AMERICAN ACTION FORUM

Rebuilding our Nation's Flood Insurance Program

By Ike Brannon and Elizabeth Lowell

Executive Summary

The National Flood Insurance Program (NFIP), administered by the Federal Emergency Management Agency (FEMA), offers affordable flood insurance to communities on the condition of meeting minimum flood mitigation standards. However, while the NFIP has been successful in encouraging mitigation and reducing required federal disaster aid, it is politically and structurally unable to minimize taxpayer subsidies and moral hazards. As a result, premiums do not reflect risk, as underscored by its nearly $18 billion in debt, with inland taxpayers subsidizing upper income coastal homes often in environmentally sensitive areas. Exploring ways to reform the NFIP is particularly relevant given that Congress is currently drafting legislation to reauthorize the program, which expires on September 30, 2011. Rather than discuss in detail specific aspects of reform legislation, this paper provides a general view into the primary problems facing the NFIP, as well as options for addressing them. In particular, it focuses on the following issues:

1) Premium Rates: As currently structured, NFIP premium rates do not reflect the underlying risk; they are underpriced by design, irrational, based on inaccurate data, and structural subsidies have long out-lived the initial social transitional goals. Premiums should be structured based on a fair evaluation of risk rather than political pressure to preserve subsidies.

2) Regressive Subsidies: NFIP offers premium subsidies that tend to benefit upper-income households, particularly in Gulf States. If premium subsidies are to remain at all, they should be extended only to those with existing homeownership in floodplains who could otherwise not afford full-risk premiums.

3) Environmental Damage: Offering underpriced flood insurance creates an incentive to build and live in floodplains, exacerbating environmental harm. NFIP should encourage flood mitigation measures that include incentives for avoiding construction in high-risk floodplains.

Problems with the National Flood Insurance Program

The root cause of NFIP's failure lies in its conflicting tasks: While Congress expects it to function as if it were a private insurance company, it also places on it a plethora of political constraints that forces it to act as no insurance company would ever act. Most insurance companies expend a great deal of resources attempting to measure the actual risk incurred by a potential customer and charging a price for insurance commensurate with that risk. NFIP neither measures risk well nor develops rates based on risk, and instead essentially extends a subsidy to millions of homes susceptible to floods—many of which are located in environmentally sensitive areas and owned by upper-income households.

Premiums do not reflect risk, and in fact are underpriced by design

Congress established the National Flood Insurance Program in 1968 in order to mitigate flood risk in the absence of private companies offering flood insurance and to offset, at least in part, post-disaster federal aid. Private insurers deemed flood insurance infeasible due to concerns that only those in flood-risk zones would purchase insurance, that risk-based premiums would be more expensive than the average household was interested in paying and that state regulators would approve, and that the resulting premium base could not cover the cost of catastrophic events.[i] NFIP has stumbled over these same obstacles, suffering from adverse selection as well as underpriced premium rates sufficient to cover small, predictable "average annual" flood events but not the cost of flood disasters. Without the ability to determine or charge risk-based premiums or generate sufficient loss reserves, NFIP bears only a passing resemblance to private insurance.[ii]

"Full-Risk" premiums are too low

NFIP offers "full-risk" and "subsidized" premiums for its flood insurance policies, neither of which are high enough to cover the cost of flood disasters. Private insurers generally charge premiums that include a margin for profit and a reserve for losses. In contrast, NFIP's "full-risk" premium rates are designed to cover losses only relative to the historical average loss per year, providing insufficient funds to handle infrequent, very large catastrophic losses.[iii]

The 2005 hurricane season was a stark illustrator of the inability of NFIP to handle mega-catastrophes. From 1986 to 2005, NFIP was self-supporting; Hurricanes Katrina, Rita, and Wilma together triggered $17 billion in flood claims in 2005. By January, 2011, NFIP owed almost $18 billion to the Treasury.[iv] While NFIP received over $3 billion in premium revenue in 2010, annual payments to policyholders in the past three years have ranged from over $700 million to over $3 billion.[v] In 2009 the GAO deemed it unlikely that NFIP can ever repay its debt without assistance.[vi]

Properties with the highest reparation cost receive insurance subsidies

In addition to its so-called "full-risk" premiums, NFIP explicitly subsidizes about one-fifth of its policies, with policyholders paying only 35 to 40 percent of full-risk premium rates.[vii] According to FEMA Administrator Craig Fugate, NFIP collects $3 billion in premium revenue annually but forgoes an additional $1.5 billion due to subsidized rates.[viii] NFIP must offer subsidized premium rates for certain types of properties, specifically those built before the issuance of flood hazard maps or before January 1, 1974. Because subsidized properties tend to be older than those commanding full-risk premiums and because of the lack of mitigation, they are also subject to the greatest risk of damage by flood. As a result, NFIP ends up charging the lowest premiums to those properties most likely to incur large flooding repair costs.

NFIP also subsidizes a large percentage of "repetitive-loss properties" (RLP) that experience frequent flood losses. Ninety percent of RLPs are subject to premium discounts, yet one-tenth of RLP homes have filed claims *exceeding* the value of the house.[ix] In testimony before the House Financial Services Committee, Steve Ellis, Vice President of Taxpayers for Commonsense, referred to a house in Mississippi that has flooded 34 times since 1978 and received payments worth almost ten times the house's $70,000 value, as well as another property owner in Texas who has received $1.6 million worth of claims for a house worth $116,000.[x] RLPs account for a disproportionately large share of claims, representing one percent of flood insurance policies but over one-third of claims paid.[xi]

While the Flood Insurance Reform Act of 2004 established a Repetitive Flood Claims grant program to purchase and demolish, relocate or flood proof RLPs, NFIP has found few volunteers and lacks the authority to compel property owners to participate. NFIP provides an especially good deal for those who experience repeat or annual flood losses; policyholders can receive subsidized insurance to pay for near-certain damages. Yet the intention of federally backed insurance should be to guard against catastrophic, unpredictable events rather than minor losses.

Premiums rely on inaccurate data

NFIP's reliance on inaccurate data provides another obstacle to charging premiums that actually reflect risk. Having precise flood risk maps is essential for pricing risk, yet NFIP's flood maps do no such thing. NFIP faces strong political pressure not to reclassify flood zones as high risk, which would lead to increased premiums for certain groups. As a result, even attempts to update its maps have not led to significant changes in the premiums it charges, since property owners with flood insurance can "grandfather in" underpriced premium rates if their properties are remapped into riskier flood zones. In addition, NFIP sets flood insurance rates on a nationwide basis depending on broad flood risk categories that may fail to account for local factors that can impact the flood risk associated with individual properties.

According to the GAO, NFIP's own managerial practices have led to the use of inaccurate data to price payments.[xii] GAO has found multiple instances where NFIP has inadequately monitored its contractors, and, despite an investment of $40 million for a new IT management system, that NIFP still lacks adequate procedures for managing insurance policy and claims data.[xiii]

No tools to counteract low premiums

NFIP has limited means to make up any realized losses. Congress did not capitalize it on formation, and as a result the program must rely on the premiums it charges to cover its losses. Yet NFIP cannot raise premium rates by more than 10 percent per year, which is unusual even among states that regulate other types of insurance.[xiv] In addition, unlike private insurers, NFIP assumes all of the risk for the policies it sells, rather than limit its risk exposure by purchasing reinsurance. Since NFIP cannot deny insurance based on the expectation of frequent losses, it experiences strong adverse selection effects, with those most likely to experience losses also the most likely to purchase insurance. Only 20 to 30 percent of people exposed to flood hazards actually purchase flood insurance, and many only purchase insurance after experiencing flood damage, later discontinuing it after several flood-free years.[xv]

To counteract adverse selection effects and encourage more people to buy flood insurance, Congress has enacted mandatory flood insurance purchase requirements for property owners with federally guaranteed mortgages on properties located in high-risk flood zones. However, only 49 percent of single family homes in high risk flood zones are covered by flood insurance, due both to noncompliance with purchase requirements and the view that purchasing flood insurance is not worth the cost.[xvi] The expectation of federal relief in the case of a flood disaster provides yet another deterrent to the purchase of flood insurance.

Adverse Consequences

Rather than an insurance program, NFIP would be better described as a subsidy program for housing in floodplains. It is regressive, subsidizing properties such as beachfront vacation homes, and contributes to environmental damage in flood zones.

NFIP benefits upper-income households in Gulf States

The NFIP in effect transfers wealth from the taxpayers to communities along the Gulf Coast, and especially to upper-income homeowners residing there. As shown in Figure 1, both the amount of flood insurance coverage and number of claims filed favor the Gulf States. Ninety percent of the U.S. population lives outside of high-risk flood zones.[xvii] Some still contend that flood losses are distributed fairly evenly across the U.S., and that the NFIP does not benefit coastal states at the expense of non-coastal states.[xviii] Since NFIP's current debt arises from its inability to pay flood claims to policyholders in the Gulf States, however, taxpayer funds will clearly subsidize the Gulf if the program is to remain solvent.

In addition to a wealth transfer to the Gulf, NFIP is a redistribution of resources to the wealthy. The Institute for Policy Integrity shows that the wealthiest counties have historically filed 3.5 times more claims and received over a billion dollars more from claim payments than the poorest counties.[xix] A large share of insurance benefits flows to upper-income houses since beachfront property tends to be the most valuable and also faces the greatest risk of flooding.

An analysis of 10,000 NFIP-insured properties done by the Congressional Budget Office (CBO) found that 40 percent of subsidized coastal properties were worth more than $500,000, compared to the median owner-occupied housing value in the U.S. of $160,000. Furthermore, 23 percent of the subsidized coastal properties were non-principal residences such as vacation homes.[xx] Figure 2 illustrates the disparities in the proportion of coastal versus inland properties at different values.

Figure 1: Coverage and Claim Values per Capita by State (1978-2010)[xxii]

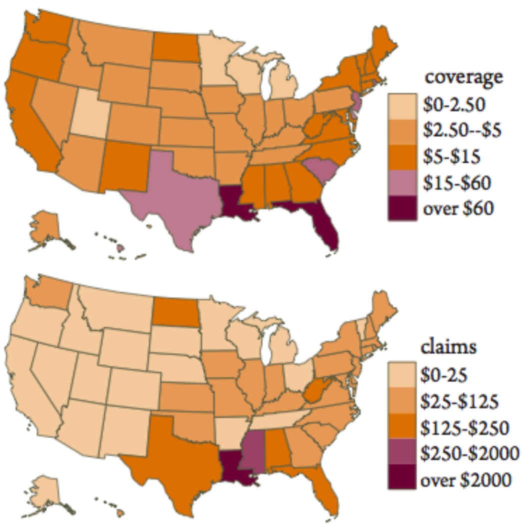
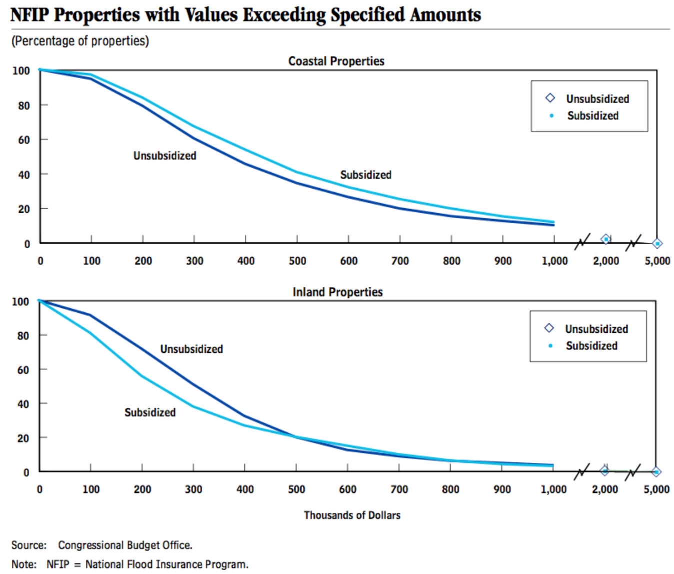


Figure 2: NFIP Property Values[xxi]



NFIP subsidizes environmentally harmful activities

Offering underpriced flood insurance encourages building in floodplains, which causes environmental damage and can intensify flood hazards. Implicit and explicit subsidies have helped contribute to a boom in population in flood zones. In designating "special flood hazard areas," or high-risk flood zones, NFIP typically has not differentiated between natural protection and protection offered by (fallible) structures such as levees.[xxiii] By not accounting for the "residual risk" of constructing behind levees, NFIP has given residents a false sense of security and encouraged development. One of the perceived advantages of government-sponsored flood insurance is the requirement to adhere to flood management standards as a condition of buying insurance through NFIP. While these standards can mitigate flood risk, they provide a poor alternative to not building in the highest-risk zones.

Floodplains are environmental assets. They are located near waterways and coastal zones, which help to purify wastewater naturally, control erosion, provide habitat for fish and wildlife, support irrigation flows and fisheries, and offer other natural resources.[xxiv] Several environmental groups have filed Endangered Species Act lawsuits against FEMA, alleging that the NFIP has resulted in harm to critical habitat. For example, the Institute for Policy Integrity cites studies valuing restoration along the Platte River at $70 million, and another study valuing undeveloped coastal wetlands at several thousand dollars per hectare.[xxv]

Development in floodplains contributes geologically to greater flooding and erosion risks. Wetlands provide natural buffers to storm surges and downstream flooding but are disappearing rapidly with continued development. Coastal Louisiana loses an area of wetlands the size of Manhattan each year due in part to the presence of levees, jetties, and canals.[xxvi] Even where development does not displace wetlands, encroaching roads, buildings, and other impermeable surfaces reduce the ability to absorb or delay water flows.[xxvii] In short, the practical effect of the NFIP program is to encourage development in high risk and environmentally sensitive areas.

Fixing Flood Insurance

Finding funds to rebuild communities after flood catastrophes will always present a challenge. After a major disaster, people will inevitably look to the government to supply a solution. Furthermore, political exigencies mean that rejecting aid requests from low-income flood victims is impossible. And once that occurs, the pressure to extend aid to middle- and upper-income households becomes intense as well.

In the absence of private insurance, a well-structured government insurance program provides a potential way of minimizing government expenditures post-disaster. The NFIP can lessen the cost of flood disasters assuming that it discourages people from living in the highest risk zones, forces them to bear the risk they take for living in floodplains, and provides an incentive for adopting flood mitigation measures.

Creation of a private insurance market is unlikely

There is no consensus that a robust private flood insurance market would develop in the absence of a government program. A limited number of private companies offer flood insurance, which they generally market to wealthy homeowners and large companies since their premium rates exceed those offered by the NFIP.[xxviii]

The prospect of post-disaster government intervention in insurance policies creates another disincentive for private flood insurance companies to enter the market. Katrina and other devastating hurricanes show that the government will bring pressure to bear on companies that are perceived by policyholders and the media to be providing less than full coverage, regardless of the actual contract. After Hurricanes Katrina and Rita, the insurance commissioners in Florida and Louisiana declared a state of emergency in their respective state's insurance market, suspending statutes and regulations regarding policy cancellations, non-renewals, reinstatements, and claim filings.[xxix] Senators such as Trent Lott (R-MS) moved to pass bills forcing private insurance companies to cover flood losses. No company can insure or hedge against the risk of government mandates.

Recommendations for Reform

Charge premiums that reflect risk: Update flood maps and reduce subsidies

The first step toward making the NFIP a viable insurance program is to raise premiums so that they actually reflect risk. However, the challenge in raising premiums lies in ensuring that people will continue to buy NFIP insurance policies. GAO found that in order to create a fund equal to one percent of NFIP's total exposure by 2020, the average subsidized premium would need to increase from $840 to $2,696 and the average full-risk premium would have to increase from $358 to $1,149. Such steep increases would greatly reduce participation in the program.[xxx] Furthermore, mandating more widespread insurance purchases may raise legal, ethical, and enforcement issues, and is politically infeasible. Without being able to coerce people into buying insurance, it may be impossible to cover catastrophic losses simply by raising premiums.

Yet while relying on high premiums to completely cover catastrophic losses may not be possible, NFIP's premium rates can still be reformed so that they more accurately reflect risk. As a first step, NFIP should base its pricing decisions on accurate and up-to-date flood risk maps. In addition to updating its map system, NFIP should phase out grandfathered premium rates resulting from flood risk zone reclassification. Flood risk zones are naturally subject to change due to impacts such as development, weather patterns, and erosion. It is not the role of the federal government to assume the entire flood risk of coastal properties.

Subsidize based on need rather than property history

Ideally, premiums would be based on property risk, and any subsidies would reward only homeowners already located in flood zones who clearly lack the ability to pay these premiums. Premium subsidies are currently justified as being "fair" for those whose houses preceded accurate knowledge of flood risks. These subsidies were never intended to last in the long term and have led to perverse effects on rate structures where the lowest premium rates applied to those properties least prepared for flood damage. One alternative would be to replace subsidies with vouchers; NFIP could charge full-risk premiums but offer direct need-based grants to those living in high-risk zones who lack the ability to pay full rates. Such a system would more efficiently reflect risk while encouraging participation. Other alternatives include eliminating subsidies for second homes and repetitive-loss properties.

Improve mitigation measures

A flood risk mitigation strategy should discourage people from living in the highest-risk flood zones. Charging higher premium rates would help in achieving this goal. More extreme measures include requiring homeowners to sign waivers forfeiting their right to federal disaster relief unless they purchase flood insurance.[xxxi] While the NFIP should discourage people from moving into flood zones, the fact remains that over half of the U.S. population already lives in coastal watershed counties or floodplain areas.[xxxii] Encouraging effective flood management standards is therefore essential for mitigating flood damage.

Federal assistance should be tied to both the individual and the community's degree of flood preparedness by explicitly pricing premium rates in order to reward flood mitigation efforts. If premium rates were clearly tied to these efforts, they would theoretically offer sufficient incentive to engage in flood mitigation without the government having to enforce specific standards.

It may also make sense to look into a community-based flood insurance system. States and communities generally administer floodplain management requirements and issue permits for construction in floodplains, while the individual pays the insurance premiums. A community-based flood insurance system would make the community responsible both for paying at least part of the premium and enforcing flood preparedness standards, which could give it more incentive to enact effective flood management practices.

Conclusion

Few would defend the National Flood Insurance Program rate structure in its current incarnation. The program is nearly $18 billion in debt, riddled with perverse incentives, and operates with the efficiency one would expect from any dysfunctional government bureaucracy. Its premium structure, subsidies, and mitigation incentives need to be reformed in order to give it any hope of minimizing flood risk efficiently.

Ike Brannon is Director of Economic Policy & Congressional Relations at the American Action Forum, Elizabeth Lowell works for the Organization as a Research Analyst.

---

[i] CRS. "National Flood Insurance Program: Background, Challenges, and Financial Status," March 4, 2011.
[ii] Of course, many government-run insurance programs bear little resemblance to those operating in the private sector.
[iii] Ibid.
[iv] Ibid.
[v] Ibid.
[vi] GAO. "Information on Proposed Changes to the National Flood Insurance Program," February 27, 2009. http://www.gao.gov/new.items/d09420r.pdf
[vii] CBO. "Value of Properties in the National Flood Insurance Program," June 2007 (p.3) and GAO. "National Flood Insurance Program: Continued Actions Needed to Address Financial and Operational Issues," September 22, 2010.
[viii] Testimony of Craig Fugate, Administrator of the Federal Emergency Management Agency, on "Legislative Proposals to Reform the National Flood Insurance Program" before the House Committee on Financial Services, March 11, 2011. http://financialservices.house.gov/media/pdf/031111fugate.pdf
[ix] CRS. "National Flood Insurance Program: Background, Challenges, and Financial Status," March 4, 2011
[x] Testimony of Steve Ellis, Vice President, Taxpayers for Common Sense, on "Legislative Proposals to Reform the National Flood Insurance Program" before the House Committee on Financial Services, March 11, 2011. http://financialservices.house.gov/media/pdf/031111ellis.pdf
[xi] CRS. "National Flood Insurance Program: Background, Challenges, and Financial Status," March 4, 2011 (p. 15).
[xii] GAO. "National Flood Insurance Program: Continued Actions Needed to Address Financial and Operational Issues," September 22, 2010. http://www.gao.gov/new.items/d101063t.pdf
[xiii] Ibid.
[xiv] Ibid.
[xv] http://financialservices.house.gov/media/pdf/031111parrillo.pdf
[xvi] CRS. "National Flood Insurance Program: Background, Challenges, and Financial Status," March 4, 2011 (p. 8)
[xvii] Testimony of Sally McConkey, Vice Chair of the Association of State Floodplain Managers, Inc., on "Legislative Proposals to Reform the National Flood Insurance Program" before the House Committee on Financial Services, March 11, 2011. http://financialservices.house.gov/media/pdf/031111mcconkey.pdf
[xviii] See Testimony of Terry Sullivan on behalf of The National Association of Realtors before the House Committee on Financial Services, March 11, 2011. http://financialservices.house.gov/media/pdf/031111sullivan.pdf
[xix] http://policyintegrity.org/files/publications/FloodingtheMarket.pdf
[xx] CBO. "Value of Properties in the National Flood Insurance Program," June, 2007. http://www.cbo.gov/ftpdocs/82xx/doc8256/06-25-FloodInsurance.pdf
[xxi] Image from: http://www.cbo.gov/ftpdocs/82xx/doc8256/06-25-FloodInsurance.pdf
[xxii] Image from: http://policyintegrity.org/files/publications/FloodingtheMarket.pdf
[xxiii] See discussion of cross subsidies in: CBO. "The National Flood Insurance Program: Factors Affecting Actuarial Soundness," November, 2009 (Appendix B). http://www.cbo.gov/ftpdocs/106xx/doc10620/11-04-FloodInsurance.pdf

[xxiv] Institute for Policy Integrity. “Flooding the Market: The Distributional Consequences of the NFIP,” April, 2010 (p. 3). http://policyintegrity.org/files/publications/FloodingtheMarket.pdf

[xxv] Ibid.

[xxvi] CBO. “The National Flood Insurance Program: Factors Affecting Actuarial Soundness,” November, 2009 (p. 16). http://www.cbo.gov/ftpdocs/106xx/doc10620/11-04-FloodInsurance.pdf

[xxvii] Ibid.

[xxviii] GAO. “Information on Proposed Changes to the National Flood Insurance Program,” February 27, 2009 (p. 3). http://www.gao.gov/new.items/d09420r.pdf

[xxix] CRS. “Post-Katrina Insurance Issues Surrounding Water Damage Exclusions,” February 6, 2009 (p. 10)

[xxx] GAO. “Flood Insurance: Public Policy Goals Provide a Framework for Reform,” March 11, 2011 (p. 5). http://www.gao.gov/new.items/d11429t.pdf

[xxxi] Testimony of Sandra Parrillo, on behalf of the National Association of Mutual Insurance Companies, before the House Committee on Financial Services, March 11, 2011. http://financialservices.house.gov/media/pdf/031111parrillo.pdf

[xxxii] Testimony of Craig Fugate, Administrator of the Federal Emergency Management Agency, on “Legislative Proposals to Reform the National Flood Insurance Program” before the House Committee on Financial Services, March 11, 2011. http://financialservices.house.gov/media/pdf/031111fugate.pdf