Testimony for The Pew Charitable Trusts Presented by Velma Smith on Behalf of the Flood-Prepared Communities Initiative
House Committee on Financial Services
Preparing for the Storm: Reauthorization of the National Flood Insurance Program
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Chairwoman Waters, Ranking Member McHenry and Members of the Subcommittee, thank you for your invitation to share The Pew Charitable Trusts' (Pew) perspective on reauthorization of the National Flood Insurance Program (NFIP). My name is Velma Smith. I have a Masters' in Urban and Regional Planning, and I am a senior officer in government relations with Pew's flood-prepared communities initiative.

Pew's flood-prepared communities initiative—like this Committee—has taken on one of these complex and truly difficult problems: the costly and common problem of floods and flooding damage. Our aim is to reduce the impact of flood-related disasters on the U.S. economy, communities, and environment. Pew applies a rigorous, analytical approach to improving public policy that prioritizes investments in flood-ready infrastructure, mitigates the impact of disasters, modernizes flood insurance, and promotes nature-based solutions to flooding.

The NFIP, now 50 years of age, has long been an essential component of our nation's management of flood risk. While the program must be adjusted and reformed, we understand that Congress must consider fully the consequences of changes to a program that serves so many flood-weary communities across the country. That is why Pew applauds the priority that the Committee has placed on moving forward with this hearing and a timely reauthorization.

Pew supports changes to the NFIP that will:

- keep flood insurance available to those who need it without asking taxpayers to subsidize risky development;
- help drive new development away from flood-prone areas;
- foster fixes or buyouts of problem properties and provide assistance to the most vulnerable communities;
- promote careful consideration of future risk and the conservation of the natural resources that can help in flood management; and
- ultimately, make the nation better prepared for tomorrow's severe storms.

As the Committee considers changes to the NFIP, it is critical to balance the multiple aspects of the program. It was established, not just to provide insurance and to lower federal disaster relief expenses, but also to communicate risk, improve disaster response, and enable local governments to make sound decisions about land use and development. The fixes the Committee considers, therefore, should address these multiple goals.

Flood Maps

There are many pieces to the NFIP puzzle, and one is central to all that this program does or strives to do: flood maps.

The Flood Insurance Rate Maps (FIRMs) serve a greater purpose beyond identifying locations where flood insurance is required for federally-backed mortgages and informing the federal flood insurance rates. Flood maps help with a multitude of important decisions that impact the overall resiliency of communities.[1]

Perhaps most importantly, they help state and local decision-makers steer public investment into areas least likely to flood during the lifetime of newly constructed infrastructure. Informed by maps, communities can construct critical facilities, such as hospitals, electrical utilities, and emergency shelters outside of the most hazardous zones, thereby lowering future response and recovery costs. Maps can show areas of "residual risk" behind levees or dams that could be affected by overtopping or structure failure; identify areas that might be preserved as parks and natural areas to absorb floodwaters; help coastal communities plan sensibly for sea level rise; and pinpoint priorities for storm drainage improvements.

Flood maps—and the data that goes into them—can also save lives. Information about flow rates or potential water heights can tell emergency responders where rescue help may be needed, who to evacuate first, and what routes should be closed or opened. And even after a flood disaster, up-to-date maps can promote a speedy recovery, directing limited repair dollars into the safest areas for reconstruction and revitalization.

In other words, flood maps help us all—not just the roughly five million NFIP policyholders. Therefore, over the past few years, Pew has advocated for increases in appropriations for flood mapping.

[1] Association of State Floodplain Managers, "Flood Mapping for the Nation: A Cost Analysis for the Nation's Flood Map Inventory," March 1, 2013, http://www.floods.org/ace-files/documentlibrary/2012_nfip_reform/flood_mapping_for_the_nation_asfpm_report_3-1-2013.pdf. (For more updated information, see also data available in FEMA's Coordinated Needs Management Strategy database available at https://msc.fema.gov/cnms/).

Previous spending on flood maps has been far from adequate, resulting in too few modern, digitized maps and important map products for many areas of the country. The Federal Emergency Management Agency (FEMA) and its partners in state and local governments have produced more than 100,000 map panels covering land areas where much of the nation's population resides. Many of the recent mapping efforts are based on improved hydrologic models and newer technology, including Light Detection and Ranging (LiDAR) remote sensing technologies that can provide the fine-grained elevation data that is needed for estimating flood heights.

Unfortunately, even as new technologies are employed to improve mapping in heavily populated areas, many of the more rural areas lack even the most basic information about risks. This lack of data can mean that, as those locales begin to experience development pressures, builders and investors will not be guided by risk information. The result, in too many instances, will be new construction of homes and businesses that become tomorrow's NFIP problems: structures built in flood-prone places that will strain the program's finances by qualifying for premium discounts, either because they are designated as pre-FIRM structures built before the effective date of a community's first flood map or because they become grandfathered by virtue of changing map lines.

Therefore, Pew supports completion of maps across the country in an accelerated timeframe. The delivery of flood maps to all communities is an urgent priority. While we also support more investment in new technologies such as LiDAR, we caution the Committee against efforts that could result in highly detailed maps for a relative handful of communities. We need good maps everywhere, not perfect maps here and there.

Flood Risk Disclosure

Pew urges the Committee to move forward with a national framework for flood risk disclosure to homebuyers and renters, not dissimilar to the existing requirement for lead paint disclosure for older homes.

As many flood experts have noted, an understanding of flood risk is fundamental to preparedness and protection, but individuals frequently underestimate their own risk of flooding, the extent of the damage that flooding can cause, or both. Some may not realize that the standard homeowner's insurance policy does not cover flooding. Others assume that their chances of significant loss to a flood are remote or believe that federal disaster assistance will allow for full recovery and restoration. Many do not realize that for those living in the one-percent-annual-chance or 100-year floodplain, the chances of a flood occurring during the lifetime of a 30-year mortgage are roughly one in four, far greater than for fire. Others mistakenly believe that if they reside outside of a flood hazard area, their chances of experiencing a flood fall to zero.

This lack of awareness or understanding can have devastating consequences for families and their property. Flooding can wreak havoc on what may have seemed like a sensibly balanced family budget. Flood victims, who may have lost their belongings, means of livelihood, cars, pets, or even loved ones to floodwaters can become trapped financially, unable to sell or to break a lease; they may be making rent or mortgage payments while flood damages force them to live elsewhere. They may have foregone flood insurance, simply because they had no means of recognizing their own flood risk.

Upfront disclosures about flood risk—available before financial commitments are made—could change those results. Informed about a structure's loss history, for example, homebuyers could consider alternative neighborhoods, purchase flood insurance, or investigate mitigation options, such as landscaping improvements, building elevation, or special placement of electrical equipment. An informed buyer who has not yet finalized financing may be able to roll the costs of flood-resiliency improvements into a long-term loan that will protect the structure and lower insurance rates. For most, this would be much easier than facing a costly repair bill on top of a mortgage payment post-storm.

For renters, flood knowledge can allow for the same sort of informed decision-making. The individual with mobility issues may choose a safer location, for example. A renter with expensive computer equipment might opt for the second floor rather than the basement apartment. And, again, more individuals may decide that an insurance policy to cover loss of their belongings in a sensible and affordable safeguard.

Pew believes that buyers and renters need to have all the information necessary to make informed decisions on what is often their largest and most important purchase. Sellers and lessors should be compelled to share the information they know about past flood damages and claims, obligations to carry insurance based on previous access to federal disaster assistance, and designation of a home as repetitive loss property, which can have serious implications for flood insurance rates. They should also be compelled to share the results of any elevation survey completed on the property. Such information can round out the broader picture of flood risk for a given property, giving consumers the equivalent of a CarFax for homes.

We were delighted to find broad agreement on this issue with groups such as the National Association of Realtors and the Natural Resources Defense Council. Further, such a proposal enjoys bipartisan support by the public. A Pew poll released today shows that three quarters of respondents support a single, national standard to ensure that potential homebuyers are aware if a property has flooded repeatedly and if that property is required to carry flood insurance.

Pew urges the Committee to direct FEMA to move quickly to develop national standards for disclosure of past flood losses by sellers and lessors and to ensure that those standards become a basic part of the NFIP program. We also support directing FEMA to make flood claims data, aggregated at block or census level, readily available to the public on its website.

Rates and Affordability

As Members on this Committee know, rates have proven to be a difficult sticking point. There are those who see rates as too low, enticing people to build or live in risky areas. Others believe the opposite or expect to recoup every dollar spent on insurance in eventual claims payments. Given the chasm between these points of view, it may be useful to consider a bit of history.

When the NFIP was started, its proponents were wary of flood insurance providing an indirect subsidy for development in risky areas.[2] Nonetheless, they were driven by what, at the time, seemed like large federal disaster expenditures, and were compelled to find a way to assure that those already living in flood-prone areas could make some sort of down payment on future federal assistance. The program's drafters were cognizant of the fact that land use decisions and building practices affect flood risk and that those decisions are made, not at the federal level, but by individual communities. They saw federal flood insurance as a means of leveraging improved floodplain management by local governments to reduce overall risk.[3]

They assumed that a very limited number of communities would be at risk for flooding and that flood maps could be produced rather quickly and prove useful for long periods of time. They aimed for covering risks for the average "normal" year and allowed for borrowing from the Treasury for "extreme" events. At the same time, they seemed certain that there would be enough years with few storms to allow quick repayment of borrowed funds.

When Congress pressed ahead with rate reductions to attract more policyholders, it also assumed that the need for subsidies would diminish over time as local floodplain management improved and as older structures were leveled by storms or rebuilt entirely.

Some of these assumptions were on point. Others, with the benefit of hindsight, appear naïve.

Today, we are beginning to understand that where it rains, it can flood, and that even in communities that sit above a river or far from the coast, heavy rainstorms can overcome storm drainage infrastructure. We are also beginning to understand that flood risk is dynamic, and that assessing risk must be an ongoing process. Now we see, too clearly, that large events can follow on the heels of other large

[2] See e.g., U.S. Task Force on Federal Flood Control Policy, "A Unified National Program for Managing Flood Losses," House Document No. 465, 89th Congress, second session, (August 10, 1966) https://www.loc.gov/law/find/hearings/floods/floods89-465.pdf.

[3] Ibid. See also, Federal Emergency Management Agency, " A Chronology of Major Events Affecting the National Flood Insurance Program," (October 2002) prepared by The American Institutes for Research, The Pacific Institute for Research and Evaluation, and Deloitte & Touche LLP, https://www.dhs.gov/xlibrary/assets/privacy/privacy_pia_mip_apnd_h.pdf; Michel-Kerjan, Erwann O, 2010 *Catastrophe Economics: The National Flood Insurance Program* Journal of Economic Perspectives, 24 (4): 165-86.

events, diminishing opportunities for building up financial reserves. We can also see that many at-risk homes and businesses have remained at risk for multiple decades, and that discounted rates that were once seen as temporary have endured.

Now, it seems, the space between the rock and the hard place that the program occupies has become tighter. Although $16 billion of program debt to the Treasury was forgiven recently, experts see no realistic chance that the program will be able to repay, with interest, the currently owed $20 billion plus.[4]

Therefore, to the extent that Congress makes no changes to the structure of the program but offers new risk rate relief to policyholders, it may increase its current financial shortfall and threaten the program's ability to pay claims. On the other hand, to the extent to which rates are perceived as too high, lower-risk policyholders may drop coverage, thereby increasing the pressure to raise rates on the remaining properties. In addition, as some policyholders pay off loans and, thereby, fall out of the group that is required to carry flood insurance, they may drop coverage as well. If those individuals suffer uninsured losses in the future, Congress will be pressed to offer other types of disaster relief.

Clearly, this is a tough problem to solve, and we recognize that adjusting the NFIP's now complicated rate structure is a delicate business, because of the way it impacts people's ability to live and work in places they love. As the Committee approaches this difficult issue, Pew offers the following considerations:

First, any NFIP affordability program must be carefully and tightly targeted to those policyholders that need it most. The Committee should strive to ensure that artificially low insurance rates do not encourage more risky development in flood-prone areas or undermine incentives for mitigation. We caution that an overly generous program—especially one that is not tied to significant program changes—will simply hasten the date by which Congress will find it necessary to forgive additional loans or raise the borrowing cap.

Second, we urge the Committee to ensure that any new affordability program compensates clearly for the price signals that new discounts convey. Too many individuals assume that a low insurance rate equals low risk; many will see a lowering of rates as confirmation of minimal risk. Where this is not the case, people should be fully informed and educated about their true risks. An affordability program should not feed flood complacency.

Finally, Pew recommends beginning a triage of the program's financial ailments by moving more vigorously to improve the floodplain management aspects of the program, addressing costly repeat loss

[4] U.S. Government Accountability Office, High Risk List: National Flood Insurance Program (2019) https://www.gao.gov/highrisk/national_flood_insurance/why_did_study#t=0.

properties, limiting discounts for newly constructed properties, and directing more robust funding and resources to mitigation of risk.

Repeatedly Flooded Properties

Where should Congress begin the financial and mitigation triage? Pew believes that Congress must start with the long-standing but still growing problem of repetitive loss properties.

This subset of insured properties that flood over and over again have strained the program's finances. In some years, repetitive loss properties account for as little as one percent of the program's policyholders but make 25 to 30 percent of its claims.[5] Since the National Wildlife Federation first drew attention to this imbalance in the 1990s, Congress, FEMA, the Government Accountability Office, and others have probed the problem, documenting multiple cases of properties repaired and rebuilt numerous times at the NFIP's expense.

In 2009, the Department of Homeland Security's Inspector General (IG) said that about one in ten repeatedly flooded homes had cumulative claims exceeding the value of the house.[6] The IG also said the increase in new repeat loss properties was outpacing mitigation efforts by a factor of ten to one. At that time, the universe of these properties was estimated to be growing at roughly 5,000 per year. A 2016 report by Resources for the Future and the Wharton Risk Center notes that claims filed by repetitive loss properties run 5 to 20 percent higher than the average of claims overall.[7]

The program currently provides for a more rapid escalation of rates for repetitive loss and severe repetitive loss properties compared with other premium-discounted properties. It also directs FEMA to prioritize mitigation assistance to such properties and requires even more rapid rate escalation if an offer of mitigation assistance is refused. However, these are simply starting points to reducing the growth properties that flood over and over.

Last year's House-passed bill included a mandatory deductible that would have required owners to shoulder more of the repair costs, and it also included a measure that Pew supports aimed at addressing the root causes of repeated flooding.

Inspiration for the Repeatedly Flooded Communities Preparation Act came from work already being done. A few jurisdictions participating in FEMA's Community Rating System (CRS) were already conducting repetitive loss area analyses, using FEMA data to map and evaluate concentrations of

[5] Federal Emergency Management Agency, *Severe Repetitive Loss Property Locations in FEMA Region IV and VI* (last updated May 1, 2014) https://www.fema.gov/media-library/assets/documents/16114.
[6] Department of Homeland Security, Office of the Inspector General, *FEMA's Implementation of the Flood Insurance Reform Act of 2004* (March 2009), https://www.oig.dhs.gov/sites/default/files/assets/Mgmt/OIG_09-45_Mar09.pdf.
[7] Carolyn Kousky & Erwann Michel-Kerjan, *A Look at 35 Years of Flood Insurance Claims*, Resources 41-45 (2016).

repeated claims. Some appeared to be having real success reducing the number of unmitigated repetitive loss properties.

While such efforts could be sophisticated, they might also be as simple as using a paper map and a marker to look for patterns in the data, following up, as necessary, with field visits, and looking at options for identified flooding hotspots. The bill used a specific number to identify the very small set of communities that would be required to participate, but it did not dictate specific outcomes. It directed FEMA to set up rules and called for communities to make progress. The bipartisan bill's sponsors understood that progress for one community might look very different for another.

Pew believes this approach is good one. It does not penalize the homeowner, who may or may not have any means of controlling the flood threat. It allows for multiple solutions. In one community, progress might come in the form of property buyouts or elevations. Elsewhere, a change in storm drain maintenance or new stormwater pumps might provide an answer. In yet another, a particular problem area itself might remain, but the local decision-makers might improve their subdivision regulations to avoid creating newer versions of the same problem.

Overall, such legislation would foster thoughtful floodplain management and careful priority-setting by local governments—very much in keeping with the original intent of the NFIP program.

To address under-resourced communities, new mitigation investments proposed in the Chairwoman's draft bill could be directed to technical assistance and planning. In addition, we believe it might be possible for FEMA itself to help affected communities, perhaps with creation of web-based applications, checklists, and guidance materials that smaller jurisdictions would find helpful.

Investment in Mitigation

Pre-flood preparation, mitigation, and adaptation: to date, these have been the missing pieces of the NFIP puzzle.

There are mitigation programs attached to the NFIP: the Flood Mitigation Assistance (FMA) program and the Increased Cost of Compliance (ICC) insurance riders have been helpful, and other members of the panel have solid recommendations for improving those programs. But the reality is that those programs are not enough to remedy the problems with underfunding of mitigation activities.

Pew sees the provisions in the Chairwoman's bill establishing a state revolving loan fund for flood mitigation as a possibly transformational step forward. It is a concept that is supported by over 160 national and local organizations from Florida to Minnesota to Texas to California.[8]

Pew commends the work of the Chairwomen, Congressman Charlie Crist, (D-FL) a former member of this Committee, and Congressman Roger Williams (R-TX) who sits on this Committee. We believe the solution that you have fashioned together is one that can make an enormous contribution to lessening flood losses and flood disasters across the country.

As many Members know, floods remain the nation's most common and costly natural disaster, affecting all 50 states. Since 2000, floods, hurricanes, and severe storms have caused over $800 billion in overall losses associated with physical damage to buildings, agricultural assets, and public infrastructure as well as other impacts such as business interruptions.[9]

The magnitude and the incessant growth of the problem is reflected, not just in the size of the NFIP debt, but also in the billions in Individual Assistance that FEMA provides after storms and in the more than $64 billion that FEMA's Public Assistance program has obligated for flood events since 2000.[10] Additionally, the nature of the problem is reflected in the nearly $15 billion that Congress has earmarked for emergency highway repairs and the remaining funding shortfall associated with that program. Finally, it is also evident in the billions of recovery assistance that flows through the Department of Housing and Community Development's Community Development Block Grant Disaster Recovery program (CDBG-DR), and through the untallied numbers associated with the multiple other forms of federal flood assistance, from community and Small Business Administration loans, to special unemployment assistance, mental health counseling aid, and property damage tax deductions.

Precise or not, all those numbers add up to a problem we cannot ignore. Pew is not in favor of stopping needed disaster assistance, but for doing more before floods happen to save dollars and lives after floods.

We whole-heartedly endorse the creation of a mitigation state revolving loan fund program. Modeled on the success of similar programs for wastewater treatment and drinking water, this approach would put a real emphasis on flood preparedness, allow the states to develop their own in-house institutional

[8] Laura Lightbody, *Pew Joins Organizations in Supporting Bill to Boost Flood Preparedness*, Pew Charitable Trusts (October 2018) https://www.pewtrusts.org/en/research-and-analysis/speeches-and-testimony/2018/10/08/pew-joins-organizations-in-supporting-bill-to-boost-flood-preparedness.
[9] National Oceanic and Atmospheric Administration, *Billion-Dollar Weather and Climate Disasters: Summary Stats*, National Centers for Environmental Information, (accessed February 5, 2019) *available at* https://www.ncdc.noaa.gov/billions/summary-stats (considering tropical cyclone to be flood-related disasters).
[10] Federal Emergency Management Agency, OpenFEMA Dataset: Public Assistance Funded Projects Summaries – V1 (last accessed March 5, 2019) https://www.fema.gov/openfema-dataset-public-assistance-funded-projects-summaries-v1.

capacity in the field of mitigation, and help break the flood-damage-and-repair cycle that cripples so many communities.[11]

Study after study tells us that in order to curb post-disaster spending, we must increase pre-disaster investment. The experts who have evaluated real flood preparedness projects tell us that for every dollar that FEMA and other federal agencies have put into building stronger and smarter before the next flood, we get a return on investment averaging $6.[12]

The proposal for a new revolving loan fund program will put that proof into practice, allowing communities across the country to act before storms come. Flood-weary residents could be given assistance, repeatedly flooded areas returned to naturally functioning floodplains, new building codes adopted and enforced, community raingardens created, culverts upgraded, riverbanks restored, vital pumps upgraded, utilities elevated, and more.

The states, which already have good experience in managing revolving loan funds, will be able to evaluate needs across communities and set priorities. Some communities would be given loans—repaying loans for needed projects over time—rather than being faced with enormous "repair bills" that come due all at once following a storm. Other communities might need more assistance. Where incomes and economic circumstances dictate, states could offer grants rather than loans, and, as loan payments return or "revolve" back to the fund, more communities will be helped over time.

Overall, we see this proposal as one that will save lives, livelihoods, and money, and we hope it will become a central feature of the NFIP reauthorization this Committee moves forward.

Looking ahead

In closing, I would ask the Committee to look to the future and think about how to make this program more forward-leaning. To do this, it may be helpful to think again about flood maps, considering not how or how fast they are made but how they are used. This is where we believe we can make a change that can guide the use of any new mitigation dollars and ultimately improve the prospects of limiting flood damage into the future.

Though it can flood just about anywhere, FEMA long ago opted to use the line associated with a certain statistical construct of a flood—the imaginary one-percent-annual-chance or 100-year flood—as the arbitrary marker of where flood insurance is required and where it is not.

[11] EPA, 2017 Annual Report: Clean Water State Revolving Fund Programs (March 2018) https://nepis.epa.gov/Exe/ZyPDF.cgi/P100UAGH.PDF?Dockey=P100UAGH.PDF.
[12] National Institute of Building Sciences, Natural Hazard Mitigation Saves 2017 Interim Report (2017), https://www.nibs.org/page/mitigationsaves.

As a statistical calculation, this line is drawn from data observed in past events, so it has been criticized as blind to the future, unduly optimistic, and worthless in the face of possible climate change impacts. Indeed, it has been widely misinterpreted as the indicator of safe and not safe, though it is not. But, if an arbitrary line is needed to look at a single year's flood insurance policies, this line can, perhaps, serve that purpose.

The trouble we have been creating for ourselves, however, is that we use the very same line to make decisions with consequences that run much longer than a single year. The NFIP asks local communities to evaluate the potential flood impacts only of those activities that fall within that arbitrary 100-year line—that line that will undoubtedly move in the future. Though many structures will likely stand for decades if not centuries, we are still making siting and building decisions based on this line that offers no real glimpse of the future.

Thus, we would ask the Members of this Committee to examine how the NFIP program might be changed to make better, more forward-looking decisions, how FEMA can be directed to provide communities with maps that tell a more nuanced story of evolving flood risk, and of how the program's basic land use regulations might be changed to consider and account for future risks.

Such changes would better serve, not just today's policyholders, but future generations as well.
Again, I thank the Committee for the opportunity to testify today and look forward to answering your questions.