The Nature Conservancy
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4245 N. Fairfax Avenue NW
Suite 100
Arlington, VA 22203

Tel (703) 841-5300

www.tnc.org

Statement of The Nature Conservancy
Committee on Banking, Housing and Urban Affairs
Subcommittee on Economic Policy

The National Flood Insurance Program: The Need for Long-Term Reauthorization and Reform

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Mr. Chairman and members of the Subcommittee, thank you for the opportunity to present The Nature Conservancy's views on the timing of and nature of reforms to the National Flood Insurance Program. My name is Sarah Murdock and I am a Senior Policy Advisor for The Nature Conservancy. The Nature Conservancy is an international, non-profit conservation organization working around the world to protect ecologically important lands and waters for nature and people. Our mission is to conserve the lands and waters upon which all life depends.

The Nature Conservancy continues to support a five year reauthorization of the National Flood Insurance Program through passage of The Flood Insurance Reform and Modernization Act of 2011 currently being considered by the United States Senate. We believe this legislation brings significant reforms which we consider critical to begin to address areas of the Program that are currently broken. Contrary to Congressional intent, the Program as it currently functions is increasing risk from storms and floods to people, property and ecosystems, and to the important services that those ecosystems provide to people.

Enactment of The Flood Insurance Reform and Modernization Act of 2011 will phase out subsidies that have undermined the financial stability of the program; will require the Federal Emergency Management Agency (FEMA) to ensure maps are updated and accurate so that people understand and can better prepare for their risks; and will streamline and strengthen mitigation programs to help decrease flood risks and better protect flood-exposed communities and homes and businesses. We ask that this legislation be brought before the full Senate for debate and consideration at the earliest opportunity.

The Nature Conservancy is also a member of the Smarter Safer coalition, a diverse coalition of environmental organizations, taxpayer advocates, insurance industry representatives and housing groups. Though the groups span the political spectrum, the coalition works together on insurance, natural disasters and mitigation. Smarter Safer also strongly supports the Senate Banking Committee flood insurance reform bill which will help ensure that the flood program can continue to provide needed insurance to Americans in harm's way while making common sense reforms.

Why Reform Is Needed Now

Waiting to implement reforms will continue a policy that results in increased risk, destruction of homes and infrastructure, and cost to people, property and the natural resources upon which we depend. The National Flood Insurance Program (NFIP) is currently over $18 billion in debt.

Without significant reform, the NFIP will not be economically sustainable and American taxpayers will continue to be asked to bail out the program and subsidize public and private development in flood risk areas.

Extreme Weather Events Predicted to Increase

Results from scientific studies indicate that a changing climate has exacerbated and will continue to intensify extreme weather events including flooding and coastal storms. Over the last 50 years, Americans have seen a 20% increase in the heaviest downpours. In addition, newly published research demonstrates that proportion of category 4-5 hurricanes has doubled from 20% to 40% in only 35 years[1]. Coastal storm surge and storm impacts will only intensify as sea levels continue to rise the predicted 0.6 and 2 feet globally in the next century.[2]

A published study conducted by Nature Conservancy scientists and others examines the impacts of storm surge to people and property on Long Island, NY and in particular examines the likely added effect of sea level rise to these impacts. Just a little bit of sea level rise (just 1.6 feet) increases predicted impacts of storms to people and property by nearly 50% and 75% respectively.[3]

Associated Costs Are Increasing

In the first decade of the new millennium, floods and flood damage associated with extreme rainfall events have increased, with damages rising from $6 billion to $10 billion over this time period, despite the billions of dollars invested in flood control. In 2011 alone, there were 58 Federal flood disaster declarations, covering 33 different states. The 2011 flooding damages cost over $8 billion and caused 113 deaths; both the costs and the number of deaths exceeded the 30–year averages. Clearly, these trends all speak to the immediate need to decrease risk and allow implementation of mitigation measures that decrease risks. The proposed reform legislation is the most important single step we can take toward decreasing flood risks.

Maximizing our Return on Investment by Integrating Built and Natural Infrastructure

Under the current National Flood Insurance Program (NFIP), a dangerous feedback loop is in play. Subsidized insurance rates facilitates development in coastal zones and in freshwater floodplains which not only puts people and property at risk, it simultaneously facilitates the destruction and degradation of ecosystems that provide a natural defense to people and properties. Left in place, coastal marshes and sand dunes and inland wetlands and floodplains serve important flood- and storm-control purposes.

The overall benefits of flood mitigation efforts implemented has been studied and found that for every dollar spent on flood mitigation five dollars are saved.[4] Other recent studies[5] show that one

[1] Holland and Bruyere (2012)

[2] International Panel on Climate Change (2007)

[3] Shepard, C., V. N. Agostini, B. Gilmer, T. Allen, J. Stone, W. Brooks, M. W. Beck. 2011. Assessing future risk: quantifying the effects of sea level rise on storm surge risk for the southern shores of Long Island, New York. Natural Hazards. DOI: 10.1007/s11069-011-0046-8.

[4] Multihazard Mitigation Council, "Natural Hazard Mitigation Saves: An Independent Study to Assess the Future Savings from Mitigation Activities," Multihazard Mitigation Council, http://www.floods.org/PDF/MMC_Volume1_FindingsConclusionsRecommendations.pdf
and

of the most cost-effective solutions to protect people from the impacts of increased extreme precipitation and coastal storm intensity will be to preserve, enhance and restore the natural systems that already deliver critical protection from sea level rise, storm surge and coastal and inland flooding. Scientists from the Nature Conservancy recently published a review of all papers that measured the role of salt marshes in protecting coastlines from waves and erosion. They found that salt marshes have a strong and significant role in the United States and globally in providing coastal defense and shoreline stabilization.[6]

In addition to flood control benefits provided by protection and restoration of floodplains and coastal wetlands, these ecosystems provide many services that support and protect humans and nature such as filtering pollutants, erosion protection, habitat that supports fish and shellfish populations. These services provide real economic benefits that can be measured through reduced cost of water quality protection, increased revenue from fishing and increased value to personal property.

The traditional approach to flood protection in river-floodplain systems has been to rely on dams and levees to contain flood waters and in coastal areas has been to build sea walls, bulkheads and other "grey" infrastructure and to "nourish" beaches with additional sand to slow erosion and diminish the impact of storms. While built infrastructure plays an important role in helping to secure our communities, it requires substantial investments for both initial construction and ongoing maintenance. Moreover, an over-reliance on built infrastructure in the United States during the 20th and early 21st centuries has encouraged extensive land development in areas particularly susceptible to flooding and storm damage, and catastrophic flooding when infrastructure fails. And fail it has. Despite many billions of dollars in taxpayer investment in flood protection, flood damages continue to increase and now average more than $6 billion annually.[7] If left unaddressed, as the nation's water and coastal protection infrastructure continues to age we should be expecting that these economic losses will continue to increase – including the taxpayer's obligation under the National Flood Insurance Program – along with the risk faced by tens of millions of Americans who live and work behind levees[8] and tens of millions more living along the coast.

Simply investing to renew the nation's over-reliance on built flood control infrastructure poses a daunting challenge. There are more than more than 110,000 miles of levees across the country[9], the average of which is well over a half century and which the American Society of Civil

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Rose, A. et al. 2007. Benefit-Cost Analysis of FEMA Hazard Mitigation Grants. Natural Hazards Review 8, 97.

[5] Examples include a report on the effect climate change will have on Caribbean economies, by the Caribbean Catastrophe Risk Insurance Facility; and a study by Entergy Corporation and Swiss Re on disaster risk along the Gulf Coast.

[6] Shepard, C., Crain, C., Beck, M.W. 2011. The protective role of coastal marshes: a systematic review and meta-analysis. PLoS ONE 6(11): e27374. http://bit.ly/vfAHvT

[7] U.S. Army Corps of Engineers (USACE). (2009). "Flood risk management: Value to the nation." ⟨http://www.corpsresults.us/docs/VTNFloodRiskMgmtBro_loresprd.pdf⟩.

[8] Freitag, B. S., Bolton, F.Westerlund, and Clark, J. L. S. (2009). Floodplain management: A new approach for a new era, Island Press, Washington, DC, USA.

[9] National Committee on Levee Safety. (2009). "Draft recommendations for a national levee safety program: A rep. to Congress from the National Committee on Levee Safety." ⟨http://www.nfrmp.us/ncls/docs/NCLS-Recommendation-Report_012009_DRAFT.pdf⟩ (Jan. 15, 2009).

Engineers estimates would require $100 billion to repair and rehabilitate[10]. The challenge also exists for coastal infrastructure. In Massachusetts alone, there are about 140 miles of publically owned sea walls or other structures along the coast designed to protect billions of dollars of property. Most were designed to last a half century but are older than that now. The estimated price tag to repair and fortify all of them against rising seas is more than a billion dollars. I happen to live in the coastal town of Scituate, Massachusetts where the sea walls are crumbling and in disrepair. During a nor'easter on Dec. 27th, 2010, a break in the sea wall occurred, flooding dozens of homes. Two homes caught fire and burnt to ground as firefighters could not access them through the five feet deep freezing water. All of the residents living in those homes were displaced for many months and some were forced to permanently relocate. Yet the town does not have the financial resources necessary to adequately repair the town's sea walls. The town is seeking state and federal resources to maintain the sea walls, yet those funds are becoming scarcer and more difficult to secure. Unless significant repairs are made, residents living behind these sea walls continue to be at significant risk. This is but one example of similar incidents occurring throughout our nation.

Instead of relying solely on grey infrastructure, an alternative approach involves integrating the use of natural infrastructure (or so-called "green infrastructure") with built infrastructure. This specifically involves maintaining and restoring the connectivity of rivers along with sufficient area of floodplain and conserving and restoring coastal natural infrastructure such as wetlands, reefs, dunes and barrier beaches and islands.

An example of this approach is the Yolo Bypass in California's Central Valley. It is a 60,000-acre engineered area of the Sacramento River floodplain that was reconnected to the river in the 1930s. The system is designed such that when the Sacramento River rises during major floods and exceeds the elevation of weirs built within the levee, additional floodwater flows over the weirs into the Yolo Bypass and away from the City of Sacramento and its suburbs. Since its construction, Yolo has been an integral part of the valley's flood management system, conveying as much as 80% of large floods. The Yolo Bypass not only protects Sacramento and the surrounding area, it does so at a small fraction of the cost of would have been necessary to construct and maintain traditional built infrastructure for a similar level of protection. Moreover, because of the episodic and seasonal nature of floods, Yolo has continued to act as economically valuable and productive farmland while providing additional benefits such as critical habitat for fish and water fowl[11].

On the Gulf Coast, The Nature Conservancy is focusing efforts on restoration of sea grass and oyster reef habitat both of which serve to greatly diminish coastal erosion and mitigate impacts from storms and flooding. Over the past 100 years, the oyster reef habitat has severely diminished and this has contributed to increased coastal erosion and vulnerability to storm impacts. In Alabama and Louisiana, The Nature Conservancy has created 5 miles of shoreline-protecting oyster reefs and *directly* supported 227 jobs through the work to create these reefs. Working with partners, our goal is to develop 100 miles of oyster reef breakwaters/living

[10] ASCE. (2009). "Facts about water and environment, levees." 2009 infrastructure fact sheet, ⟨http://www.infrastructurereportcard.org/sites/default/files/RC2009_levees.pdf⟩ (Mar. 25, 2009).

[11] Sommer T, Harrell B, Nobriga M et al. (2001) California's Yolo Bypass: Evidence that flood control can be compatible with fisheries, wetlands, wildlife, and agriculture. Fisheries 26: 6–16.

shorelines in Alabama that will in turn promote the growth of more than 1,000 acres of coastal marsh and sea grass.

The Nature Conservancy and dozens of diverse partners across the country recognize the long-term effectiveness and cost-efficiency of connected river-floodplains and in conserving and restoring coastal wetlands and reef habitats in helping to reduce flood risk, while providing other economically important benefits such as continued agricultural production, enhanced water quality, and improved fish and wildlife habitat and associated recreation. Floodplain restoration projects such as Mollicy Farms in Louisiana, Emiquon and Spunky Bottoms in Illinois, and Hamilton City in California are further demonstrating the many values of this approach and underscore the commitment of the Conservancy and its partners to implement these projects and realize the associated high returns on investment.

Nature Conservancy Supports Legislative and Administrative Reforms

Enactment of The Flood Insurance Reform and Modernization Act of 2011 will accomplish several policy objectives. It will put the program on a path of financial sustainability, will improve communication of risk through more accurate, higher quality maps, and finally will streamline and strengthen mitigation programs to help decrease flood risks and better protect flood-exposed communities and homes and businesses. In addition to passage of the legislation, there are additional policy changes that support the legislative goals that are needed and could be achieved administratively that would support, amplify and run parallel to the legislative reform efforts.

The Nature Conservancy supports the following three key provisions of the Senate Flood Insurance Reform and Modernization Act of 2011 and corresponding administrative reforms:

Scientifically Accurate Mapping of Current and Future Risk

Providing scientifically sound data and information related to flood risk, land use, and natural resources is essential to communicating the actual flood risk to people and properties. Information on future changing climate conditions must also be incorporated to enable individuals, communities, and regional and state government entities to sufficiently plan to mitigate their flood risks. The Senate NFIP bill accomplishes this by requiring the incorporation of the most accurate science on current conditions and future conditions by assessing the best available climate science related to flood risks including the impact of sea level rise and other future conditions. The bill also requires outreach and education to property owners to ensure sharing of this new risk based information.

Charging Rates that Accurately Reflect Flood Risk

Only if rates reflect the true risk to people and property will people understand the true risk of living in or developing certain areas and act to discourage development in the most risky areas. Additionally, the current Program allows and subsidizes redevelopment in flood risk zones, not properly incentivizing retreat of structures and restoration of the important natural systems. It is the American people who are currently supporting the subsidization of this Program through our tax dollars, and this subsidization occurs regardless of the economic status of those benefiting from it. The National Flood Insurance Program will never be financially sound until actuarial sound rates are charged. Currently there are 1.2 million NFIP properties (20 percent) that are

charged premiums well below the actuarial value of the insured liability. On average (including subsidized and unsubsidized policies) NFIP premium collections cover approximately 70 percent of the actuarial value of the insured liability. The Senate bill makes a number of needed reforms to put the flood insurance program on sound financial footing by eliminating subsidized rates and allowing for rates to be adjusted reflecting true risk, taking into consideration future conditions. Charging actuarial sound rates for properties in flood hazard areas will greatly improve the public's understanding of the true risk of living in such areas. Such understanding should drive better decisions related to development and implementation of mitigation measures.

We recognize that increase rates for flood insurance will place an economic burden on people of lower economic means living in flood prone areas. The Senate bill does not and should consider the affordability of increased flood insurance through implementation of a voucher system or some similar means tested assistance. At a minimum a thorough study of the issue of affordability of flood insurance needs to be conducted to determine the extent to which this is an issue.

Ensuring nature based solutions are properly incentivized and funded in all FEMA programs
The Senate bill will accomplish improvements related to the use of hazard mitigation grant funds and the ability to use grant funds to accomplish conservation and restoration of freshwater and coastal ecosystems by consolidating, streamlining and making more efficient the existing programs and clarifying that voluntary buy out of properties are an allowable use of these funds.

As discussed above, preserving and restoring natural ecosystems like floodplains and coastal wetlands can provide cost-effective protection against some of the threats that result from current natural disasters which will be exacerbated by climate change. For example, coastal ecosystems like wetlands, mangroves, coral reefs, oyster reefs, and barrier beaches and intact freshwater floodplains all provide natural protection from storms and flooding in addition to their many other benefits such as habitat for fish populations, water quality improvement, economic development from recreation and tourism. Incentives to protect and restore floodplains in the Mississippi River valley could substantially contribute to reducing the dead zone in the Gulf of Mexico. The Conservancy supports greater emphasis placed on use of hazard mitigation funds for the purpose of conservation and restoration of natural systems like floodplains and natural coastal ecosystems.

While the legislation begins to make more efficient the mitigation programs of the NFIP, more changes need to occur to enable, facilitate and encourage floodplain and coastal protection and restoration. Doing so will play a significant role in returning the National Flood Insurance Program to solvency, thereby making a relatively modest – yet important – contribution to federal debt reduction. Overall greater emphasis should be made to improve these programs which as cited before, return $5 in reduced cost for every $1 invested. Improvements should include overall increased funding for the mitigation programs and increased effort to link the FEMA mitigation programs to programs with similar goals of other federal agencies, including FEMA's other mitigation programs that fall under the Stafford Act. Several important administrative changes should also be considered that will additionally facilitate use of the mitigation funds for floodplain and coastal restoration. Such changes involve changes to how FEMA calculates the cost and benefit of mitigation activities. Currently, clear economic benefits

such as water quality improvements, flood reduction benefits, and fisheries revenue enhancement are currently valued or considered.

These policy changes will better protect American communities from the threat to life and livelihood of future flooding, improve the quality of our drinking water, and help restore the health and productivity of the nation's rivers and estuaries.

Summary

Thank you for the opportunity to present The Nature Conservancy's recommendations on the need to pass the Senate's five year reauthorization of the National Flood Insurance Program and why we implore immediate reform to begin to fix aspects of the Program that are currently financially and environmentally unsustainable.