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"Flood Insurance Reform: A Taxpayer's Perspective"

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Chairman Hensarling, Ranking Member Waters, and members of the Committee. I am Joshua Saks, and I serve as the Legislative Director for the National Wildlife Federation (NWF), the nation's largest member-based conservation group, representing 6 million members and supporters and affiliate conservation organizations in 51 states and territories. The National Wildlife Federation is also a member of the Smarter-Safer Coalition, a broad-based partnership of conservationists, free-market and taxpayer advocates, low-income housing advocates, insurance interests, and other stakeholders that support National Flood Insurance Program (NFIP) reform.

I appreciate the opportunity to testify today about the draft reauthorization proposal recently released by the Financial Services Committee and on the ways the National Flood Insurance Program impacts, and benefits from, the natural environment.

NWF has been engaged in protecting and restoring the nation's coasts, wetlands, and floodplains – areas that provide some of the most vital wildlife habitat – since its founding in 1936. Healthy, natural systems not only provide essential wildlife habitat but also help to protect people and communities by providing buffers against storm surge and wave action and maintaining areas for water to pool and settle instead of flooding surrounding areas. But decades of federal policies have led to increased development and alteration of coasts and floodplains that, as a result, are no longer able to serve important environmental and public safety functions. Unfortunately, the National Flood Insurance Program has been one of the primary culprits.

The NFIP was originally founded on a strategy developed by eminent scientists and government officials in the late 1960s, which combined the ideas of identifying flood risks (generally through mapping), developing and implementing risk-reducing land use and building codes, and providing affordable insurance that was not otherwise available in the private markets. It was believed that the NFIP would slowly reduce the amount of floodplain development and encourage communities to take steps to reduce flood risk. Nearly 50 years later, we find that the exact opposite has happened. Development of the floodplain has continued at an alarming pace, building codes and mitigation have failed to keep pace, and the NFIP currently owes a debt to the federal treasury nearing $25 billion.

This enormous debt is due in large part to heavily subsidized rates, inadequate investments in mitigation, and the failure to protect the vital functions that floodplains perform. National flood

damages, instead of decreasing as the program's founders would have hoped, are now rising at alarming levels. To address these shortcomings, the National Flood Insurance Program is in need of significant reform. The Committee has previously taken positive steps – including phasing out subsidies for Severe Repetitive Loss properties and second homes – and this year's reauthorization is a vital opportunity to move the reform ball further down the field.

Today I will make five major points reflecting on the Committee's draft and, in some cases, going beyond. First, the NFIP must better protect natural floodplains which benefit wildlife, improve water quality, reduce flood impacts, and enhance hunting, fishing and outdoor recreation opportunities. Second, we cannot afford business as usual with extraordinary and often unwise development pressures, more severe weather, and sea level rise. Third, we must continue to build upon efforts to ensure rates reflect the actual risk to properties and that communities truly understand their risk through accurate mapping. Fourth, substantial new investments in mitigation, especially through enhancing natural features such as wetlands and dunes, can greatly reduce flood risks and save taxpayers from ballooning disaster payments. Fifth, offering private market insurance alternatives will provide consumers with vital choices, enhance affordability, and promote better site specific mitigation.

The NFIP Must Protect Floodplain Functions

Floodplains, the flood-prone bottomlands that cradle rivers, streams, and oceans, are where the land and the waters meet. Naturally functioning floodplains provide vital habitat for countless species. These areas provide grounds for breeding, foraging, and other parts of the life cycles of a variety of plants, insects, reptiles, amphibians, birds, and mammals. Floodplains are also crucial to the survival and recovery of many threatened and endangered species, including salmon, steelhead trout, sturgeon, and sea turtles. However, alterations to floodplains create multiple threats to wildlife through a range of impacts including: changing the flow and hydrology of rivers; eliminating wetlands and side channels, destroying nesting and rearing areas and other important habitat; straightening and deepening channels; and causing siltation, nutrient, and other water quality problems.

Additionally, floodplains in their natural form provide an array of environmental and public health benefits, including: reducing the number and severity of floods; attenuating floodwaters upstream to delay and reduce downstream flood peaks; fostering vegetation to limit non-point water pollution from storm water runoff; providing a tree canopy for shade to cool water temperatures in adjacent rivers and streams, which in turn increases dissolved oxygen levels and improves habitat for aquatic plants and animals; allowing water to recharge in underground drinking water aquifers; and providing aesthetic beauty and outdoor recreation benefits.

Protecting floodplains is also way to protect the areas where NWF members, hunt, fish, and enjoy wildlife. Often overlooked, the outdoor recreation sector supports more jobs than many American industries. According to the Outdoor Industry Association the outdoor recreation industry supported 6.1 million American jobs and contributed $646 billion in economic output in 2012. From hunting and fishing supplies, to outdoor guides and travel to America's National Parks and more, adventure and travel exploring our nation's natural treasures and wildlife resources is a major driver of the U.S. and local economies, particularly in rural communities. This is the outdoor

economy and it is dependent upon its own type of infrastructure — natural infrastructure comprised of restored wildlife habitat, clean waterways, healthy forests, wetlands, and grasslands, and productive soils, and accessible public lands for recreating, hunting, fishing, and supporting abundant wildlife populations. Preserving floodplains is an investment in this outdoor economy.

Floodplain Development is Skyrocketing

As noted earlier, the NFIP was created with the intention of slowing or preventing new flood-prone coastal and riverine development. The program aimed to incentivize "appropriate land use adjustments to *constrict* the development of land which is exposed to flood damage" and intended to "guide the development of proposed future construction, where practicable, *away* from locations which are threatened by flood hazards."[1]

But despite these good intentions, the current floodplain management system in the United States is not working. Instead of reducing floodplain development, one of the NFIP's original goals, the system in place has incentivized and exacerbated development. Flood-prone coastal population growth and development in the U.S. has skyrocketed since the NFIP's creation. U.S. Census Bureau data shows that the population in coastal counties grew by 84% between 1960 and 2008, compared to 64% in noncoastal counties.[2] In 2010, the number of people living in coastal shoreline counties made up 39% of the population – and by 2020, that number is expected to increase by an additional 8%.[3] Now, the coastal area which comprises only 17 percent of the nation's contiguous land area is home to nearly half its population. With this population growth, development has also increased: between 2000 and 2010, the total number of housing units in coastal shoreline counties increased by 8%, and the number of seasonal housing units increased by 18%.[4]

The result has been large-scale loss and alteration of floodplains and a loss of their ecological benefits as these important natural systems have been developed, filled, and leveed off due in part to ill-conceived NFIP policy choices. Of these problematic NFIP policies, the primary driver of development has been a rate structure with many hidden subsidies that have masked the risk and true cost of floodplain development. As such, land use patterns have been altered, impairing the ability of the systems themselves to provide natural flood protection values.

Courts have also realized the impact premiums have on land use and development. In Florida Key Deer v. Stickney 864 F. Supp. 1222 (1994), the federal district court found that "The evidence presented in the case clearly demonstrates that there is more than a substantial likelihood of cause and effect between the federal flood insurance and new development…"

With Sea-level Rise and Heavier Rainfall, Flooding is Only Getting Worse

Furthermore, sea-level rise and an increase in the number and intensity of heavy rainfall events are only making the problem of flooding worse. Accelerating sea-level rise due to the expansion of warming ocean water and melting glaciers and ice sheets is among the most direct and certain

[1] 42 U.S. Code § 4001, *emphasis added*
[2] U.S. Census Bureau, Coastline Population Trends in the United States: 1960 to 2008, May 2010, found in The Growing Value of U.S. Coastal Property at Risk
[3] NOAA, National Coastal Population Report, March 2013, found in The Growing Value of U.S. Coastal Property at Risk
[4] NOAA, National Coastal Population Report, March 2013, found in The Growing Value of U.S. Coastal Property at Risk

consequences of climate change. The global average sea level rose about 8 inches over the past century, and since the early 1990s the rate of sea-level rise has been accelerating more quickly than previously thought.[5]

As global temperatures continue to increase, further sea-level rise is inevitable. Scenarios developed for the 2014 U.S. National Climate Assessment suggest that future sea-level rise will range from an additional 8 inches (above 1992 levels) to 6.6 feet by the end of the century, with a mid-range estimate of 1-4 feet.[6] Even at the low-end sea level projections, coastal communities will face significant impacts. Yet there is compelling evidence that even the high-end projections likely underestimate potential sea-level rise due to accelerating ice loss on Greenland and Antarctica.[7]

In addition to contributing to sea water inundation and erosion, sea-level rise is exacerbating coastal flooding and storm damage.[8,9] According to a recent study by NOAA, an increase in relative sea levels has led to more frequent flooding during high tides in many U.S. coastal regions,[10] a trend that is projected to continue.[11,12] In addition, as sea level rises, storm surges emanate from an elevated base. Already, a rise in relative sea levels across the Mid-Atlantic coast has increased the probability that the region will experience additional storm surge events comparable to the severity of Hurricane Sandy.[13] In some areas of the Pacific Northwest, southern California, and the Southeast, research suggests that sea-level rise could turn today's 100-year storm surge into an annual event before the middle of this century.[14]

In addition, heavy downpours are increasing nationally, especially over the past 3 to 5 decades, with the largest increases occurring in the Midwest and Northeast.[15] In data ranging back to 1895, 9 of the 10 years for the most extreme precipitation events have occurred since 1990.[16] This has corresponded to a significant increase in annual flood magnitude from the 1920s through 2008.[17] An increase in both the frequency and intensity of extreme precipitation events are projected across the United States in the decades to come. Recent events illustrate the potential risks. For example,

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[5] Dangendorf, S., et al. 2017. Reassessment of 20th century global mean sea level rise. Proceedings of the National Academy of Sciences, 201616007.
[6] Parris, A., et al. 2012. *Global Sea Level Rise Scenarios for the U.S. National Climate Assessment*. NOAA Tech Memo OAR CPO-1. http://scenarios.globalchange.gov/sites/default/files/NOAA_SLR_r3_0.pdf.
[7] Le Bars, D., et al. 2017. A high-end sea level rise probabilistic projection including rapid Antarctic ice sheet mass loss. *Environmental Research Letters* 12: 044013.
[8] Melillo, J.M., T.C. Richmond, and G.W. Yohe (eds.) 2014. *Climate Change Impacts in the United States: The Third National Climate Assessment*.
[9] Vitousek, S., et al. 2017. Doubling of coastal flooding frequency within decades due to sea-level rise. *Scientific Reports* 7: 1399.
[10] Sweet, W., et al. 2014. *Sea level rise and nuisance flood frequency changes around the United States*. NOAA Technical Report NOS CO-OPS 073.
[11] Dahl, K.A., et al. 2017. Sea level rise drives increased tidal flooding frequency at tide gauges along the U.S. East and Gulf Coasts: Projections for 2030 and 2045. *PLoS One* 12: e0170949.
[12] Moftakhari, M.R., et al. 2017. Cumulative hazard: The case of nuisance flooding. *Earth's Future* 5: 214-223.
[13] Sweet, W., et al. 2013. Hurricane Sandy inundation probabilities today and tomorrow. In: Explaining Extreme Events of 2012 from a Climate Perspective. *Bulletin of the American Meteorological Society* 94: S17-S20.
[14] Tebaldi, C., Strauss, B. H., & Zervas, C. E. 2012. Modelling sea level rise impacts on storm surges along US coasts. *Environmental Research Letters*, *7*: 014032.
[15] Kunkel, K.E., et al. 2013. Monitoring and understanding trends in extreme storms: state of knowledge. *Bulletin of the American Meteorological Society* 94: 499-514.
[16] NOAA. 2014. U.S. Climate Extremes Index: URL: www.ncdc.noaa.gov/extremes/cei
[17] Peterson, T.C., et al. 2013. Monitoring and understanding changes in heat waves, cold waves, floods and droughts in the United States: state of knowledge. *Bulletin of the American Meteorological Society* 94: 821-834.

in April 2016, 17-inches of rainfall and associated flooding in in Houston, Texas, caused an estimated $2.7 billion in damages.[18] Research by the National Oceanic and Atmospheric Administration (NOAA) suggests that human-caused climate change increased the chances of the torrential rains and catastrophic flooding in south Louisiana last August by at least 40 percent.[19] And this spring, parts of Missouri, Illinois, Indiana, Arkansas, and Louisiana received 10-15 inches of rain over a seven-day period, contributing to deadly, record-breaking flooding throughout the region.

Rates Should Send Risk-Based Signals

As described above, heavily subsidized rates have contributed to or enabled coastal and riverine development, which has in turn contributed to the loss of functioning floodplains and natural features that reduce flood damages. Risk-based rates help send appropriate signals that will lessen new development in high risk areas and encourage individuals and communities to take steps to reduce or mitigate their risk.

For these reasons, the National Wildlife Federation was supportive of efforts in the Biggert-Waters Flood Reform Act of 2012 to increase rates and opposed to rollbacks in the Homeowner Flood Insurance Affordability Act (HFIAA). However, we understand the need to provide targeted assistance for low-income homeowners, through outside of the rate-structure support and mitigation assistance, as well as the need to more thoughtfully and slowly transition primary residences to risk-based rates. We are encouraged to see the committee proposing such assistance.

We understand there are people – specifically owners of primary residences who face higher flood threats due to land use decisions made by the federal and state governments – for whom full risk-based rates in a short five-year time horizon would be unaffordable. This includes communities in coastal Louisiana, where the National Wildlife Federation has worked to restore coastal wetlands for over a decade. Some of these communities have been settled for more than two centuries. Their increased flood threat is not the result of choices that they made, but rather are in large part the result of governmental actions that changed the management of the lower Mississippi River, built a vast network of federal navigation channels, and permitted and incentivized thousands of miles of oil and gas canals, all leading to the highest marsh loss rate in the nation – a football field every hour. The loss of millions of acres of marsh that formerly buffered those communities is a leading cause of their increasing vulnerability. The political backlash to rate increases mandated by Biggert-Waters taught us that while premiums should reflect risk, they must also remain affordable and allow for a longer transition horizon with significant front-loaded mitigation investments.

For these reasons the National Wildlife Federation supports proposed efforts by the Committee to continue rate increases while providing some measures to help keep flood insurance affordable. NWF supports the 15% limitation on rate increases included in the Committee's draft bills. We believe that this allows the Federal Emergency Management Agency (FEMA) the flexibility to

[18] NOAA. 2017. U.S. Billion-Dollar Weather & Climate Disasters 1980-2017. URL: https://www.ncdc.noaa.gov/billions/events/US/1980-2017.

[19] Van der Wjel, K., et al. 2017. Rapid attribution of the August 2016 flood-inducing extreme precipitation in south Louisiana to climate change. *Hydrology and Earth Systems Sciences* 21: 897-921.

continue to move towards risk-based market signals while thoughtfully limiting the potential for dramatic short-term rate increases. NWF also applauds the Committee for allowing states the ability to create state flood insurance affordability programs. We recommend inclusion of additional provisions that would provide means tested assistance to low-income homeowners with a preference towards mitigation.

While the National Wildlife Federation supports slowing annual rate increases, we believe that affordability assistance should happen independent of and outside of rate structure, and believe it would be a mistake to provide states with authority to cap premiums. Similarly, NWF is concerned about a proposal to eliminate the mandatory purchase requirement for business properties. We do not support exemptions for classes of properties from mandatory purchase requirements. We believe that those in harm's way must be covered for those risks and must understand what their risks are. For this reason, we do not support a blanket exemption for commercial properties. However, we understand that the intent is to reduce the regulatory burdens for large commercial properties that are covered through umbrella or other large scale insurance policies. If this is the case, then we would ask for clarification that this exemption is truly a regulatory relief provision, and that commercial properties must still be covered for known risks including flood. In addition, this could be fixed by limiting the so-called exemption to only the largest commercial properties, to ensure that smaller businesses are not left without flood coverage.

NFIP Must Mitigate to Reduce Risk and Rates

While NWF supports the Committee's proposals to keep flood insurance premiums affordable, the best way to keep rates low and to protect people and property is through proactive mitigation actions that would avoid and minimize damages on the ground, rather than premium support that subsidizes development in risky places, is reactive by nature, and provides a sense of false security to flood-prone areas. A considerable amount of data shows that proactive, preventative mitigation is the most cost effective investment the NFIP can make.

Several analyses have shown a range of more than $2 to nearly $6 return on investment for every $1 spent on flood mitigation. A highly-cited 2005 study from the Multihazard Mitigation Council (MMC) documented how every $1 spent on mitigation saves society an average of $4.[20] A new 2016 study in Florida showed flood mitigation benefits even exceeded this 4:1 cost-benefit ratio.[21] A 2014 study by URBIS showed flood mitigation assets in Australia have the potential to provide economic payoffs which exceed $2.20 and range as high as $5.40 for each dollar spent.[22] A 2016 analysis by the Economist Intelligence Unit, using a database of flood mitigation projects provided by FEMA of 21,411 flood-specific projects spanning all 50 states, indicated the economic benefits from flood mitigation significantly outweigh the costs by as much as 5:1 when using traditional cost-benefit analysis, and when broader benefits are considered, values could be even higher than 5:1.[23]

And not all mitigation is created equal. Community-wide, natural, and nature-based mitigation should be used and encouraged wherever possible. These are practices that protect, restore, or in

[20] Natural Hazard Mitigation Saves: An Independent Study to Assess the Future Savings from Mitigation Activities
[21] An Addendum to the White Paper for Developing Pre-Disaster Resilience Based on Public and Private Incentivization
[22] Economic Benefits of Flood Mitigation Efforts
[23] Flood Mitigation Takeaways, Economist Intelligence Unit

some cases, even create natural features or processes that reduce erosion and flood impacts in coastal or riverine floodplains by dissipating floodwaters or wave energy, capturing sediment and debris, and building land elevation.[24]

Such practices may include but are not limited to:

- Planting or conserving native vegetation that increases floodwater infiltration, traps debris, slows erosion, and contributes to land building and elevation gain;
- Restoring, protecting, or constructing wetlands to attenuate floodwaters in the upper reaches of a watershed, thereby delaying and reducing downstream flood peaks;
- Levee setbacks, floodways, and restoration of floodplain topography to allow floodwaters to spread out across the landscape and slow down, thereby reducing downstream flood impacts;
- Managing sediment budgets to help build and maintain coastal ecosystems, helping them to keep pace with sea level rise;
- Restoring tidal marshes where they have been ditched or ponded for navigation or mosquito control, damaging practices which cause rapid marsh deterioration, erosion, and inland saltwater intrusion, which in turn can further lead to coastal forest die-off and even greater exposure to coastal storms;
- Implementing "living shorelines" that use site-appropriate, native biological materials to stabilize shorelines as an alternative to hard armoring;
- Expanding no-wake zones to reduce tidal marsh erosion;
- Open space protection and ecological restoration of barrier islands that buffer the mainland from the full force of coastal storms.

Floodplain forests, wetlands, wide beaches, vegetated dunes, tidal marshes, coastal forests, shrublands, mangroves, and oyster reefs all have a role to play as a form of natural infrastructure that, in some cases, can be even more resilient than hard armoring, like bulkheads, and create less erosion.[25] These natural features serve not only as vital fish & wildlife habitat, but also to keep communities safe by dissipating floodwaters and wave energy, while helping to maintain and, in places, gain land elevation.

Taking this into account, the National Wildlife Federation urges the Committee consider any and all ways to drive immediate investment in mitigation. We applaud the proposed change to Increased Cost of Compliance (ICC) coverage provides up to up to $60,000 to help cover the cost of mitigation measures that will reduce flood risk. But loans are not enough to upgrade America's resilience to flooding, and loans do not reduce premiums and help affordability. We encourage the Committee to consider Smarter Safer's proposal to evaluate whether it is best to provide premium support or up-front mitigation dollars. We ask the Committee to look at the proposal offered by Senators Cassidy and Gillibrand to spend a portion of the NFIP Reserve Fund dollars, collected via a fee imposed by HFIAA on up-front mitigation. And we encourage the Committee to look outside of the NFIP to help mitigate risk. We need robust investment through appropriated programs like the Pre-Disaster Mitigation Grant Program, the Hazard Mitigation Grant Program, and the Emergency Management Performance Grant Program. Any infrastructure package

[24] Bridges et al. 2015, Small-Lorenz et al. 2016
[25] Gitman 2016

considered by the House should also include an investment in pre-disaster mitigation and resiliency.

The National Wildlife Federation applauds the risk-reduction planning provisions of the Committee's proposal. We believe that it is essential to target flood-prone hotspots, to create detailed plans to reduce flood risk, and to implement them. We support the Royce-Blumenauer proposal to create plans for communities with multiple Severe Repetitive Loss properties, and request the Committee to consider ensuring that the plans cover community-wide, nature based mitigation when possible. We also believe that the proposal to create a pilot program for buyouts of Severe Repetitive Loss properties for low-income homeowners would ultimately provide the best type of mitigation: that which avoids loss of life and property by restoring lowlands to healthy, naturally functioning floodplains. But Americans cannot wait until the next storm for long-term planning to take hold, and we encourage the Committee to find ways to invest immediately in community-wide, natural infrastructure as a high priority aspect of pre-disaster mitigation.

Maps Must Reflect Risk

Accurate mapping is critical to the NFIP; without accurate maps, communities, and their residents cannot be confident in the federal program or their projected flood rates. Although there are new tools at our disposal to get more accurate, up to date mapping including property level elevation, unfortunately FEMA does not use the latest technology. In fact, it is our understanding that FEMA continues to spend some mapping funds to digitize outdated paper maps. The National Wildlife Federation and Smarter Safer believe that the only way to restore faith in the maps and the NFIP's rate structure is to require FEMA to use the latest technologies such as LIDAR to get property level elevation data (or as close to property level as possible), combined with the latest climate modeling, including precipitation, sea level rise, and flood projections, and to use that data to map and set rates. There are areas of the country that have done this at a reasonable cost: North Carolina secured Lidar data for flood-prone areas of the state for under $25 per property. Smarter Safer and NWF urge the Committee to include language in any bill that requires FEMA to secure LIDAR data and use it in mapping and rate setting. This could be done on a rolling basis starting with the states with the highest concentrations of NFIP properties, and could be paid for either through a modest fee on policies or through appropriations.

Not only will property level data ensure that FEMA maps are accurate and rates are risk-based, but it will also take the burden off of homeowners to prove their elevation and will do so at a much lower cost than property by property elevation certificates. This will also reduce burdens program-wide, as North Carolina has experienced almost no appeals on mapping and flood risk determinations since moving to this new system. We urge the Committee to consider these options in the final NFIP reauthorization.

NWF also urges the Committee to consider that maps, to accurately detail risk, be graduated to include: not only the 100-year floodplain, but also the 50, 200 and 500-year floodplain areas (for example); residual risk areas and associated depths of flooding; other flood-related hazards and additional risk areas; and important habitat and key natural ecosystem functions areas. Although it has been expedient to list whether a property is located in or out of a floodplain ("special flood

hazard area"), this does not reflect real risk. We believe maps should be as graduated as possible, so that a homeowner knows if they are in a 10-year floodplain or a 70-year floodplain.

Maps must address the issue of levee decertification. Like the 100-year floodplain, FEMA's rate maps are currently based on an in-out model. When a levee is no longer accredited to provide protection from a 100-year flood, FEMA's maps are redrawn as if the levee is not in existence. Again, while this may have been expedient in the past, it does not reflect real conditions. We recommend the Committee require FEMA to take into account each levee based on the level of protection each confers.

Private Insurance Options Will Benefit Consumers, Taxpayers, and Environment

The National Wildlife Federation is aligned with Smarter Safer in supporting several objectives of this bill, including leveling the playing field so that consumers can choose private sector flood insurance, continuing to require the NFIP to purchase reinsurance to cover risks, and making changes to the program to ensure it is on sounder financial footing. We are pleased to see that the draft legislation includes the bill authored by Representatives Ross and Castor to ensure that consumers can choose private flood insurance where available, and we oppose any efforts to prohibit the purchase of private flood insurance. We believe private sector competition will help with affordability, will provide consumers different choices of types of coverages and plans, and will provide needed competition on risk analysis and mitigation credits. In many cases, private insurance companies are better equipped to credit site specific mitigation that property owners may take to reduce their own flood risk.

We applaud the Committee for releasing a discussion draft that takes strides towards improving the National Flood Insurance Program. We are pleased to see updates to mapping as well as plans to address affordability and mitigation, and we hope to work with the Committee to strengthen and pass meaningful NFIP reauthorization.