basis and to make withdrawals for eligible purposes without tax penalty.

Disaster Savings Accounts may not be the solution for all property owners seeking to mitigate flood or other risks, but may serve as a powerful financial incentivize for some homeowners to self-fund mitigation activities. A home that has been retrofitted to withstand hurricane force winds and where appropriate flood mitigation measures have been undertaken is far less likely to require assistance from the DRF in the wake of a major disaster.

A homeowner who funds flood mitigation benefits from increased protection and lower flood insurance premiums and allows hazard mitigation grant program funds to be used in a manner that protects the greatest number of properties. H.R. 2230 and similar legislation is a tool to leverage limited federal disaster mitigation funds and incentivize homeowners to take on more responsibility to preserve and protect property. Congress should enact legislation similar to H.R. 2230 to incentivize property owner funded mitigation.

Vouchers, Mitigation, and Flood Insurance Affordability

35 Under some circumstances the FMA program will fund 100 percent of mitigation costs (i.e., severe repetitive loss properties).
36 H.R. 2230 was introduced by U.S. Rep. Dennis Ross (R-FL) in the 114th Congress on May 1, 2015. H.R. 2230 was referred to the U.S. House Committee on Ways and Means, but no legislative action was taken on the bill in the 114th Congress. As of the publication of this paper Rep. Ross has not reintroduced similar legislation in the 115th Congress.
Rising flood insurance costs for property owners is a significant concern for federal, state, and local policymakers, to say nothing of NFIP policyholders. Understanding that higher flood insurance premiums may have unintended consequences for certain policyholders, Congress has directed FEMA to undertake or expedite multiple studies on flood insurance affordability during and after the transition to full-risk premiums.

FEMA is currently preparing a flood insurance affordability framework, projected to be available in 2017. It is anticipated that a voucher program will be a component of the FEMA affordability framework. The U.S. House Appropriations Committee has noted the importance of FEMA designing vouchers as a component of an affordability framework. In its report accompanying H.R. 5634, the Department of Homeland Security Appropriations Act, 2017, the committee wrote—

As a means to address affordability of the NFIP, it is critical that accurate data be used in determining eligibility for and distribution of vouchers. For the forthcoming statutorily mandated affordability framework in which vouchers are being considered, FEMA is directed to collaborate with the Department of Housing and Urban Development (HUD) and the U.S. Census Bureau to use actual data on home values and household income instead of simply relying on micro-simulation modeling.

To this end, CSFI has argued premium affordability may be achieved by limiting the number of NFIP policies with premiums exceeding one percent of policy coverage amounts. Further, CSFI has expressed support for financial assistance to policyholders where a one percent of coverage NFIP premium causes a policyholder’s monthly housing costs to exceed certain thresholds. As FEMA develops its pending affordability framework, the agency should consider policies to direct assistance to policyholders exceeding the one percent of coverage premium threshold and the impact of requiring that voucher assistance fund mitigation of higher flood risk properties. Ultimately, mitigation will be required to achieve long-term program affordability and stability through reduced NFIP premiums and actual savings for the Fund.

Potential Roadmap for Vouchers, Private Capital, and Affordability

As FEMA develops its proposed affordability framework, a study by the Wharton Center for Risk Management and Decision Processes (Wharton Risk Center) may provide a reasonable roadmap for combining vouchers and private capital to help property owners mitigate insured structures and achieve flood insurance affordability. In a study of NFIP-insured structures located in Charleston County, SC, Wharton Risk Center researchers identified groups of properties exposed to increasing flood insurance premiums (projected to eventually double 2016 premiums) where a combination of a NFIP voucher to

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37 In S. Rpt. 114-264, Senate appropriators noted that FEMA’s estimate for completion of its affordability framework is “a mere 20 days before the authorization of NFIP sunsets.” Appropriators directed FEMA to provide regular updates concerning its affordability framework to ensure Senators could consider FEMA policy recommendations in the 2017 NFIP reauthorization. See p. 119 for a discussion of Senate appropriators’ directives to FEMA concerning the affordability framework.


pay premiums and a private mitigation loan would result in cost-savings for both the policyholder and NFIP.

In designing an assistance program, Wharton Risk Center researchers assume households will contribute at least 5 percent of annual income, up to $2,500 in annual premium payments (1 percent of maximum structure coverage insurance), with households under certain income thresholds paying reduced amounts. To fund elevation of structures, homeowners would obtain low-cost (estimated 3 percent interest) loans with 20-year terms to bring insured structures into compliance with existing code, thereby substantially reducing flood risk and NFIP premiums.

Researchers found that compliance with current elevation and code requirements substantially lowered annual flood insurance costs for target structures, which in turn substantially offset the property owner’s mitigation loan payments. In some cases, post-mitigation actuarial premiums fell below the $2,500 threshold and a voucher was no longer deemed necessary. If a voucher is required after mitigation, researchers determined NFIP will likely still benefit from reduced claims payments over the life of the arrangement. The benefit to cost ratio diminishes for NFIP where required mitigation costs are high and flood insurance-related costs continue to far exceed the $2,500 annual consumer cost limitation, which increases the amount of the voucher.

In general, researchers concluded mitigation is necessary to reduce federal expenditures and result in a positive benefit to cost ratio. Researchers determined a voucher program without mitigation would be cost-effective only in limited circumstances—very low income households located in V-zones. Notwithstanding this finding, researchers demonstrated that mitigation, even when the costs of elevation are high, may produce tangible benefits for homeowners and NFIP.

A critical component of the Wharton Risk Center proposal is the availability of long-term, low interest loans to fund mitigation of target properties. Researchers do not identify a ready source of liquidity to fund necessary mitigation loans other than private lenders. Policymakers should carefully consider existing sources of liquidity that may be used to fund mitigation loans. Specifically, policymakers should examine the appropriateness of authorizing the Small Business Administration (SBA) to guarantee mitigation loans for property owners who will use an affordability voucher. Such a proposal would require revision of current SBA disaster loan regulations to implement necessary amendments and establish program parameters, if adopted.

A second source of liquidity policymakers may constructively examine is the Federal Home Loan Bank System (FHLB). The FHLB System is a housing government sponsored enterprise, comprised of 11 regional banks, which are mutually owned by member financial institutions. Under current law and regulation, each FHLB has authority to make advances to member institutions to support lending in disaster areas. Such disaster advances to FHLB members are typically priced below other advance rates and have terms ranging from 3 months to 40 years.

A clear advantage for including the FHLB System as a source of liquidity for disaster mitigation loans is that System members regularly use FHLB advances as a source of funding. Further, use of the System
may facilitate an increased role for community financial institutions, which are heavily vested in their local communities.

An important disadvantage policymakers must consider is that while making advances to support disaster recovery is an authorized activity of the FHLB System, the primary purpose of the System is to support housing and mortgage lending. Involving the System in funding mitigation loans may detract from this core purpose.

The System’s regulator, the Federal Housing Finance Agency (FHFA), must be involved in any policy discussion to ensure the System is operating under statutory authority as well as in a safe and sound manner. Policymakers should engage FHFA, the individual FHLBs, and System members to determine if FHLB advances are an appropriate or feasible source of liquidity for flood mitigation loans when used with a FEMA affordability voucher.

**Increased Cost of Compliance Claims and Hazard Mitigation Assistance**

Biggert Waters Act Section 100225 made substantial reforms to the FMA program, including clear statutory authority for the federal government to assume 100 percent of FMA project costs for insured structures classified as “severe repetitive loss structures” and 90 percent of flood mitigation costs for insured structures classified as “repetitive loss structures.”

FMA authorizes a broad suite of mitigation activities, including localized flood control projects that will benefit NFIP insured structures and reduce the likelihood of flood damage. Notwithstanding this, FMA program evaluation criteria place significant weight for mitigation activities that substantially reduce claims rates for severe repetitive loss and repetitive loss structures when determining awards. Thus, the primary focus of FMA is to reduce losses to the Fund from repetitive flood claims, which are a significant drain. While such structures account for a limited portion of NFIP policies, repetitive loss structures receive a significant percentage of claims payments on an annualized basis.

As early as 2004, the Government Accountability Office (GAO) highlighted FEMA estimated claims payments of approximately $200 million per year for insured structures with repetitive losses, amounting to more than $1 billion in claims over the prior 21 years (1983 - 2004). In subsequent research, GAO found the number of repetitive loss structures increased by approximately 73 percent from 1997 to 2011.

The persistence of repetitive loss structures insured by NFIP ultimately led Congress to authorize aggressive annual flood insurance rate increases to more rapidly achieve full-risk premiums for insured severe repetitive loss structures. Mitigating repetitive loss structures will limit NFIP losses and address premium affordability for affected policyholders.

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The Standard Flood Insurance Policy (SFIP) includes coverage known as Increased Cost of Compliance (ICC), which permits certain policyholders to access claims payments to fund the cost of complying with current floodplain management standards if required after a flood loss event. To be eligible for an ICC claim, a policyholder must have received notification from a county or parish government that flood event damages equal or exceed 50 percent of the insured structure’s value. If a county or parish has adopted a cumulative damage standard, property owners may file an ICC claim if applicable. ICC claims payments may be used to fund up to $30,000 in costs to comply with current code requirements.

Under current HMA program guidance, ICC claims may be used to satisfy HMA local match requirements for federally-funded flood mitigation activities, subject to certain restrictions. To satisfy local match requirements, an ICC claim must be submitted after a qualifying flood loss event and within the permissible timeframe established by NFIP (generally within 60 days—subject to extension—of an insured’s receipt of a substantial damage determination or cumulative damage determination from a county or parish government as applicable). Mitigation work funded by ICC claims must be completed within 4 years. Additional program requirements include the insured’s assignment of the ICC claim to a HMA subapplicant, which then assumes an obligation to perform mitigation work. This provides flexibility to subapplicants in meeting local match requirements for HMA grants and increases mitigation activities.

As the need to address severe repetitive loss and repetitive loss properties is a pressing concern, it is noteworthy that only FMA authorizes federal funding for 90 to 100 percent of flood mitigation activities for such properties. Flood mitigation activities funded through HMGP and PDM are subject to the general program requirements that mandate a local match even though the work performed and the target properties are the same. This programmatic disparity of cost-sharing arrangements for repetitive and severe repetitive loss structures may discourage certain property owners from seeking mitigation assistance or completing necessary mitigation actions due to a lack of available matching funds.

In 2010, FEMA undertook a pilot program that authorized pre-event ICC claims when used with other federal grant funding to mitigate severe repetitive loss properties. To be eligible for the ICC claim, a policyholder must have received an offer to participate in the Severe Repetitive Loss Assistance Grant Program (terminated under the Biggert Waters Act), be NFIP insured, and have maintained continuous coverage for the 180 days preceding the grant opening period through acceptance of the mitigation offer. This permitted the policyholder to access an ICC claim to fund mitigation, thereby limiting future losses.

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44 Standard Flood Insurance Policy, Coverage D.
45 FEMA, Hazard Mitigation Assistance Guidance (2015), Part III, Section C.2: Increased Cost of Compliance as Non-Federal Cost Share, p. 28. HMA program guidance notes ICC claims payments “from a flood event may be used to contribute to the non-Federal cost-share requirements so long as the claim is made within the timelines allowed by the NFIP. ICC payments can only be used for costs that are eligible for ICC benefits, which are elevation, floodproofing, relocation, or demolition (or any combination of these activities).”
48 FEMA, Hazard Mitigation Assistance Guidance (2015), p. 27, Table 2: Cost-Share Requirements. In limited circumstance, certain jurisdictions may qualify for a reduced local cost-share.
Policymakers should consider allowing a policyholder who has received an offer for ICC-eligible flood mitigation through HMGP and PDM to access ICC claims if the structure is insured through NFIP and the currently meets, or will likely meet, the statutory definition of severe repetitive loss structure or meets the definition of repetitive loss structure. FEMA has already demonstrated statutory authority to permit ICC claims under substantially similar circumstances in establishing and operating its Severe Repetitive Loss Increased Cost of Compliance Pilot Program. Further, allowing qualified policyholders to access and use ICC claims when an offer for mitigation assistance has been extended irrespective of when a flood event has occurred will establish parity for flood mitigation activities for repetitive and severe repetitive loss structures in the HMA suite of programs.

Summary of Policy Recommendations

- Congress has appropriated $209 billion in federal disaster response since 2000, but only 4 percent of this amount has been allocated through FEMA HMA to prevent disasters over the same period. Spending hundreds of billions on disaster response while providing limited disaster mitigation funds deepens the cycle of growing federal disaster costs. Disaster mitigation and effective floodplain management are the primary tools to break this cycle and ensure that homes and businesses are protected by actuarially-priced, affordable flood insurance.

- Congress must conduct effective oversight of U.S. Army Corps of Engineers (USACE) procedures and project approval timelines to ensure authorized flood control projects do not languish, needlessly putting communities, homes, and businesses at risk of flood damage.

- Policymakers must ensure coordination of all available federal funds so that funds are used efficiently to enhance protection of damaged flood control facilities, including funds authorized under Section 404 and Section 406 of the Stafford Act as well as funds from non-federal sources as authorized by Section 1176 of the WIIN Act.

- Congress should adopt an ongoing policy that emergency supplemental funds for restoration of damaged flood control facilities be used in ways that will reduce the risk of future flood damage, enhance facility resilience, and improve levels of flood protection.

- Congress should strive to fund flood control projects through the regular annual appropriations process to ensure USACE activities are appropriately prioritized and matching funds are used to leverage federal funds.

- Policymakers should review the HMGP 12 month lock-in requirement and provide access to full HMGP allocations if HMGP funds will be combined with other resources such as PA mitigation funds to enhance protection levels and resilience of damaged flood control systems.
• FEMA must expedite a comprehensive review of HMA-eligible mitigation activities for property-types that are not suited to elevation. The FEMA review should result in a suite of mitigation activities for such properties and include defined premium discounts for individual mitigation activities or combinations of mitigation activities

• Congress must appropriate consistent levels of funding for the Pre-Disaster Mitigation Program to provide program stability

• Congress should consider increasing FMA program funding through an additional round of funding available only to those jurisdictions with demonstrated capacity to consistently manage and close FMA grants

• Congress should enact legislation such as the Disaster Savings Account Act to establish tax incentives for property owners to fund mitigation activities

• FEMA must expedite and submit its affordability framework to Congress so that policymakers and stakeholders have ample opportunity to evaluate affordability options in the 2017 NFIP reauthorization

• If vouchers are to be used to address NFIP affordability, vouchers should be used in concert with property-level flood mitigation activities to ensure future affordability of insurance and reduced future NFIP claims on the structure

• FEMA should consider a voucher affordability program to direct mitigation assistance to policyholders paying premiums that exceed one percent of policy coverage; employ flood mitigation to reduce flood insurance premiums; and use voucher payments to limit a qualified policyholder’s total housing costs

• Policyholders should explore existing programs at the Small Business Administration and the Federal Home Loan Bank System to fund flood mitigation loans in conjunction with NFIP affordability vouchers to ensure policyholders have adequate access to credit for mitigation activities