

Exploring a New Attempt at Affordable Flood Insurance

By: Morgan Johnson

I. Introduction

Flooding is the most common natural disaster Americans face each year.¹ While the general public may only associate floods with coastal areas and hurricane seasons, floods occur throughout the United States (U.S.) wherever rainfall, snow, and storm surges cause water systems (i.e., dams, rivers) to overflow.² Even without considering climate change, population growth is expected to lead to an increase in flood discharge across the U.S.³ Climate change will further amplify this increase in flood discharge; studies predict that various types of flooding, including flash, urban, and river, will increase in the next few decades.⁴

As the risk of flooding continues to grow, affordable flood insurance is an important vehicle to prepare Americans to face the most common natural disaster. The Federal Emergency Management Agency's (FEMA) adoption of Risk Rating 2.0, a new pricing methodology that calculates flood risk based on individual properties' risks, is an overdue step towards making flood insurance accessible to Americans and bridging the gap between insured and uninsured.

Part I of this paper will discuss the relevance and importance of affordable flood insurance in the U.S. Next, Part II of will provide background on how and why the federal government created the National Flood Insurance Program (NFIP). Part III will then discuss the need for FEMA to adopt changes to the NFIP. Finally, in Part IV, this paper will discuss

¹ Christopher C. French, *Insuring Floods: The Most Common and Devastating Natural Catastrophes in America*, 60 VILL. L. REV. 53, 53 (2015).

² NOAA, *Flood Related Hazards*, NAT'L WEATHER SERV., <https://www.weather.gov/safety/flood-hazards> (last visited Jan. 10, 2022).

³ AECOM, *THE IMPACT OF CLIMATE CHANGE AND POPULATION GROWTH ON THE NAT'L FLOOD INS. PROGRAM THROUGH 2100*, ES-7 (June 2013), https://aecom.com/content/wp-content/uploads/2016/06/Climate_Change_Report_AECOM_2013-06-11.pdf.

⁴ ARIS GEOGAKAKOS, ET AL., *CLIMATE CHANGE IMPACTS IN THE U.S.: CHAPTER 3 WATER RESOURCES* 75 (U.S. Glob. Change. Rsch Program 2014) 75.

FEMA's recent modifications to the NFIP enacted in October 2021 in the aim of creating affordable and equitable flood insurance.

II. Importance of Affordable Flood Insurance

A. Severe Economic Hardship

Due to the severe consequences that even minimal flooding can cause, floods are capable of causing severe economic hardships on households and businesses.⁵ Flood water can contain high levels of hazardous substances that are dangerous for human consumption.⁶ In addition, water damage can lead to toxic mold and damage a home's structural integrity.⁷ A mere inch of water damage can cause \$25,000 in damages to a flooded household.⁸ Due to the economic burdens imposed by floods, flood insurance is an important vehicle for households' wealth retention.

Flood insurance is an important means to prepare for the long, expensive process of recovering from a flood. FEMA flood insurance covers as much as \$250,000 in damages to the policyholder's residential building, and \$100,000 in damages for the policyholder's personal property in the flooded premise.⁹ Although this amount of money may be insufficient for insured individuals to fully recover from the devastation of a flood, individuals without flood insurance may face enormous economic burdens on their road to recovery.¹⁰ Uninsured flood victims may be forced to rely on their own wealth, or contributions from support systems such as family, to

⁵ FEMA, *Flood Insurance*, <https://www.fema.gov/flood-insurance> (last updated Nov. 13, 2021).

⁶ NAT'L CTR. FOR ENV'L HEALTH, *Dangers of Flooding and How to Protect Yourself*, CDC, <https://www.cdc.gov/nceh/toolkits/floods/default.html> (last reviewed Mar. 27, 2020).

⁷ *See id.*

⁸ FEMA, *supra* note 5.

⁹ Jason Metz & Amy Danise, *Here's Who Gets Hit Hardest by FEMA Flood Insurance Rates*, FORBES. (Oct. 1, 2021), <https://www.forbes.com/advisor/homeowners-insurance/fema-flood-insurance-rate-changes/>.

¹⁰ French, *supra* note 1, at 69; *see* CAROLYN KOUSKY & HELEN WILEY, IMPROVING THE POST-FLOOD FIN. RESILIENCE OF LOWER-INCOME HOUSEHOLDS THROUGH INS. 2 (Wharton Risk Ctr. Jan. 2021), https://riskcenter.wharton.upenn.edu/wp-content/uploads/2021/01/Improving-LMI-Household-Flood-Insurance-Options_Issue-Brief.pdf.

fund their property's restoration or their move; disaster relief funds are not always available for flood victims.¹¹ Although the federal government can distribute recovery funds for disaster relief regardless of insurance status, this only occurs if the President makes a "disaster declaration".¹²

Individuals interested in flood insurance through NFIP should become policyholders in advance of major flooding events; flood insurance generally takes 30 days to activate.¹³

Becoming a flood insurance policyholder in advance of projected flooding events will ensure policyholders are not caught in the 30-day window when their coverage has not yet begun.¹⁴

B. Lack of Knowledge About Flood Insurance

American knowledge on flood prevalence and flood insurance is often incomplete. There is a common misconception among American homeowners that flood insurance is included with home owners' insurance.¹⁵ However, home owners' insurance generally does not include flood insurance.¹⁶ Instead, the burden falls on homeowners to purchase each separately.¹⁷

Despite an increase in flooding in recent decades, households often do not have flood insurance when facing flooding events.¹⁸ In 2017, less than 20% of the homes impacted by Hurricane Harvey had active flood insurance.¹⁹ Many homeowners assume that relying on disaster relief funds will sufficiently cover the economic consequences of flooding.²⁰

¹¹ *Why Should I Purchase Flood Insurance If, My Home Flood Damage Could be Covered by Federal Disaster Assistance?*, FEMA, <https://www.floodsmart.gov/why-buy-flood-insurance> (last visited Jan. 10, 2022).

¹² *Id.*

¹³ FED. DEPOSIT INS. CORP., FDIC CONSUMER COMPLIANCE EXAMINATION MANUAL V-6.5 (Sept. 2019), <https://www.fdic.gov/resources/supervision-and-examinations/consumer-compliance-examination-manual/documents/5/v-6-1.pdf>.

¹⁴ *See id.*

¹⁵ *See* FEMA, *supra* note 5 (informing the public that "[m]ost homeowners insurance does not cover flood damage").

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *See* Robert H. Jerry II, *Managing Hurricane (And Other Natural Disaster) Risk*, 6 TEX. A&M L. REV. 391, 428-31 (2019).

¹⁹ *Id.* at 430.

²⁰ *Id.*

Unfortunately, they face an unwelcome surprise to learn that disaster assistance is unavailable without a presidential disaster declaration and rarely offers aid that matches flood-insurance coverage.²¹ Another stark contrast between NFIP flood insurance and FEMA disaster relief funds is that while flood insurance distributions to policyholders need not be paid back, disaster relief funds are often allocated as loans that must be repaid.²²

Throughout the U.S., certain communities face a disparate risk of flooding.²³ Homes located in historically redlined areas in major cities have a higher flood risk than other areas in the same cities.²⁴ These areas suffer from a history of disinvestment which may increase the risk of severe flooding to the homes and businesses in the area.²⁵ Investment in community-based flood control strategies in minority or historically disinvested areas, for example in Texas in the wake of Hurricane Harvey, continues to be a decisive political issue.²⁶ Without large-scale investment in flood prevention in these communities, it is vitally important that flood insurance is affordable for individual purchase.²⁷

III. The National Flood Insurance Program

A. Background

Historically, private insurance companies were unwilling to underwrite flood losses because they were large and had the potential to impact a substantial number of property owners in certain geographic regions at the same time.²⁸ Moreover, uncertainty regarding the frequency

²¹ See FEMA, *supra* note 5.

²² *Id.*

²³ See Kriston Capps & Christopher Cannon, *Redlined, Now Flooding*, BLOOMBERG CITYLAB (Mar. 15, 2021), <https://www.bloomberg.com/graphics/2021-flood-risk-redlining/>.

²⁴ *Id.*

²⁵ *Id.*

²⁶ See Christopher Flavelle, *A Climate Plan in Texas Focuses on Minorities. Not Everyone Likes It*, N.Y. TIMES, (Jul. 24, 2020). <https://www.nytimes.com/2020/07/24/climate/houston-flooding-race.html>.

²⁷ *Id.*

²⁸ See Jennifer Wriggins, *Flood Money: The Challenge of U.S. Flood Insurance Reform in a Warming World*, 119 PENN. ST. L. REV. 361, 387 (2014).

and damage caused by flooding events complicated accurately pricing flood insurance policies.²⁹ In order to remain profitable, insurers would need to offset this ambiguous risk of simultaneous, major payouts by increasing the price of flood insurance plans; this high price would render it almost impossible for most households to purchase flood insurance.³⁰ Thus, insurance companies are reluctant to underwrite flood insurance plans due to the correlated losses.³¹

B. Method of Implementation

In 1968, Congress signed the National Flood Insurance Act into law which created the National Flood Insurance Program (NFIP).³² The NFIP is currently under the purview of FEMA.³³ Flood insurance through NFIP is available to anyone living in one of the 23,000 communities across the country which actively comply with FEMA's floodplain management criteria.³⁴ These criteria include: (1) adopting measures to mitigate and reduce flood damage, and (2) avoiding further development in high-risk flood areas.³⁵

The NFIP relies on a public-private partnership in which private insurers sell flood insurance plans to the communities while the federal government underwrites the policies.³⁶ Unlike private insurance programs, the government bears the financial risk and burden of potential flooding.³⁷ Because pricing flood insurance according to the actual flood risk to properties would lead to high premiums that would make flood insurance largely unaffordable, the NFIP offers

²⁹ See *id.* at 386.

³⁰ See *id.*

³¹ See Jeffrey Valacer, *Thicker Than Water: America's Addiction to Cheap Flood Insurance*, 35 PACE. L. REV. 1050, 1051 (2015); Sarah Fox, *This is Adaptation: The Elimination of Subsidies Under the National Flood Insurance Program*, COL. J. ENV'T L., 205, 213 (2014).

³² National Flood Insurance Act, Pub. L. 90-448, tit. 13, § 1302 (codified as amended in 42 U.S.C. § 4001).

³³ See Alexander Mendelson, *Taking Away the Tightrope: Fixing the National Flood Insurance Program Circus Via Eminent Domain*, 83 BROOK. L. REV. 1519, 1524 (2018).

³⁴ *Id.*; FEMA, *supra* note 5.

³⁵ See Ani Esenyan, *The Clash of the Acts: FEMA's Implementation of the National Flood Insurance Program and Its Collision With the Endangered Species Act and the National Environmental Policy Act*, 123 PENN ST. L. REV. 499, 506 (2019).

³⁶ See Wriggins, *supra* note 28, at 377.

³⁷ *Id.*

policyholders subsidized premiums to offset the cost.³⁸ For communities that qualified, the NFIP allowed home and business owners to access the security of flood insurance rather than relying on federal disaster relief.³⁹

Originally, an NFIP policyholder's premium was largely based on the flood risk of the geographic area where the insured property was located.⁴⁰ Flood risk estimates for geographic areas relied on the flood maps created by the NFIP.⁴¹ The risk calculation relied on two factors: (1) whether there was a 1% annual risk of flooding, and (2) the property's elevation.⁴² FEMA required property owners with federally-backed mortgages to purchase flood insurance if their structure was located within a designated high-risk flood zone.⁴³ To determine an area's flood risk, NFIP flood zone maps used historical data on floods.⁴⁴ The maps aimed to accurately reflect the true flood risk of areas; in practice, the risk-levels reflected in a large number of maps continue to be out-of-date and misrepresentative.⁴⁵

IV. Need for Change to the NFIP

While the NFIP created access to flood insurance, many weaknesses existed in the methods and rollout of the NFIP. These weaknesses include its flood risk calculation method, the resulting inequitable pricing of flood insurance plans, and the incentivization to continue rebuilding in high-risk areas.

A. Risk Calculation and Equity Issues

³⁸ See Katie Sinclair, *Water, Water Everywhere, Communities on the Brink: Retreat as a Climate Change Adaptation Strategy in the Face of Floods, Hurricanes, and Rising Seas*, 46 *ECOLOGY L.Q.* 259, 283 (2019); Jerry II, *supra* note 14, at 436-37.

³⁹ See Mendelson, *supra* note 33, at 1524.

⁴⁰ See Jerry II, *supra* note 18, at 436-37; Mendelson, *supra* note 33, at 1524-525.

⁴¹ *Id.*

⁴² See Alexander Lemann, *Rolling Back the Tide: Toward an Individual Mandate for Flood Insurance*, 26 *FORDHAM ENV'T L. REV.* 166, 181-82 (2015).

⁴³ See Jerry II, *supra* note 18, at 438.

⁴⁴ See Mendelson, *supra* note 33, at 1525.

⁴⁵ See *id.*

The NFIP's original method of calculating flood risk unfairly distributed flood insurance costs among policyholders.⁴⁶ A general, geographic zone risk classification often resulted in low-income policyholders paying the same rates for insurance as affluent policyholders.⁴⁷ Yet because the payouts to modest homes would always be smaller, especially for the partial losses that comprise the majority of all claims, there existed an actuarial, embedded cross-subsidy from policyholders owning older, smaller homes to policyholders owning larger, newer ones.⁴⁸

Moreover, the floodplain maps the NFIP utilized for risk calculation were out of date, inaccurate representations of the actual flood risk in the many areas.⁴⁹ The accuracy of the flood maps is crucial; home and businessowners are only required to purchase flood insurance if they have a federally-backed mortgage for a property in a zone designated as a high flood risk.⁵⁰ Flood insurance is optional for individuals living in lower-risk areas.⁵¹ Out-of-date maps may falsely label areas as low-risk when climate change, land use changes, or other factors may have increased the risk of flooding in the area.⁵² An audit of the NFIP's flood maps showed that in 2016 only 42% of the maps had been revised to reflect changes to the flood risk over time.⁵³ As evidenced by how 40% of NFIP claims from 2014-2018 were policyholders from lower-risk

⁴⁶ See Ronald Hodges, *Changes to National Flood Insurance Program Will Have Significant Impact on Real Estate Industry*, COLLIN CNT'Y ASS'N REALTORS, <https://www.ccar.net/2021/10/15/changes-to-national-flood-insurance-program-will-have-significant-impact-on-real-estate-industry/> (last visited Jan. 10, 2022).

⁴⁷ *Id.*

⁴⁸ See generally CONG. RSCH. SERV., NAT'L FLOOD INSURANCE PROGRAM: THE CURRENT RATING STRUCTURE AND RISK RATING 2.0 (2021); see also *FEMA Updates Its Flood Insurance Rating Methodology to Deliver More Equitable Pricing*, FEMA, (Apr. 1, 2021), <https://www.fema.gov/press-release/20210401/fema-updates-its-flood-insurance-rating-methodology-deliver-more-equitable> ("Currently, many policyholders with lower-value homes are paying more than they should and policyholders with higher-value homes are paying less than they should.").

⁴⁹ A. Tarlock & Deborah Chizewar, *Living With Water in a Climate-Changed World: Will Federal Flood Policy Sink or Swim*, 46 ENV'T. L. REV. 491, 505-506 (2016).

⁵⁰ *Id.* at 506.

⁵¹ *Id.*

⁵² *Id.*

⁵³ Alexander B. Lemann, *Assumption of Flood Risk*, 51 ARIZ. ST. L. J. 163, 201 (2019).

zones, families' enrollment in an affordable flood insurance plan will be increasingly important, regardless of their property's risk-zone designation, as the effects of climate change continue.⁵⁴

B. Incentivizing High-Risk Behavior

A major criticism of the NFIP is that its structure provided a safety-net for rebuilding in historically flood prone areas, rather than promoting its mitigation goals.⁵⁵ Claim payouts in high-risk flood areas incentivized families and businesses to enter a cycle of repeated payouts, floods, and construction in the same high-risk area.⁵⁶ Properties that are repeatedly flooded and rebuilt make up one percent of NFIP's policies but account for 25-30% of all claim payouts.⁵⁷ The repetitive loss properties combined with the high price of paying out claims led the NFIP to amass, after particularly large storms, sizable deficit.⁵⁸

V. Risk Rating 2.0

On October 1, 2021, FEMA attempted to address the foregoing concerns by implementing Risk Rating 2.0.⁵⁹ The purpose of Risk Rating 2.0 is to improve the risk calculation method so it more accurately reflects properties' individual risk.⁶⁰ FEMA hoped that individualized risk-to-premium pricing would make flood insurance more affordable for Americans who face a risk of flooding.⁶¹ According to FEMA's estimations, approximately 23% of policyholders' premiums will decrease post-implementation of Risk Rating 2.0.⁶² Since the policy was implemented only

⁵⁴ FEMA, *supra* note 5.

⁵⁵ See Mendelson, *supra* note 33, at 1522.

⁵⁶ *Id.*

⁵⁷ Jerry II, *supra* note 18, at 436.

⁵⁸ *Id.*

⁵⁹ See FEMA, *supra* note 48.

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² FEMA, *Risk Rating 2.0 – National Rate Analysis*, https://www.fema.gov/sites/default/files/documents/fema_risk-rating-2.0-national-rate-analysis.pdf (last visited Jan. 10, 2022).

at the end of 2021, and will not fully take effect until April 2022, its full impact remains to be seen.⁶³

A. Risk Calculation Method

FEMA's Risk Rating 2.0 advances the organization's goal to make flood insurance pricing more equitable for policyholders.⁶⁴ In sharp contrast to its predecessor, Risk Rating 2.0's pricing focuses on equity;⁶⁵ Risk Rating 2.0 will use price plans more accurately based on the insured property's individual flood risk rather than the property's general flood zone risk.⁶⁶

Policyholders' premiums will reflect the food risk of their property rather than the flood risk of the general community in which their structure is located.⁶⁷ Risk Rating 2.0 utilizes several variables when determining the unique flood risk of a property, including: (a) flood frequency, (b) possibility of different types of floods, (c) distance between the insured property and bodies of water, (d) type and size of nearby bodies of water, (e) property's elevation, and (f) the cost to rebuild the property.⁶⁸ Risk Rating 2.0's risk model will encompass the risks of river, coastal, and rainfall flooding on the specific structure.⁶⁹ These variables are not an exhaustive list of relevant variables for a risk calculation; however, data on each variable helps improve the accuracy of estimating the property's individual flood risk.⁷⁰ The combination of various types of variables allows for a more dynamic calculation than the "static measurements" previously

⁶³ *FEMA*, *supra* note 48.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ CONG. RSCH. SERV., *supra* note 48.

⁶⁷ *Id.*

⁶⁸ *See FEMA*, *supra* note 48.

⁶⁹ CONG. RSCH. SERV., *supra* note 48.

⁷⁰ *Id.*

used to calculate a property's flood risk.⁷¹ More dynamic calculations that consider all relevant variables will likely be more accurate reflections of a property's flood risk.⁷²

Structures in designated Special Flood Hazard Areas will still require flood insurance regardless of individual flood risk.⁷³ Additionally, policyholders with repetitive loss properties will be responsible for costs more proportional to their high-risk properties, shifting their financial burden from those with lower risk properties.⁷⁴ The new calculation method will incorporate the replacement value cost of a structure by analyzing the zip code, square footage, and importantly the year the structure was built.⁷⁵

B. Reducing Premiums

The change in the risk calculation method is not the only means FEMA is utilizing to make flood insurance more affordable. FEMA's Risk Rating 2.0 will allow policyholders to reduce their premiums by implementing certain flood mitigation strategies.⁷⁶ For instance, policyholders' premiums can be lowered by community-wide flood mitigation efforts such as community rating system (CRS) and hazard mitigation assistance.⁷⁷ Participating in CRS requires communities to adopt flood mitigation strategies, including methods to protect floodplains and reduce the risk of erosion.⁷⁸ Communities who participate in CRS can reduce policyholders' premiums by 5-45%.⁷⁹

⁷¹ FEMA, *supra* note 48.

⁷² *See id.*

⁷³ CONG. RSCH. SERV., *supra* note 48.

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *6 Ways A Flood Insurance Rate can be Lower with Risk Rating 2.0 – Equity in Action*, FEMA, (Apr. 26, 2021), <https://www.fema.gov/blog/6-ways-flood-insurance-rate-can-be-lower-risk-rating-20-equity-action>.

⁷⁷ *Id.*

⁷⁸ CONG. RSCH. SERV., *supra* note 48.

⁷⁹ *Id.*

Likewise, if they can afford it, individual property owners can lower their premiums by improving their properties' flood mitigation capabilities, thereby lowering their risk of suffering severe harm from potential future floods.⁸⁰ These mitigation methods include: (1) elevating the home above flood level, (2) installing flood vents and openings within the structure, and (3) elevating electrical machinery.⁸¹ Flood vents are permanent openings, such as a garage or crawlspace, that allow water to freely flow in the event of a flood.⁸² Allowing water to flow freely through flood vents mitigates the risk of pressure build-up from standing water that would hurt the structure's foundation.⁸³ Raising electrical machinery above ground-level can prevent the damage or destruction of valuable equipment if a structure floods.⁸⁴ Adoption of any of these mitigation strategies independently will reduce a policyholder's premium, making flood insurance, at least for some policyholders, more affordable.⁸⁵

VI. Conclusion

FEMA's adoption of Risk Rating 2.0 is a necessary step to improve both the accuracy and equity of flood insurance. Although premiums will rise for some, other policyholders may experience lower rates under Risk Rating 2.0.

⁸⁰ FEMA, *supra* note 76.

⁸¹ *Id.*

⁸² *Protect Your Home from Flooding*, FEMA, https://www.fema.gov/sites/default/files/2020-10/low-cost-projects_protect-home-flood.pdf (last visited Jan. 10, 2022).

⁸³ *Id.*; FEMA, *supra* note 76.

⁸⁴ *Id.*; FEMA, *supra* note 76.

⁸⁵ FEMA, *supra* note 76.