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The Biggert-Waters Flood Insurance Reform Act of 2012: Temporarily Curtailed by the Homeowner Flood Insurance Act of 2014—A Respite to Forge an Enduring Correction to the National Flood Insurance Program Built on Virtuous Economic and Environmental Incentives

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The Biggert-Waters Flood Insurance Reform Act of
2012: Temporarily Curtailed by the Homeowner Flood
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Alexander B. McDonnell*

*One who knows the Mississippi will promptly aver—not aloud,
but to himself—that ten thousand River Commissions, with the
mines of the world at their back, cannot tame that lawless
stream, cannot curb it or confine it, cannot say to it, Go here,
or Go there, and make it obey; cannot save a shore which it
has sentenced; cannot bar its path with an obstruction which it
will not tear down, dance over, and laugh at.*

—Mark Twain¹

INTRODUCTION

Hurricane Sandy descended on New Jersey in late October of 2012. The densely populated region braced for record storm surges, flooding,² and power loss.³ More than \$7.9 billion in National Flood

* B.A., History (2007), DePaul University; M.B.A. (2015), Olin Business School at Washington University in St. Louis; J.D. (2015), Washington University School of Law. Thank you to my parents and brother who fostered my love for nature, taught me about equity, and who I know believe as I do—that prudent land-use must consider both. Thank you to Shannon for maintaining my health with nutritious juices and prophylactic elixirs, and for her unwavering support. Lastly, a special thank you to my friends and colleagues at the *Journal* for their expert contributions to this piece.

1. MARK TWAIN, LIFE ON THE MISSISSIPPI 234 (P.F. Collier, 1917) (1874).

2. See FED. EMERGENCY MGMT. AGENCY, NATIONAL FLOOD INSURANCE PROGRAM: ANSWERS TO QUESTIONS ABOUT THE NFIP 2 (2011), available at http://www.fema.gov/media-library-data/20130726-1438-20490-1905/f084_atq_11aug11.pdf [hereinafter ANSWERS] (“Flood is defined in the Standard Flood Insurance Policy (SFIP), in part, as: ‘A general and temporary

Insurance Program (NFIP)⁴ payments were eventually dispersed to policyholders affected by the storm.⁵ These policyholders benefited from an antiquated version of the four-decade-old, federally subsidized NFIP because their former premiums significantly underestimated the flood risk to their properties.⁶

The passage and looming implementation of the Biggert-Waters Flood Insurance Reform Act of 2012 (Biggert-Waters) altered the New Jersey residents' calculus.⁷ They needed to determine if they could afford to dwell in their rebuilt homes given near certain increases to flood insurance costs.⁸ Anticipated and observed growth of severe coastal storms and flood frequency from rising sea levels

condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties . . . from overflow of inland or tidal waters, from unusual and rapid accumulation or runoff of surface waters from any source, or from mudflow.”).

3. See *Hurricane Sandy Recovery Efforts One Year Later*, FED. EMERGENCY MGMT. AGENCY (Oct. 28, 2013), http://www.fema.gov/media-library-data/1382967173777-7411aa1b6d729a8a97e84dbba62083d8/FEMA%20Sandy%20One%20Year%20Fact%20Sheet_508.pdf [hereinafter *One Year*].

4. See Flood Insurance Reform Act, Pub. L. No. 108-264 (2004), National Flood Insurance Reform Act, Pub. L. No 103-325 (1994); Flood Disaster Protection Act, Pub. Law 93-234 (1973); Housing and Urban Development Act, Pub. Law 91-152 (1969); and Housing and Urban Development Act, 42 U.S.C. §4201-4128.

5. See *One Year*, *supra* note 3. More than 8.5 million people lost power, 23,000 needed temporary shelter, \$4.6 billion was spent for individual assistance and emergency work, and \$2.4 billion was distributed in the form of low-interest disaster loans. *Id.*

6. See The National Flood Insurance Act, 42 U.S.C. §4054(a) (2012). “The Administrator . . . shall make periodic payments to the [flood insurance pool] . . . in recognition of such reductions in chargeable premium rates under section 4015 of this title below estimated premium rates under section 4014(a)(1) of this title as are required in order to make flood insurance available on reasonable terms and conditions.” *Id.* See also Christopher Joyce, *Program Drowning in Debt. Who Will Pay?*, NAT’L PUB. RADIO (Jan. 1, 2014), <http://www.npr.org/2014/01/01/258706269/federal-flood-insurance-program-drowning-in-debt-who-will-pay>. “Millions of American property owners get flood insurance from the federal government, and a lot of them get a hefty discount...You can buy a FEMA flood insurance policy for about half the ‘actuarial’ rate private insurers would offer. (The actuarial rate more accurately reflects the value of a property at risk.)” *Id.*

7. Biggert-Waters Flood Insurance Reform Act of 2012, 126 Stat. 916 (codified as amended at 42 U.S.C. §§ 4001-4131 (2012)).

8. See Joyce, *supra* note 6. “[Over] the past decade, the government has paid out huge amounts of money after floods, and the flood insurance program is deeply in the red. Congress tried to fix that in 2012 by passing a law to raise insurance premiums. Now *that* move has created such uproar among property owners that Congress is trying to make the law it passed disappear.” *Id.*

further complicated their calculations of whether to remain.⁹ A growing number of Americans now share the same concerns as these New Jersey residents. Coastal populations in the United States grow at an alarming pace, doubling-down on already population-dense areas¹⁰ bolstered by the NFIP.¹¹

Congress passed the National Flood Insurance Act of 1968 to provide financial security for property owners in elevated flood-risk areas.¹² The law made otherwise risky development areas viable, and

9. See U.S. GLOBAL CHANGE RESEARCH PROGRAM, INTRODUCTION TO THIRD NATIONAL CLIMATE ASSESSMENT REPORT (2014), available at <http://nca2014.globalchange.gov/report/our-changing-climate/sea-level-rise>.

Scientists are working to narrow the range of sea level rise projections for this century . . . In the context of risk-based analysis, some decision makers may wish to use a wider range of scenarios, from 8 inches to 6.6 feet by 2100 . . . Nearly 5 million people in the U.S. live within 4 feet of the local high-tide level . . . In the next several decades, storm surges and high tides could combine with sea level rise and land subsidence to further increase flooding in many of these regions . . . Sea level rise will not stop in 2100 because the oceans take a very long time to respond to warmer conditions at the Earth's surface. Ocean waters will therefore continue to warm and sea level will continue to rise for many centuries at rates equal to or higher than that of the current century.

Id.

10. See NOAA, NATIONAL COASTAL POPULATION REPORT: POPULATION TRENDS FROM 1970 TO 2020, 4, Fig. 3, (2013), available at <http://stateofthecoast.noaa.gov/features/coastal-population-report.pdf>. "In 2010, 123.3 million people, or 39 percent of the nation's population lived in Coastal Shoreline Counties . . . the population in Coastal Shoreline Counties increased by 34.8 million people, a 39 percent increase, while the nation's entire population increased by 52 percent over the same time period." *Id.* While coastal population growth is outpaced by the national average, the data does not incorporate populations along rivers or consider population density. See NOAA, NOAA'S STATE OF THE COAST: COMMUNITIES: THE U.S. POPULATION LIVING AT THE COAST, (2013) available at <http://stateofthecoast.noaa.gov/population/welcome.html>. Coastal shoreline counties make-up ten percent of the U.S. land area (excluding Alaska). *Id.* However, U.S. coastal county population density is more than four times the U.S. average (446 persons per square mile (excluding Alaska), compared to the U.S. average of 105 persons per square mile). *Id.*

11. Joyce, *supra* note 6. "Millions of American property owners get flood insurance from the federal government, and a lot of them get a hefty discount...You can buy a FEMA flood insurance policy for about half the 'actuarial' rate private insurers would offer. (The actuarial rate more accurately reflects the value of a property at risk.)" *Id.*

12. National Flood Insurance Act of 1968, Pub. L. 90-448, 82 Stat. 572 (codified as amended at 42 U.S.C. §§ 4001-4131 (2012)).

The Congress finds that (1) from time to time flood disasters have created personal hardships and economic distress which have required unforeseen disaster relief measures and have placed an increasing burden on the Nation's resources; (2) despite the installation of preventative and protective works and the adoption of other public

stabilized or increased real property values in areas stricken with well above-average likelihoods for flood events.¹³

The NFIP, prior to Biggert-Waters, allowed certain homeowners to purchase flood insurance for “about half the ‘actuarial’ rate private insurers would offer.”¹⁴ Now, after decades of underpriced premiums, steady growth in the number of outstanding flood insurance policies, and more severe and frequent flood events the program is \$24 billion in debt (as of January 2014).¹⁵

Biggert-Waters sought to quell the NFIP’s swelling financial liability through premium adjustments, flood mapping enhancements,

programs designed to reduce losses caused by flood damage, these methods have not been sufficient to protect adequately against growing exposure to future flood losses; (3) as a matter of national policy, a reasonable method of sharing the risk of flood losses is through a program of flood insurance which can complement and encourage preventative and protective measures; and (3) if such a program is initiated and carried out gradually, it can be expanded as knowledge is gained and experience appraised, thus making flood insurance coverage available on reasonable terms and conditions to persons who have need for such protection.

Id. § 4001(a). *See also id.* § 4002(a)(5)-(6).

The Congress finds that—. . . (5) the Nation cannot afford the tragic losses of life caused annually by flood occurrences, nor the increasing losses of property suffered by flood victims, most of whom are still inadequately compensated despite the provision of costly disaster relief benefits; and (6) it is in the public interest for persons already living in flood-prone areas to have both an opportunity to purchase flood insurance and access to more adequate limits of coverage, so that they will be indemnified, for their losses in the event of future flood disasters.

Id. *See also id.* § 4012. “Priority for insurance for certain residential and church properties and business concerns.” *Id.*

13. *Id.* § 4012. Consider that the intrinsic value of an asset like real property equals the present value of its future cash flows. When revenue and discount rates remain constant but expenses rise (*e.g.*, flood insurance premiums increase) then cash flows are reduced and the value of the asset diminishes. *See also Joyce, supra* note 6. Federal subsidization of flood insurance premiums increases the value of properties in flood plains because it reduces the cost of ownership. Hence, undeveloped property that without the federal subsidy did not provide an adequate return could—given the reduced expenses associated with its ownership—become profitable enough to justify development.

14. *Joyce, supra* note 6.

15. *See id.* “FEMA has a problem. ‘We are \$24 billion in debt’ says Craig Fugate, who directs FEMA. Fugate delivered that bit of news to Congress’ House Financial Services Committee in Washington, D.C., recently, as he tried to make the case for raising insurance rates.” *Id.* *See also* Sarah Fox, *This is Adaptation: The Elimination of Subsidies Under the National Flood Insurance Program*, 39 COLUM. J. ENVTL. L. 205, 218 (2014). Unable to cover all claims from Hurricane Katrina, the NFIP secured increased borrowing authority from Congress to \$20.775 billion. After Hurricane Sandy, NFIP borrowing authority expanded to \$30 billion. *See id.*

and the potential incorporation of private reinsurance.¹⁶ Its passage in 2012 by a “do-nothing Congress” unable to find much common ground to address the federal government’s other fiscal difficulties¹⁷ hints at the significance of the bipartisan consensus behind the law at the time—and arguably—its necessity.¹⁸

Biggert-Waters harnessed political will only briefly, however. A movement emerged to delay and strip the NFIP of its most critical Biggert-Waters amendments—the removal of subsidized premiums. In 2014, President Obama signed into law the Homeowner Flood Insurance Affordability Act of 2014 (Affordability Act),¹⁹ indefinitely postponing the requirement to impose risk premiums for flood insurance that “accurately reflect the current risk of flood to such property.”²⁰ The US Senate voted sixty-seven to thirty-two to approve the Affordability Act.²¹ The new law was promoted by Representative Maxine Waters—the very legislator who sponsored Biggert-Waters.²² The White House was initially critical of the

16. See Eli Lehrer, *Strange Bedfellows: Smartsafer.org and the Biggert-Waters Act of 2012*, 23 DUKE ENVTL. L. & POL’Y F. 351, 352 (2012–2013) (describing the Biggert-Waters Flood Insurance Reform Act 2012).

17. See Chris Cillizza, *The Least Productive Congress Ever*, WASH. POST, July 17, 2013, <http://www.washingtonpost.com/blogs/the-fix/wp/2013/07/17/the-least-productive-congress-ever> (citing statistics that Congress in 2012 passed only 561 bills, “the lowest number since they began keeping these stats way back in 1947”).

18. Partisanship aside, consider the political and economic climates in 2012. The Great Recession, while it waned, still dominated attention among domestic political issues. *For Votes It’s Still the Economy*, PEW RES. CENTER (Sept. 24, 2012), <http://www.people-press.org/2012/09/24/for-voters-its-still-the-economy/>. Normally, most legislators in both houses of Congress would have balked at any bill to increase costs for Americans—lest it amount to a tax increase. Biggert-Waters however, emerged alive despite the significant premium increases.

19. See S. 1926, 113th Cong. (2014).

20. Moving Ahead for Progress in the 21st Century Act, Pub. L. No. 112-141, § 100207, 126 Stat. 405, 919 (2012). [42 U.S.C. § 4015(h) (2012).]

21. See S. 1926, 113th Cong. (2014). See also Natasha Lindstrom, *Senate Bill Delays Flood Insurance Hikes*, THE INTELLIGENCER (Jan. 31, 2014), http://www.theintell.com/news/local/u-s-senate-bill-delays-flood-insurance-hikes/article_27a3269d-f490-5e73-a548-3ca67ec2d2c9.html. Senators Robert Menendez, Democrat from New Jersey, and Johnny Isakson, Republican from Georgia, wrote the Act. See *id.*

22. See Coral Davenport, *Popular Flood Insurance Law Is Target of Both Political Parties*, N.Y. TIMES (Jan. 28, 2014), <http://www.nytimes.com/2014/01/29/us/politics/popular-flood-insurance-law-is-target-of-both-political-parties.html>. “Although the effort there is being led by Ms. Waters, she already has more than 180 co-sponsors from both parties, and House Speaker John A. Boehner, Republican of Ohio, indicated that G.O.P. leadership may consider the effort.” *Id.*

Affordability Act and asserted that it would further degrade the NFIP fiscal position and place into question the federal government's ability to pay future claims.²³ Nonetheless, in the end, political pressure overwhelmed the economic and environmental imperatives furthered by Biggert-Waters, now dead in the water.

Political bombardment of the Biggert-Waters amendments and the recent implementation of the Affordability Act offers a chance to consider a more thoughtful approach to the NFIP.²⁴ Premiums that reflect actual flood risk are popular among fiscal conservatives, free-market proponents, and environmentalists alike, but the imposition of significant premium increases on property owners—even gradually over five years—chafes at morality, let alone economic prudence.²⁵

The question is: How can Congress preserve local communities that arose or expanded under an anachronistic NFIP and also gracefully cease misguided incentives imbedded in risk-ignorant NFIP flood insurance prices, encourage real estate development that incorporates appropriate economic and environmental flood risk considerations, lower NFIP debt, and control for risk in the nation's fisc?

This Note proposes that Congress should reverse the Affordability Act's drastic gutting of Biggert-Waters and pass omnibus legislation

23. *See id.*

24. *See* Joyce, *supra* note 6. Even the namesake of Biggert-Waters, Representative Maxine Waters of California, has blasted the NFIP amendments.

Waters described her law as "well-meaning," and then scolded Fugate, FEMA Administrator, for not coming to Congress earlier to explain just how high the premium increases would go (though they were specifically called for in the Biggert-Waters Act). "Let me just say," she told Fugate, "all of the harm that has been caused to thousands of people across the country—[who] are calling, [who] are going to lose their homes, [who] are placed in this position—is just unconscionable."

Id.

25. *See* Fox, *supra* note 15, at 211. Fox reflects on the difficulty with discontinuation of a widespread public subsidy.

People were able to settle in sprawling suburbs because of the low cost of transportation, were enticed to move to the desert based on an artificially low price of water, and made choices to live in coastal communities because of guarantees provided by subsidized flood insurance. Those choices are likely to come with a sense of entitlement to the continuation of these subsidies in perpetuity, and shifts in policy that force changes in lifestyle are likely to be met with an emotional response.

Id.

that reforms the NFIP through: (1) more gradual implementation of premium increases, (2) cessation of federal mortgage insurance for mortgages in high flood risk areas, and (3) the creation of a land purchase tax credit to property owners who proactively relocate.

I. HISTORY OF NATIONAL FLOOD INSURANCE POLICY

A. *Path to the NFIP*

American notions of human influence on the behavior of waterways are centuries old.²⁶ Early public attempts to limit flood risk centered on the role of forests in the preservation of natural hydrologic cycles and as buffers to watershed fluctuations and human activity.²⁷ US policy in the early twentieth century—as reflected by the Weeks Act²⁸—seemed to favor resilience techniques over more expensive and drastic resistance methods that often involve infrastructure improvements.²⁹ President Franklin Roosevelt charged

26. See Douglas Helms, *Legacy of the Flood Control Act of 1936*, in *THE FLOOD CONTROL CHALLENGE: PAST, PRESENT, AND FUTURE* 67 (Rosen, Howard & Martin Reuss eds., 1988), available at http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/about/history/?cid=nrcs143_010953. Observations of the effects that deforestation for agricultural purposes had on riparian areas in Seventeenth Century New England were put forth by colonial naturalist John Bartram who Hems quotes, “wear to ye sand & clay which it bears away with ye swift current down to brooks & rivers whose banks it overflows.” *Id.* (quoting HUGH HAMMOND BENNETT, *SOIL CONSERVATION* 869 (MCGRAW-HILL BOOK COMPANY, 1939).

27. See Helms, *supra* note 26, at 67.

28. Weeks Act, Pub. L. No. 85-862, 36 Stat. 961 (1911); *The Weeks Act*, U.S. FOREST SERVICE HISTORY, <http://www.foresthistor.org/ASPNET/Policy/WeeksAct/index.aspx> (last updated Mar. 1, 2013). President Taft signed the Weeks Act into law in 1911. *Id.* The law, “permitted the federal government to purchase private land in order to protect the headwaters of rivers and watersheds in the eastern United States . . . [and is described as] one of the most successful pieces of conservation legislation in U.S. history.” *Id.*

29. *The Weeks Act*, *supra* note 28. Generally speaking, there are three approaches to flood risk—avoidance (e.g., not building in a floodplain or rebuilding after a flood disaster), resilience (e.g., allowing water to flow naturally and design structures to compliment this), and resistance (e.g., preventing or significantly altering natural water flow to allow for existence of a structure). See generally, ASS’N OF BRITISH INSURERS, *A GUIDE TO RESISTANT AND RESILIENT REPAIR AFTER A FLOOD* (2009), available at <https://www.abi.org.uk/Insurance-and-savings/Topics-and-issues/~media/0837E8F0B35147D59A92D0A7231A572F.ashx>. For a comparison of United States and Dutch flood policy and discussion about disaster avoidance see Andrew Higgins, *Lessons for U.S. from a Flood-Prone Land*, N.Y. TIMES (Nov. 14, 2012), <http://www.nytimes.com/2012/11/15/world/europe/netherlands-sets-model-of-flood-prevention.html> (“The Dutch ‘way of thinking is completely different from the U.S.’, where disaster relief generally takes precedence over disaster avoidance, said Wim Kuijken, the Dutch government’s

the Civilian Conservation Corps (CCC) to apply forestry and soil erosion efforts to “broad areas rather than . . . [an] individual parcel of land . . . [revealing] his faith in the value of forests in reducing floods.”³⁰

New Deal politics, economics, scientific disagreements, and timely spring floods moved President Roosevelt from a preference for resilience and avoidance methods of flood management to one of resistance.³¹ He signed the Flood Control Act of 1936³² “enabl[ing] the federal government to build dams and levees.”³³ For several decades thereafter, the federal government’s proactive line of defense against flood risk for coastal and riparian dwellers and businesses included crudely thought-out dams, levees, and seawalls.³⁴ Levees

senior official for water control policy. ‘The U.S. is excellent at disaster management,’ but ‘working to avoid disaster is completely different from working after a disaster.’”) and ABHAS K JHA, ROBIN BLOCH, & JESSICA LAMOND, *CITIES AND FLOODING: A GUIDE TO INTEGRATED URBAN FLOOD RISK MANAGEMENT FOR THE 21ST CENTURY*, 32 (2012). Flood avoidance is categorized by some as a “Non-structural” measure that relies on accurate flood forecasting. An example of avoidance flood technique includes land use planning and land use regulations designed to discourage new construction in high-risk flood areas.

30. See Helms, *supra* note 26.

31. See *id.* “The legislative journey of the Flood Control Act of 1936 began in response to the spring floods, but emerged as a national policy on flood control.” *Id.*

32. Flood Control Act of 1936, Pub. L. No. 74-738, § 1. President Franklin Roosevelt signed the act into law and affirmed Congressional declaration of policy which states in part:

[D]estructive floods upon the rivers of the United States, upsetting orderly processes and causing loss of life and property, including the erosion of lands . . . constitute a menace to national welfare . . . that the Federal Government should improve or participate in the improvement of navigable waters or their tributaries, including watersheds thereof, for flood-control purposes if the benefits to whomsoever they may accrue are in excess of the estimated costs, and if the lives and social security of people are otherwise adversely affected.

Id.

33. Beth Davidson, *How Quickly We Forget: The National Flood Insurance Program and Floodplain Development in Missouri*, 19 WASH. U. J.L. & POL’Y 365, 366 (2005).

34. See *id.* at 366–67. “Despite the government’s investment of billions of dollars into flood control projects, flood damages continued to rise. In the 1950s, when the government first considered flood insurance, it was clear that private industry could not provide coverage and retain a profit.” Moreover, “the costs of building and maintaining structural measures, such as dams and levees, were increasing, as were losses from flooding.” *Id.* at 367. Yet the structural measures also “created a false sense of security that led to development in flood-prone areas” and upon failure “caused more damage than if the structural measures had never existed.” *Id.* See also Fox, *supra* note 15, at 213 (The Flood Control Act of 1936 “authorized the construction of more than 200 specific flood control projects . . . control measures tended to

and dams were increasingly relied on to provide stability in flood-prone areas.³⁵ These structural measures contributed greatly to development in floodplains and to the damage caused by flood events.³⁶ Furthermore, “[generally], disaster assistance was the only financial recourse for flood victims” at that time.³⁷

“Billion Dollar Betsy”, a category three hurricane,³⁸ crashed into the Louisiana coast in September 1965.³⁹ The hurricane killed

exacerbate the problems that they were intended to solve by fostering misplaced confidence in the safety of living in the floodplain and tampering with the operation of the ecosystem.”).

35. See *Davidson*, *supra* note 33, at 366–67. See also *supra* text accompanying note 26. See JOSEPH ARNOLD, OFFICE OF HISTORY, U.S. ARMY CORPS OF ENG’RS., THE EVOLUTION OF THE 1936 FLOOD CONTROL ACT (1988), available at http://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/EP_870-1-29.pdf. (“The [Flood Control Act of 1936] authorized hundreds of flood control projects and established policies that endure to this day. Moreover, it dramatically increased the Corps’ work load, forcing the agency to develop new procedures and offices”). See also *Higgins*, *supra* note 29.

36. See *Davidson*, *supra* note 33, at 365–67. To make matters worse, if the levees failed, “flooding caused more damage than if the structural measures had never existed, increasing the costs of floods.” *Id.* at 367; see also *id.* (quoting Oliver A. Houck, *Rising Water: The National Flood Insurance Program and Louisiana*, 60 TUL. L. REV. 61, 67 (1985) (“If investments have been placed below a dam or behind a levee, relying on their protection, the losses will be greater than ever. Another limitation . . . is that constriction of the floodplain in one area will inevitably increase water stages somewhere else. The net result has been that [e]fforts at control may, in some cases, in the end produce results worse than they were intended to cure.”)).

37. *Davidson*, *supra* note 33, at 366; See also Fox, *supra* note 15, at 213 (discussing the general unavailability of private flood insurance prior to the NFIP, and explaining that “local, state, and especially, the federal government bore the burden of providing flood victims with disaster relief funds . . . [which] ‘placed an increasing burden on the Nation’s resources.’” (quoting 42 U.S.C. § 4001 (a)(1) (1988)).

38. See TIMOTHY SCHOTT ET AL., NAT’L WEATHER SER., THE SAFFIR-SIMPSON HURRICANE WIND SCALE 1 (2012), available at <http://www.nhc.noaa.gov/pdf/sshs.pdf>. The Saffir-Simpson Hurricane Wind Scale rates hurricanes between one and five based on wind speed at particular points in time. *Id.* Category Three Hurricanes cause “devastating damage” with wind speeds of 111–129 miles per hour. *Id.* at 3.

There is a high risk of injury or death to people . . . [n]early all older (pre-1994) mobile homes will be destroyed . . . [p]oorly constructed frame homes can be destroyed, [w]ell built frame homes can experience major damage . . . [t]here will be a high percentage of roof covering and siding damage to apartment buildings and industrial buildings . . . [c]omplete failure of older metal buildings is possible and unreinforced masonry buildings can collapse . . . [m]any trees will be snapped or uprooted [and] [e]lectricity and water will be unavailable for several days to a few weeks after the storm passes.

Id.

39. J. SCOTT HOLLADAY & JASON A. SCHWARTZ, INST. FOR POLICY INTEGRITY: NYU SCH. OF LAW, *FLOODING THE MARKET: THE DISTRIBUTIONAL CONSEQUENCES OF THE NFIP* 1

seventy-five people and caused destruction on the order of \$1 billion.⁴⁰ Private flood insurance was generally unavailable to property owners prior to the hurricane, so the federal government and Louisiana residents were forced to bear the financial burden for recovery.⁴¹

Immediately following Hurricane Betsy, the federal government considered new methods to insulate property owners and federal disaster relief funds from natural catastrophes. Congress passed the Southeast Hurricane Disaster Relief Act⁴² after Betsy in 1965 to furnish disaster relief for the affected region, and notably, to consider the utility of prophylactic tools to reduce the financial burden posed by flood recovery—including the provision of insurance.⁴³

The private insurance industry was, and still is, both unwilling and unequipped to provide flood insurance.⁴⁴ Risk diversification, or risk pooling, by way of “the law of large numbers” forms the backbone of an insurance provider.⁴⁵ Floods, because of their catastrophic and

(Policy Brief No. 7, Apr. 2010), available at <http://policyintegrity.org/documents/FloodingtheMarket.pdf>

40. *Id.* See also Fox, *supra* note 15, at 213 (citing Tarak Anada, Comment, *The Perfect Storm, an Imperfect Response, and a Sovereign Shield: Can Hurricane Katrina Victims Bring Negligence Claims Against the Government?*, 35 PEPP. L. REV. 279, 285 n.32 (2008) (claiming Hurricane Betsy killed 81, injured in excess of 17,600, and displaced 250,000 residents)).

41. See HOLLADAY & SCHWARTZ, *supra* note 39, at 1.

42. Southeast Hurricane Disaster Relief Act, Pub. L. No. 89-339, 79 Stat. 1301-02 (1965).

43. See Fox, *supra* note 15, at 213–14.

44. See Davidson, *supra* note 33, at 367 n.10 (quoting NATIONAL FLOOD INSURANCE PROGRAM: PROGRAM DESCRIPTION 1 (2002), available at <http://www.fema.gov/fima/nfip.shtm>) (The private flood insurance market would not develop “primarily because of the catastrophic nature of flooding and the inability to develop an actuarial rate structure which could adequately reflect the risk to which flood-prone properties are exposed.”); see also MARK S. DORFMAN & DAVID A. CATHER, INTRODUCTION TO RISK MANAGEMENT & INSURANCE 29 (6th ed.) (explaining that private insurance companies prefer not to insure catastrophic, non-diversifiable events like floods). Because of their aversion to catastrophic, non-diversifiable events, and given the like, nature of flood events, the private insurance industry may never enter the market without public subsidy. Theoretically, however, private insurers will insure most events if premiums and deductibles reach high enough levels. *Id.*

45. See DORFMAN & CATHER, *supra* note 44, at 29–30.

In its simplest form, risk diversification is a process in which the financial losses of a few members in a group are spread across a much larger number of people in the group who have not suffered a loss . . . Crucial to the success of such risk-bearing arrangements is making sure that there are a large number of clients to share the risk, and that the risk is not likely to cause a large number of group members to suffer a loss at the same time and thus financially overwhelm the group . . . Most common types of

concentrated impact, are considered non-diversifiable events and are thereby considered financially imprudent to insure against.⁴⁶

In 1968, Congress applied what it learned from the Southeast Hurricane Disaster Relief Act. It called on the federal government to step into the role private insurers would not, and offered its citizens flood insurance through the NFIP.⁴⁷ The flood loss insurance was made available to—among others—homeowners, businesses, and renters.⁴⁸

Congress wanted to expand flood insurance coverage to more Americans, but likely did not anticipate the quagmire of financial and ecological problems the program would rouse.⁴⁹ They believed the legislation was balanced and that over time, risk would be

insurance, such as auto and life insurance, offer protection from risks well suited to diversification via risk pooling because the loss usually affects only one person, not a large number of clients in the same risk pool. On the other hand . . . catastrophic risks . . . [such as] floods, wars and unemployment—tend to be non-diversifiable risks for insurers because they often result in financial losses for a large number of people in the risk pool at the same time. Private insurers rarely offer insurance for non-diversifiable risk, recognizing that their financial strength could be harmed if such a catastrophic loss occurred.

Id. at 5.

46. *See id.* at 29; *see also* Fox, *supra* note 15, at 213 (“The combination of high monetary losses . . . and inaccurate risk data makes flood insurance financially infeasible for many providers. Furthermore, those who purchase flood insurance tend to be those most at risk of flooding, and insurance companies are subjected to a large volume of claims from any given flood event.”).

47. *See* National Flood Insurance Act of 1968, Pub. L. 90-448, 82 Stat. 572 (codified as amended at 42 U.S.C. § 4001(a) (2012)) (“The Congress finds that (1) from time to time flood disasters have created personal hardships and economic distress which have required unforeseen disaster relief measures . . . (3) as a matter of national policy, a reasonable method of sharing the risk of flood losses is through a program of flood insurance . . .”).

48. *See id.* § 4012(a)-(b) (“In carrying out the flood insurance program, the Director shall afford a priority to making flood insurance available to cover residential properties which are designed for the occupancy of from one to four families, church properties, and business properties which are owned or leased and operated by small business concerns.”).

49. *See id.* U.S.C. § 4002(b)(1) (“The purpose of this Act, therefore, is to—(1) substantially increase the limits of coverage authorized under the national flood insurance program.”).

appropriately delegated.⁵⁰ Furthermore, Congress intended for the NFIP to curtail development in flood-prone areas.⁵¹

The NFIP has failed to realize its goals.⁵² The program's primary flaw thus far is the mandate to underprice premiums and otherwise ignore actuarial data, *i.e.*, the likelihood a natural disaster would occur or the expected value of a flood policy claim.⁵³

B. NFIP Structure

NFIP oversight falls to the Federal Insurance and Mitigation Administration (FIMA). FIMA is a branch of the Federal Emergency Management Agency (FEMA), which in turn is a subset of the Department of Homeland Security.⁵⁴ FIMA is sub-divided into insurance and mitigation functions.⁵⁵

For property owners to qualify for NFIP coverage, their locality must participate in the NFIP and develop "floodplain management policies to manage floodwaters and reduce risk to property."⁵⁶ Participating communities must also create flood insurance rate maps (FIRMs) that identify special flood hazard areas, or one-hundred-year

50. *See id.* § 4001(d) ("It is therefore the purpose of this chapter to (1) authorize a flood insurance program by means of which flood insurance, over a period of time, can be made available on a nationwide basis through the cooperative efforts of the Federal Government and the private insurance industry, and (2) provide flexibility in the program so that such flood insurance may be based on workable methods of pooling risks, minimizing costs, and distributing burdens equitably among those who will be protected by flood insurance and the general public.").

51. *See id.* § 4001(e) ("It is the further purpose of this chapter to (1) encourage State and local governments to make appropriate land use adjustments to constrict the development of land which is exposed to flood damage and minimize damage caused by flood losses, (2) guide the development of proposed future construction, where practicable, away from locations which are threatened by flood hazards . . . (5) authorize continuing studies of flood hazards in order to provide for a constant reappraisal of the flood insurance program and its effect on land use requirements.").

52. *See Davidson, supra* note 33, at 366.

53. Lehrer, *supra* note 16, at 352. *Also see Fox supra* note 15, at 208. "[T]he NFIP...generates high costs for the federal government, mainly because premiums do not reflect actual flood risk and because many policyholders receive subsidized rates. These federal subsidies effectively underwrite the cost of coastal development. . . ." *Id.*

54. *See FEMA Organizational Chart*, FED. EMERGENCY MGMT. AGENCY, http://www.fema.gov/media-library-data/1422480349134-95c3a7f4e006fc39dd19d20c2c_067325/FEMA_Org_Chart_1-26-2015_508.pdf (last updated Jan. 26, 2015).

55. *Id.*

56. HOLLADAY & SCHWARTZ, *supra* note 39, at 1.

floodplains (SFHAs).⁵⁷ Federal funds may not be applied for the purpose of furthering construction in SFHAs without flood insurance.⁵⁸ Further, flood insurance is required for properties within SFHAs that have a financial relationship or receive some form of assistance from a federal body.⁵⁹ As of 2003, nearly 20,000 communities across the United States and in Puerto Rico and the Virgin Islands participated in the program.⁶⁰ FEMA issued 5,629,396 flood insurance policies in 2012.⁶¹

NFIP coverage for FIRM areas—known as participating communities—is contingent on several requirements that are enforced by the participating community through its building standards.⁶² The FEMA administrator estimates these construction

57. See TETRA TECH, KITTITAS COUNTY HAZARD MITIGATION PLAN VOLUME 1: PLANNING-AREA-WIDE ELEMENTS 10-1 (2012), available at http://co.kittitas.wa.us/public-works/hazard-mitigation-plan/documents/KittitasCoHMP_Vol1_Final_complete.pdf.

The frequency and severity of flooding are measured using a discharge probability, which is a statistical tool used to define the probability that a certain river discharge (flow) level will be equaled or exceeded within a given year. Flood studies use historical records to determine the probability of occurrence for the different discharge levels. The flood frequency equals 100 divided by the discharge probability. For example, the 100-year discharge has a 1-percent chance of being equaled or exceeded in any given year...The extent of flooding associated with a 1-percent annual probability of occurrence (the base flood or 100-year flood) is used as the regulatory boundary by many agencies.

Id.

58. 42 U.S.C. § 4106 (2012).

59. ANSWERS, *supra* note 2, at 11.

60. *Id.* at 3. “A community, as defined for the NFIP’s purposes, is any state, area, or political subdivision; any authorized tribal organization, or Alaska native village; or authorized native organization that has the authority to adopt and enforce floodplain management ordinances for the area under its jurisdiction.” *Id.* at 3. See also *Flood Insurance: Challenges Facing the National Flood Insurance Program Hearing Before the Subcomm. on Housing and Community Opportunity, Comm. on Financial Services, H. of Representatives*, 108th Cong. 3 n.1 (2003) (statement of JayEtta Z. Hecker, Director Physical Infrastructure).

61. See Fox, *supra* note 15, at 214.

62. *Id.* “[The] lowest floor of the structure be elevated to or above the base flood level—the highest elevation at which there is a 1-percent chance of flooding in a given year.” *Id.* See also DEPT. OF HOMELAND SEC., FED. EMERGENCY MGMT. AGENCY, NAT’L FLOOD INS. FUND, FISCAL YEAR 2013 CONGRESSIONAL JUSTIFICATION 2 (2012), available at https://www.fema.gov/pdf/about/budget/11h_fema_nfi_fund_dhs_fy13_cj.pdf [hereinafter FISCAL YEAR 2013 CONGRESSIONAL JUSTIFICATION].

By law, FEMA can only provide flood insurance to those States or communities that adopt and vigorously enforce floodplain management regulations that meet or exceed minimum NFIP requirements. Communities incorporate NFIP requirements into their

requirements save approximately \$1.7 billion in annual avoided flood damage.⁶³ The NFIP incentivizes local mitigation efforts through a system of discounts that a community may pass on to its citizens through a community rating system (CRS).⁶⁴ A CRS “encourages adoption of more effective measures that protect natural and beneficial floodplain functions” in exchange for “credits on premium rates for flood insurance coverage . . . based on the estimated reduction in flood and erosion damage risks.”⁶⁵ The NFIP also provides funds for certain mitigation efforts.⁶⁶ Flood mitigation components of the NFIP are small by financial comparison to its insurance element, but they highly valued regulatory levers for flood management.⁶⁷

zoning codes, subdivision ordinances, and/or building codes, or they adopt special purpose floodplain management ordinances. NFIP requirements include: [1] Elevation of new and substantially improved residential structures above the base flood level. [2] Elevation or dry floodproofing (made watertight) of new or substantially improved nonresidential structures. [3] Regulation of development in floodways, the central portion of a riverine floodplain needed to carry deeper and faster moving water, to ensure that there are no increases in upstream elevations. [4] Additional requirements to protect buildings in coastal areas from the impacts of waves, high velocity, and storm surge.

Id.

63. See Fox, *supra* note 15, at 214. “These requirements are the most cost-effective way to reduce the flood risk to new buildings and infrastructure. Structures built to NFIP standards experience 80 percent less damage than structures not built to these standards, and have resulted in \$1.7 billion per year in reduced flood losses.” *Id.*

64. See 42 U.S.C. § 4022 (b)(1)-(3) (2012).

65. 42 U.S.C. § 4022 (b) (2012). Also see Fox, *supra* note 15, at 215–16. “The CRS is a voluntary incentive system that offers community-wide discounts on insurance premiums in exchange for additional flood mitigation measures. A community’s prevention efforts are rated according to the CRS scale, and communities may earn discounts of up to 45% for SFHA, or 10% for non-SFHA.” *Id.*

66. See Davidson, *supra* note 33, at 374 n.69 (discussing 44 C.F.R. §§ 201.1.6, Flood Mitigation Assistance (FMA) Program, <http://www.fema.gov/fima/fima.shtm> (last visited Sept. 2, 2005)). “Grants are available for administration, planning, technical assistance, and implementation of mitigation programs.” *Id.*

67. See FISCAL YEAR 2013 CONGRESSIONAL JUSTIFICATION *supra* note 62, at 1. “Currently the NFIP insures more than 5.5 million residential and commercial policyholders totaling approximately \$1.2 trillion insurance coverage.” *Id.* Compare to the “\$1.7 billion in flood-related losses avoided annually” from “flood hazard grant programs and floodplain management efforts.” *Id.* More specifically, the FEMA fiscal year 2013 request for Grants/Subsidies/Contributions was \$115,424,000 and \$1,401,715,000 for Insurance Claims and Indemnity. *Id.* at 22. See also ABHAS K JHA, ROBIN BLOCH, & JESSICA LAMOND, *supra* note 29, at 311 (discussing land use planning).

C. NFIP Reforms & Biggert-Waters Flood Insurance Reform Act of 2012

The NFIP's inadequacies began to emerge shortly after its passage.⁶⁸ US population growth and rapid suburbanization in flood risk areas necessitated Congressional action to amend the NFIP to avoid potentially dire consequences for both the program's budget and communities where population growth and development was incentivized by masking true flood risk.⁶⁹ Congress passed its first NFIP correction with the Flood Disaster Protection Act of 1973.⁷⁰ The 1973 act made the purchase of flood insurance mandatory for buildings within SFHAs.⁷¹ Then, on the coattails of the Great Mississippi Flood of 1993, Congress passed the National Flood Insurance Reform Act of 1994, which further expanded the

Two of the most effective regulatory systems are land use planning and the finance and insurance sector. . . Both seek to control unregulated development of the floodplain, the former by land use plans and development frameworks to guide and control development and the latter by imposing minimum design standards for finance and insurance provision.

Id.

68. See Bruce W. Merwin, *The National Flood Insurance Program—Future Use of the Flood Plain?*, 1 URB. L. REV. 135, 136, (1977). A flood insurance scholar at the time noted that “flood losses are increasing substantially as a result of the accelerating development and concentration of people in flood hazard areas.” *Id.*

69. Flood insurance premiums that discount the true cost of a flood event for a landowner increase the value of the discounted parcel over its otherwise un-subsidized premium value by virtue of the discounted expense that the landowner would otherwise incur. That parcel's reduced flood expense increases its viability for development relative to a parcel without the benefit of the subsidy. The value of the subsidized flood-risk is baked into the value of the parcel. For editorial commentary on US development patterns and policy, see James Howard Kunstler, *Home From Nowhere*, THE ATLANTIC (Sept. 1, 1996, 12:00 AM), <http://www.theatlantic.com/magazine/archive/1996/09/home-from-nowhere/376664/>.

Human settlements are like living organisms. They must grow, and they will change. But we can decide on the nature of that growth—on the quality and the character of it—and where it ought to go. We don't have to scatter the building blocks of our civic life all over the countryside, destroying our towns and ruining farmland.

Id.

70. Flood Disaster Protection Act of 1973, Pub. L. No. 93-234, § 4001, 87 Stat. 975 (1968) (amended 1973).

71. *Id.*

requirement to purchase flood insurance and bolstered federal flood mitigation efforts.⁷²

Congress acted again in 2004 with the passage of the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004.⁷³ The act emphasized improved mitigation efforts—and possible relocation—for property owners who suffered from repeat flood incidents.⁷⁴ The 2004 act is notable for its requirement to increase premiums in situations where owners fail to accept assistance for mitigation of repetitively flooded property.⁷⁵

In 2010, as Congress continued to contemplate reformation of the NFIP, evidence mounted that the program was unsustainable.⁷⁶ The NFIP was incapable of charging “market rates, hold[ing] reserve funds, or purchas[ing] reinsurance,” making the possibility of financial independence, let alone solvency, unlikely.⁷⁷ Below-market NFIP insurance rates triggered new environmental externalities and shifted flood risk otherwise formerly held by those who owned and or developed property in ecologically sensitive and flood-prone areas to the federal government and taxpayers.⁷⁸ Furthermore, while environmental damage and financial risk was “widely distributed to

72. See Riegle Community Development and Regulator Improvement Act of 1994, P.L. 103-325, § 4001, Stat. 511, available at http://www.fema.gov/media-library-data/20130726-1545-20490-4986/frm_rf94.pdf.

73. Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004, Pub. L. No. 108-264, § 4001, Stat. 712.

74. See *id.* The act’s preamble noted that, “approximately 48,000 properties currently insured under the program have experienced, within a 10-year period, 2 or more flood losses where each such loss exceeds the amount \$1000.” *Id.* § 2(3); see also *id.* § 102(g) (“A State or community may take action under subsection (c)(2) to purchase a severe repetitive loss property.”).

75. See *id.* § 102(h)(1). See also *id.* § 102(a) (directing FEMA to provide funds for mitigation activities that include “elevation, relocation, demolition, and floodproofing of structures, and minor physical localized flood control projects, and the demolition and rebuilding of properties to at least Base Flood Elevation . . .”).

76. See ANSWERS, *supra* note 2, at 3. (“[T]he sale of flood insurance under the NFIP is subject to FEMA rules and regulations. FEMA has elected to have state-licensed insurance companies’ agents and brokers sell flood insurance to consumers.”); see also HOLLADAY & SCHWARTZ, *supra* note 39, at i (“Because of its below-market insurance rates and the intense hurricane-related floods in recent years, the NFIP has accrued a substantial deficit: \$19 billion. As currently structured, the program will not be able to repay this debt.”).

77. See HOLLADAY & SCHWARTZ, *supra* note 39, at i.

78. *Id.* at 3.

taxpayers,” the benefits largely fell to Gulf Coast states and owners of vacation residences.⁷⁹

The share of Americans who benefit from NFIP flood policy also experience disparate exposure to natural disasters. Hurricane Sandy caused nearly \$65 billion in damage to the East Coast.⁸⁰ With similarly staggering numbers, in 2005, Hurricane Katrina and other major storms cost an estimated \$20 billion.⁸¹ These storms were outliers, but they illustrate the cataclysmic cost of rebuilding an area affected by just one natural event along with the problems posed by discounting flood risk.⁸²

An inadequate premium revenue stream to the NFIP risk reserve does not excuse the federal government from paying claims to policyholders. Further, because of other legislation like the Stafford Act—which provides federal funds to state and local governments to perform infrastructure repair—the ultimate result is additional federal debt set forth to promote unwise land use.⁸³

79. *Id.* at i. See also Vishaan Chakrabarti, *America's Urban Future*, N.Y. TIMES (Apr. 16, 2014), http://www.nytimes.com/2014/04/17/opinion/americas-urban-future.html?_r=0 (providing a corollary to the imbalance of flood insurance benefits reaped from a small segment of coastal and river dwellers.).

A staggering 90 percent of our gross domestic product and 86 percent of our jobs are generated in 3 percent of the continental United States, namely our cities . . . Unfortunately, our state and federal policies continue to encourage the opposite. Sprawl didn't just happen—it is a direct consequence of 'big government.' Cities don't keep the wealth they generate: Our major cities send billions more in tax dollars to the suburbs, via state and federal coffers, than they get back . . . I am not arguing that people should not live in suburbs. But we shouldn't pay them to do so . . .

Id. Chakrabarti's key point ties into the argument against non-risk adjusted flood insurance incentives and the notion that the federal government should not “pay” for development in flood prone areas. *Id.*

80. Doyle Rice, *Hurricane Sandy, Drought Cost U.S. \$100 billion*, USA TODAY (Jan. 25, 2013, 8:34 AM), <http://www.usatoday.com/story/weather/2013/01/24/global-disaster-report-sandy-drought/1862201/>.

81. HOLLADAY & SCHWARTZ, *supra* note 39, at 1.

82. *Id.* at 2 (“[A] single flood event can affect a great number of covered properties, none of which have paid insurance premiums at a market rate.”).

83. Justin Gillis & Felicity Barringer, *As Coasts Rebuild and U.S. Pays, Repeatedly, the Critics Ask Why*, N.Y. TIMES (Nov. 18, 2012), <http://www.nytimes.com/2012/11/19/science/earth/as-coasts-rebuild-and-us-pays-again-critics-stop-to-ask-why.html?pagewanted=all>. The federal government also contributes relief funds to flood disaster areas by way of the Stafford Act. *Id.* These funds however go directly to state and local governments to repair infrastructure. *Id.* “Experts say the law is at least as important as the flood program in motivating reconstruction after storms” because it “shields local and state governments from the full

Furthermore, a continuing source of funds to rebuild after flood events coupled with improperly adjusted premiums has helped foster a difficult-to-break attachment to high-risk land in certain locales. According to one resident of Dauphin Island, Alabama, “[w]e’re Americans, damn it. Retreat is a dirty word.”⁸⁴ Between 1988 and 2012 residents of Dauphin Island paid just under 13 percent in flood premiums compared to what they received in NFIP payments to rebuild after floods.⁸⁵ Despite repeated flooding of the small island, some residents paid as little as \$700 annually, while the highest premiums were approximately \$3,000 a year.⁸⁶

The goal of Biggert-Waters was to deter continued reconstruction in places like Dauphin Island. Politically, the law “was a breakthrough in one sense . . . both traditionally conservative free-market groups and traditionally progressive environmental groups supported [it] enthusiastically.”⁸⁷ The act passed with bipartisan support in 2012, just months before Hurricane Sandy hit.⁸⁸

Congress primarily approved Biggert-Waters to allow FEMA to mandate “more realistic insurance rates that closely reflect “the rates private companies would charge.”⁸⁹ Specifically, Biggert-Waters raised “insurance premiums for some ‘non-conforming properties’ that [had] been provided flood insurance at below-market rates since

implications of their decisions on land use.” *Id.* According to a Government Accountability Office report, the federal government committed more than \$80 billion in Stafford Act funds from 2004 to 2011. *Id.*

84. *Id.*

85. *Id.* (“Dauphin Island property owners have paid only \$9.3 million in premiums to the national flood insurance program, but they have received \$72.2 million in payments for their damaged homes.”).

86. *Id.* Ironically, one of the residents of Dauphin Island interviewed for this piece, remarked at his strong emotional attachment to the island’s natural elements, stating “There’s a lot of wildlife and a lot of bird life . . . [y]ou can sit on the porch and watch the dolphins swim past your house.” *Id.* Surely most ecologists would agree that the Dauphin Island natural habitat would improve absent continued human habituation and repeated construction associated with flood recovery. *Id.*

87. Lehrer, *supra* note 16, at 351.

88. Jenny Anderson, *Outrage as Homeowners Prepare for Substantially Higher Flood Insurance Rates*, N.Y. TIMES (July 28, 2013), <http://www.nytimes.com/2013/07/29/nyregion/overhaul-and-a-hurricane-have-flood-insurance-rates-set-for-huge-increases.html>. “Biggert-Waters was passed with overwhelmingly bipartisan support,” said Carolyn Kousky, a fellow at Resources for the Future, a research group that has focused on flood insurance. “The right and left were aligned in moving toward risk-based rates.” *Id.*

89. See Joyce, *supra* note 6.

... the 1970's.”⁹⁰ Additionally, Biggert-Waters’ establishment of the “technical mapping advisory council [(TMAC)]—intended to improve the maps [used] to define flood rates,” allowed premiums “to rise at a significant rate on the basis of the new maps,” and encouraged transformation of some of the federal government’s flood risk “to the private sector through the purchase of reinsurance.”⁹¹ The TMAC was charged to insure FIRMs reflected accurate flood risk.⁹² Furthermore, FIRMs would be updated and reviewed on an ongoing basis through the new National Flood Mapping Program (NFMP).⁹³

Nonetheless, premium discounts were grandfathered for properties insured prior to the new FIRM system, even in SFHAs.⁹⁴ In 2013, approximately 20 percent of flood insurance policies received some form of discount, ranging from a 55 to 60 percent price reduction from full.⁹⁵ Biggert-Waters was set to begin phasing out the grandfathered rate discounts at a pace of 20 percent per year until the premiums were accurately adjusted for risk.⁹⁶

D. Criticism of Biggert-Waters and Initial Efforts to Curtail the Act

As the water receded after Hurricane Sandy, many coastal residents were left with a brutal choice—rebuild their homes or move on. Their conundrum was driven not only by the predicted increase in

90. Lehrer, *supra* note 16, at 352. Reinsurance is a tool for insurance companies to pass part of their risk to other insurance companies or group of insurance companies. This risk assessment limits the loss a primary insurer may suffer. Typically, reinsurance regulations require some measure of liquidity or solvency reserves. See generally *Reinsurance*, INS. INFO. INST. (Nov. 2014), <http://www.iii.org/issue-update/reinsurance>.

91. Lehrer, *supra* note 16, at 352–53.

92. Biggert-Waters Flood Insurance Reform Act of 2012, Pub. L. No. 112-141, § 100215(c)-(d), 126 Stat. 916 (codified as 42 U.S.C. § 4101a(c)-(d) (2012)). See also Fox, *supra* note 15, at 227 (stating that TMAC needed to consider “the best available climate science and risk of sea level rise”).

93. Biggert-Waters Flood Insurance Reform Act of 2012 § 100216(a).

94. Fox, *supra* note 15, at 217.

95. *Id.* Additionally, the author points out:

“Compounding the actuarial instability of the NFIP, even unsubsidized premium rates do not reflect actual risk levels. Premium rates are set not based on NFIP’s actual loss experience, but on a hydrologic model. Using that model, NFIP’s stated goal is to collect sufficient premiums to cover at least the historical average loss year.”

Id.

96. *Id.* at 228.

strong storms, but also by a far more expensive flood insurance requirement.⁹⁷ For some residents, the choice was illusory. Revised flood maps would include more buildings and, in most cases, dictate that the NFIP charge significantly higher premiums,⁹⁸ meaning flood insurance costs were expected to remain prohibitively expensive.⁹⁹

The higher premiums caused outrage and triggered politicians in flood-prone regions to take steps to delay implementation of the rate increases.¹⁰⁰ Just as Biggert-Waters passed with bipartisan support, Congressional members of both parties took a vested interest in hampering the act's realization.¹⁰¹ Political pressure to limit Biggert-Waters also emerged at local political levels. In the aftermath of Hurricane Sandy, former New York Mayor Michael Bloomberg formed the Special Initiative for Rebuilding and Resiliency.¹⁰² The

97. Christopher Joyce, *In Sandy's Wake, Flood Zones and Insurance Rates Re-Examined*, NPR (Oct. 30, 2013), <http://www.npr.org/2013/10/30/241690144/in-sandys-wake-fema-re-examines-flood-insurance-rates> [hereinafter *In Sandy's*]. "And scientists say there will be many more Sandy-style storms—that is, torrential rain and wind that create heavy coastal flooding—and they'll be more frequent than in the past." *Id.* "Sea level is changing and it is going to keep changing [T]he impacts are going to become more and more frequent and severe." *Id.*

98. See Anderson, *supra* note 88 ("For the last seven years, Palmer Doyle . . . has paid between \$350 and \$458 annually for flood insurance. He lives a block and a half from the water in Queens Now, though, the costs for Mr. Doyle are about to jump to as much as \$15,000 annually").

99. *Id.* "[I]t's also a bitter pill for many." *Id.* According to Robert Moore, senior policy analyst for the Natural Resources Defense Council, "People obviously have a little bit of sticker shock." *Id.* Democratic New Jersey Senator Robert Menendez said, "many homeowners will be forced to pay premiums that are several times higher than the current rate they pay," and he called the Biggert-Waters-induced new FEMA flood maps and higher insurance rates "a man-made disaster." *Id.*

100. *Id.*

In Brick Township, N.J., local officials have paid a mapping expert to obtain certification in floodplain technology to challenge the Federal Emergency Management Agency's new flood maps. Mayor Michael R. Bloomberg has proposed changes to make flood insurance more affordable and accessible. Senators from flood-prone states, including New York, New Jersey and Louisiana, have offered amendments and bills to extend the time frame over which the steep rates go into effect.

Id.

101. Cosponsors: H.R. 2199, 113th Cong. (2013–2014), available at <http://beta.congress.gov/bill/113th/house-bill/2199/cosponsors>. Cosponsors include twenty-four Democrats and nine Republicans. *Id.*

102. Anderson, *supra* note 88.

initiative recommended that Biggert-Waters be amended to provide for “cheaper insurance with higher deductibles.”¹⁰³

In response to the growing outcry, despite still favorable arrangements for many subsidized property owners in flood-prone areas, the Biggert-Waters co-sponsor, Maxine Waters, worked to deconstruct her 2012 efforts to the dismay of FEMA, free-marketers, environmentalists, and fiscal conservatives.¹⁰⁴

As a result of Rep. Water’s initiative, a contingent of representatives elected who almost exclusively served coastal districts introduced House Bill H.R. 2199.¹⁰⁵ The bill was introduced as an amendment to Biggert-Waters and sought to delay key aspects of the act, most notably, the implementation of proper risk-adjusted premiums.¹⁰⁶ Additionally, the bill was drafted to postpone the prohibition against subsidized rates for any property purchased after the enactment of Biggert-Waters.¹⁰⁷

Some critics of Biggert-Waters argued that improvements to flood mitigation systems should be the goal of federal flood policy.¹⁰⁸

103. *Id.* “The report also called on FEMA to give financial credit to people who undertake renovations to protect their property, like moving boilers from the basement to the first floor.” *Id.* See also *In Sandy’s*, *supra* note 97 (quoting Robert Moore, senior policy analyst for the Natural Resources Defense Council: “New York City formerly had about 35,000 buildings sitting in flood zones. That number has now doubled.”).

104. Davenport, *supra* note 22. “Tucked into broader transportation legislation, the bill had enthusiastic support across the political spectrum, from liberal environmentalists to fiscal conservatives. But Ms. Waters is now leading an effort in the House to gut the legislation she sponsored.” *Id.*

105. See Cosponsors: H.R. 2199, 113th Cong. (2013–2014) (The exceptions were Rep. William Enyart, from Illinois’s 12th district, and Rep. Bruce Braley, from Iowa’s 1st district. It is worth noting that both Enyart and Braley’s districts encompass flood-prone areas, and the bill’s sponsors were all from coastal states.).

106. See *id.* (summarizing H.R. 2199: “Delays until three years after enactment of this Act the requirement of the Biggert-Waters Flood Insurance Reform Act of 2012 . . . that any property located in an area participating in the national flood insurance program have the risk premium rate charged for flood insurance on the property adjusted to accurately reflect its current risk of flood.”).

107. See *id.* (summarizing H.R. 2199: “Amends the National Flood Insurance Act of 1968 to delay until five years after enactment of Biggert-Waters the prohibition against provision to prospective insureds of flood insurance by the Federal Emergency Management Agency (FEMA) at (subsidy) rates less than full actuarial estimates for property purchased after enactment of Biggert-Waters.”).

108. Anderson, *supra* note 88. Former New York Mayor, Michael Bloomberg’s office asserted that as many as eight hundred thousand New Yorkers statewide would lie in a one-hundred-year-floodplain by the 2050s. *Id.* According to Bloomberg’s senior mayoral aide, Seth

Accordingly, H.R. 2199 also encouraged state and local governments to invest in flood-protection infrastructure by disallowing FEMA to consider federal funding “when determining if a community has made adequate progress on flood protection improvement systems.”¹⁰⁹ The bill was also intended to make Biggert-Waters more reasonable for property owners by prohibiting immediate premium increases in the wake of flood disasters that compromised a relevant local flood-protection system.¹¹⁰

Few insurance and economics experts disagree that the flood insurance program needs to be overhauled.¹¹¹ According to Frank W. Nutter, the president of the Reinsurance Association of America, “The program is \$26 billion in debt and much of that debt is borne by federal taxpayers who do not have flood insurance . . . they are subsidizing those that do.”¹¹² For example, property owners in high-risk areas file 80 percent of NFIP claims and receive two-thirds of disaster assistance when flooded.¹¹³

Pinsky, “[t]he risk that New York faces is a combination of residents being priced out of their homes and *realistic mitigation measures not being incentivized by the strategy of the federal flood insurance program* . . .” *Id.* (emphasis added).

109. See H.R. 2199, 113th Cong., *supra* note 105. Unfortunately, flood-protection systems for certain areas invariably cause other areas along the river to become flooded. *Id.* In other words, flood-protection systems simply shirk the flood off on a different area; it is an imperfect system. *Id.*

110. *Id.*

Makes flood insurance available at certain special flood hazard area rates to riverine and coastal levees located in a community which FEMA has determined to be in the process of restoring a flood protection system previously accredited on a Flood Insurance Rate Map as providing 100-year frequency flood protection but which no longer does so.

Id.

111. See generally Houck, *supra* note 36, at 64. Rather than halt or hinder the flood policy disaster circuit outlined in Houck’s 1986 article, it is still alive and well. The cycle includes: “(1) flooding, (2) flood losses, (3) disaster relief, (4) flood control projects . . . , (5) renewed encroachment and development onto the floodplain and upstream watershed, (6) flooding, (7) flood losses, (8) disaster relief, (9) more projects, (10) more encroachment and development, *ad infinitum*.” *Id.*

112. Anderson, *supra* note 88.

113. NFIP, *About the National Flood Insurance Program: When Insurance is Required*, FLOODSMART.GOV (Jan. 30, 2014), http://www.floodsmart.gov/floodsmart/pages/about/when_insurance_is_required.jsp [hereinafter *About the National*]. A “high-risk” area has “at least a 1 in 4 chance of flooding during a 30-year mortgage.” *Id.*

Nonetheless, many residents questioned the economics and financial sense of the program's rate increases. Stephen C. Acropolis, mayor of Brick Township, is an example. Before Biggert-Waters, he paid \$1,200 annually for flood insurance. Then his rates accelerated to \$10,000 a year. Mr. Acropolis asserted that he would "not pay \$10,000 for flood insurance because the most I will get for my house is \$80,000 to \$90,000 to repair it . . . [every] 10 years, I will pay for my house to be totally replaced. It doesn't make any sense."¹¹⁴

Passage of the Affordability Act helped soften the blow for homeowners faced with higher premiums.¹¹⁵ In Pennsylvania, for example, the Affordability Act granted some thirty-five thousand flood insurance policyholders temporary reprieve from rising rates.¹¹⁶ Existing rate hikes spoiled the potential sale of some flood insured homes when buyers learned of the premium growth.¹¹⁷

E. The Moral Hazard of Flood Insurance and the Affordability Act's Curtailment of Biggert-Waters

The policy behind subsidizing flood insurance premiums is fraught with moral hazard.¹¹⁸ It masks the true cost of a flood-risk property and perpetuates development and redevelopment in areas where building may otherwise be unlikely to occur. Once a flood

114. Anderson, *supra* note 88.

115. U.S. GOV'T ACCOUNTABILITY OFFICE, HIGH RISK SERIES: AN UPDATE 385 (2015), available at <http://www.gao.gov/assets/670/668415.pdf>. "[The Affordability Act] reinstated certain premium subsidies and slowed down certain premium rate increases that had been included in the Biggert-Waters Act. Aspects of HFIAA were intended to address affordability concerns for certain property owners, but may also increase NFIP's long-term financial burden on taxpayers." *Id.*

116. Lindstrom, *supra* note 21 (reporting that "[s]ome Pennsylvania policyholders have already reported facing increases of thousands to tens of thousands of dollars annually . . .").

117. *Id.* Senator Bob Casey, Democrat from Pennsylvania said he was pleased the Senate passed the bipartisan legislation. He stated further, that the bill would give "peace of mind that this legislation will prevent sudden drastic rate hikes" from the implementation of Biggert-Waters. *Id.*

118. Joyce, *supra* note 6.

Meanwhile, people keep rebuilding in flood zones, in part because FEMA offers cut-rate prices on one-fifth of its policies. . . . Fugate made it clear that this is bad policy: "The moral hazard of subsidizing risk is, we're going to rebuild right where we were, just the way it was, and we're going to get wiped out."

Id.

disaster hits, the insured property owners are permitted to rebuild in a place clearly not meant for long-term habitation. Artificially low flood insurance premiums promote growth in towns and cities built out of flood-rich soil—places not meant for development. Furthermore, local governments are often not punished for their role in reckless land use decisions, as the Stafford Act typically pays for repairs to infrastructure damage in flood damaged areas.¹¹⁹

In addition to tampering with the value of flood risk properties and the economy of the towns or cities with which they are a part, reducing the cost to build in flood plains has devastating ecological impacts. These low-risk, low-cost sites for suburban sprawl threaten to eliminate the benefits of floodplains.¹²⁰ Further, the downstream consequences of dams and levees alter ecosystems, hasten river currents, and direct floods to non-natural flood areas and landowners.¹²¹ Natural floodplains should be used for parks and recreation, not subdivisions and strip-malls. The ecological damage is caused by a shift in “insurance risks to the taxpayers” and a reduction in “long-term private costs of building in floodplains.”¹²² This “development will inevitably trigger environmental damage.”¹²³

Despite the adverse ecological and long-term economic consequences of artificially low flood insurance costs, the Affordability Act’s reversal of Biggert-Waters’ swift removal of subsidized flood premiums may help temper near-term economic punishment to local insured areas.¹²⁴

119. See Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. § 5172(a) (1988). (“The President may make contributions—(1) to a State or local government for the repair, restoration, reconstruction, or replacement of a public facility which is damaged or destroyed by a major disaster and for associated expenses incurred by such government . . .”).

120. NAT’L CONFERENCE OF STATE LEGISLATURES, RESTORING AND PROTECTING FLOODPLAINS (2012), available at <http://www.ncsl.org/documents/enviro/Floodplains.pdf>.

121. See Houck, *supra* note 36.

122. HOLLADAY & SCHWARTZ, *supra* note 39, at 3.

123. *Id.*

124. Consider a flood-risk town occupied primarily by property owners who will pay two or three times more for flood insurance premiums. Property values in that town will fall because the cost of owning property will go up. Rents will increase relative to the change in the cost of maintaining or insuring the property. The increase in housing costs will decrease discretionary spending and saving among the affected group. Meanwhile, because commercial property costs will also rise, an increase in the cost of goods and services will follow.

The Biggert-Waters implementation was likely complicated by the political concerns of coastal lawmakers. These particular representatives hoped to avoid constituent anger caused by the newly instated flood insurance premiums, which increased the costs of owning a flood insured property and decreased its market value.¹²⁵ Indeed, the high premiums could force some residents to move—and sell their homes for less than before Biggert-Waters—and also make a coverage lapse more likely.¹²⁶

The Biggert-Waters political storm likely stems from anger over flood insurance premiums. As the act mandates that prices reflect risk yet keeps intact the requirement to purchase flood insurance if the property lies in a “high-risk” flood area and is encumbered by a federally regulated or insured lender, constituent and political anger may not be an unwarranted response.¹²⁷ Premium cost concerns together with the opportunity to better incorporate environmentalist and free-market ideas, are cause for a reimagining of the NFIP—to improve on the Biggert-Waters amendments.¹²⁸

Biggert-Waters fell short in several key categories. It “continue[d] a near-total federal government monopoly on writing primary flood insurance for private homes and smaller businesses for at least another five years”, failed to impose “‘mandatory purchase’ of flood insurance for holders of federally backed mortgages” in high-risk areas and “‘residual risk’ areas located behind levees”, and does not reign in the NFIP’s massive debt—which grew by \$3 billion since November, 2012 to approximately \$23 billion as of December 31, 2014.¹²⁹

125. See generally Anderson, *supra* note 88. Considered in a vacuum (*e.g.*, independent of tax effects and intrinsic value considerations), if the cost to own or operate an asset increases without equal or greater growth in that asset’s revenue production, then the asset’s profitability will fall, as will its market value.

126. See *id.*

127. About the National, *supra* note 113.

128. Lehrer, *supra* note 16, at 353–54.

129. *Id.* at 353 (describing Biggert-Waters Flood Insurance Reform Act of 2012, Pub. L. No. 112-141, § 100206, 126 Stat. 916). Lehrer also asserts that these measures were included in the original language of the bill. *Id.* (internal citations omitted). He further emphasizes that properties located behind levees are not required to purchase flood insurance. *Id.* (internal citations omitted). See *High Risk*, *supra* note 115, at 385. “As of December 31, 2014, FEMA owed the Treasury \$23 billion, up from \$20 billion as of November 2012. FEMA made a \$1

This is not to say that Biggert-Waters should be completely overhauled. It promoted many noble policies. Most notably, it discouraged development in high-risk areas by beginning to demand appropriate actuarial rates, called for updated technical oversight and FIRMs, and allowed FEMA to participate in the private reinsurance market.¹³⁰ These aspects of the law should be preserved and improved.¹³¹

However, the Affordability Act strips the NFIP of its central Biggert-Waters alterations.¹³² It effectively neuters § 4014(g), which ended subsidies for new or lapsed NFIP policies, and eliminates § 4015(h), which called for “the risk premium rate charged for flood insurance on such property adjusted to accurately reflect the current risk of flood to such property.”¹³³

These changes are unfortunate given the significant political will required to achieve passage of risk-adjusted premiums. Rather than gut the heart of Biggert-Waters, Congress should have dialed back premium increases across the board to mete out financial stability without drastic reductions in premium affordability and adjust the NFIP to more effectively direct thoughtful land use development.

billion principal repayment at the end of December 2013—FEMA’s first such payment since 2010.” *Id.*

130. Lehrer, *supra* note 16, at 351, 352–53.

131. See *Flood Insurance Reform Act of 2012: Section by Section Highlights*, NAT’L ASS’N REALTORS (Nov. 7, 2012), <http://www.realtor.org/articles/flood-insurance-reform-act-of-2012-section-by-section-highlights>. Most politically troubling—but effective long-term—is § 100205. It requires implementation, at 25 percent annually, actuarial rates for second homes, businesses, severe repetitive loss properties, and properties with substantial damage or improvements built before a community’s first FIRM. *Id.*

Section 100215 creates a Technical Mapping Advisory Council comprises of local, state, and national flood experts to recommend flood map standards. *Id.*

Section 100216 provides a mapping appeals court that allows local communities to request a remapping should they suspect their map does not fall within Technical Mapping Advisory Council guidelines. *Id.*

The last resort for community mapping appeals is the Scientific Resolution Panel, made up of at least five flood experts. *Id.*

See also *High Risk*, *supra* note 115, at 385. “[The Affordability Act] reinstated certain premium subsidies and slowed down certain premium rate increases that had been included in the Biggert-Waters Act . . . [it] intended to address affordability concerns for certain property owners, but may also increase NFIP’s long-term financial burden on taxpayers.” *Id.*

132. See *High Risk*, *supra* note 115, at 385.

133. See 42 U.S.C. §§ 4014(g), 4015(h) (2012).

II. PROPOSITIONS FOR NFIP REFORM

Biggert-Waters began to address major structural hurdles that contributed to NFIP's financial woes, but it did not do enough.¹³⁴ In consideration of the Biggert-Waters shortcomings and the shortsighted modifications imposed by the Affordability Act, Congress should pass omnibus legislation that incorporates the following proposals to recast the NFIP as a financially sustainable and fair land use tool. The following proposals envision a forward-thinking, financially sustainable NFIP—a twin-pillared program engendered to not only backstop property owners who suffer a flood event, but also provide states and localities with resources to permanently mitigate unreasonably risky land-use choices. An amended NFIP should slowly implement market driven policies to price premiums. Premium adjustments should increase at a rate that prevents local economies from suffering drastic financial adjustments for an inability to pay risk-adjusted premiums. Premiums should be implemented pragmatically over a longer time period than Biggert-Waters, with special attention paid to primary home, operating businesses, and low-income neighborhoods. Furthermore, a greater share of NFIP funds should be directed to states and localities to engage in permanent mitigation efforts—specifically, the public acquisition of high flood risk properties.

Ultimately, a slower-paced schedule of premium increases and more proactive mitigation strategy, vis-à-vis securing public control over flood risk property, will help the NFIP reduce its debt, lower its contingent liability, and direct many Americans to abstain from detrimental land use choices that harm the natural system, the federal fisc, and their own personal safety and finances.

134. See *High Risk*, *supra* note 115, at 385. First, it “excludes subsidized premium rates for new flood insurance policies and phases them out for many other properties, including those that have sustained repeated, severe losses and second homes.” *Id.* Second, FEMA must establish a reserve fund for the payment of claims and eventual repayment of Treasury debt. *Id.*

A. Anodyne Premium Increases

Congress should pass omnibus legislation that more gradually implements premium increases. A US Government Accountability Office (GAO) report in 2015 made a frightening assertion: even if the Treasury forgave the NFIP's approximately \$20 billion debt, flood insurance premiums would need to increase annual subsidized rates by 150 to 325 percent.¹³⁵ Such drastic increases would surely have a negative effect on flood insurance participation among property owners not required to purchase insurance. Reduced participation among this group would generate a greater need for FEMA disaster assistance loans and necessitate a further rise in premiums for the remaining insured.

Instantly unleashing a free-market approach to flood insurance is reckless. Congress should pay heed to the implications of allowing risk-adjusted rates to set in without a significant cushion. The Affordability Act "reinstat[ed] certain premium subsidies and slowed down some premium rate increases . . . included in [Bigger Waters] requiring FEMA to refund premiums to certain policy holders."¹³⁶ Yet, in the short time between Biggert-Waters and the Affordability Act, home prices declined in flood zones because of the higher premiums, an indication that anticipated increases to flood insurance premiums were a contributing factor.¹³⁷

Therefore, consider the implications of the fact that "flood insurance covers \$1.3 trillion of property in all 50 states, with Florida, Texas, Louisiana, California and New Jersey making up two-

135. *Id.* "Such rate increases could have negative effects on participation in NFIP, particularly among lower income property owners." *Id.*

136. *See High Risk*, *supra* note 115, at 386.

137. Toluse Olorunnipa, *Flood Insurance Price Hikes Wreak Havoc with Home Sales*, ST. LOUIS POST DISPATCH (Oct. 27, 2013), http://www.stltoday.com/business/local/flood-insurance-price-hikes-wreak-havoc-with-home-sales/article_a130bc63-2244-5eeb-b607-6d00713679da.html.

Monthly premiums for more than 1 million homeowners are set to increase due to a rewrite by Congress last year of the federal flood insurance program. As a result, home prices in flood zones nationwide are declining as potential buyers balk at the premiums, said Moe Veissi, a Miami real estate agent who led the Chicago-based National Association of Realtors last year.

Id.

thirds of all policies.”¹³⁸ And further, that over one million homeowners are covered by flood insurance policies.¹³⁹ It would be catastrophic if the majority of these properties were suddenly stricken with a 5 to 10 percent reduction in value (equating to an aggregate loss of \$65–\$130 billion in property value).¹⁴⁰ This instantaneous contraction in real estate wealth would be particularly destructive for property tax revenues in the aforementioned coastal states and localities.

One way of limiting the sting of necessary premium hikes, maintaining level participation, and controlling property value losses is to provide a longer linear phasing in of premium increases. Biggert-Waters sought incrementally increase premiums over a five-year (20 percent per year) period to reach the desired actuarial level.¹⁴¹ Borrowing the GAO’s suggested average premium increases of 150 to 325 percent (if NFIP debt were forgiven), this premium increase schedule corresponds to annual growth of to 30 to 60 percent over five years.¹⁴²

Congress should implement premium increases over a slightly more protracted schedule. If the schedule included two additional years, premiums would grow over a seven-year span, resulting in an average raise of 21 to 46 percent annually.

While a seven-year schedule still results in staggering rate increases relative to current levels it would afford time for local governments to prepare for lower property tax revenues and lenders that secured loans with affected properties to restructure their financing arrangements. Further, a seven-year span is far more palatable to voters and economies than a five-year implementation—

138. *Id.*

139. *Id.*

140. If the aggregate value of NFIP insured real estate is \$1.3 trillion, a five percent reduction in value is equivalent to \$65 billion and a ten percent reduction is equivalent to \$130 billion in value. Olorunnipa, *supra* note 137.

141. See 42 U.S.C.A. § 4015(h) (2012) which, under the Affordability Act, will not be implemented: “Any increase in the risk premium rate charged for flood insurance on any property that is covered by a flood insurance policy on the effective date of such an update that is a result of such updating shall be phased in over a 5-year period, at the rate of 20 percent for each year following such effective date.” *Id.*

142. *High Risk*, *supra* note 115, at 385. For a nine-year phase-in, the annualized increases correspond to 16.6 to 36.1 percent. *Id.* These estimates do not consider inflation.

and certainly more so than a one-time increase. The downside of slower premium growth is the increased possibility that the NFIP will need to borrow more from the nation's fisc should a significant disaster occur before the financial benefits related to actuarial premiums are realized.¹⁴³

While a Biggert-Waters pace of premium rate increases—five years—would be beneficial to the NFIP's financial standing and would more rapidly marshal good land use policy, it poses a significant economic risk to both local and national governments and economies and must be approached with care. Any premium increase schedule should be structured in a manner that only subtly influences real estate markets.

B. Ban Federal Mortgage Insurance for Flood Risk Properties

Congress should no longer permit currently qualified borrowers from obtaining federally insured mortgages for the purchase of flood-risk properties. Presently, borrowers who finance property with federally insured mortgages are required to obtain flood insurance if they live in a high-risk flood area.¹⁴⁴ Federally insured mortgages are available to borrowers who are not market-competitive—most often because they are unable to amass a 20 percent equity down payment for the purchase of a home.¹⁴⁵ By requiring NFIP insurance on federally insured mortgages on flood-risk properties, Congress is ostensibly requiring that the federal government backstop itself.¹⁴⁶

143. See *High Risk*, *supra* note 115, at 386. It's worth noting that the Affordability Act did take a small step to shore-up the NFIP risk profile. According to the GAO, it added "an annual surcharge for all policies (\$25 for most policies) to be added to the reserve fund." Nonetheless, FEMA claimed at the end of 2014, that "the required reserve fund balance (approximately \$13 billion) would be achieved in the next 20 years." See *High Risk*, *supra* note 115, at 386–87.

144. *About the National*, *supra* note 113.

145. See *Let FHA Loans Help You*, HUD.GOV, <http://portal.hud.gov/hudportal/HUD?src=/buying/loans> (last accessed Dec. 24, 2015).

146. For example, should a property purchased with a federally-insured mortgage without flood insurance, suffer a total loss from a flood-event, then a rational borrower may chose to not rebuild the property improvements, walk away from the mortgage, and subsequently cause the federal government to reimburse the lender for non-repayment of their note. Conversely, should the borrower in this scenario insure the flood-loss property with the NFIP then the federal government would also incur the cost to restore value to the affected parties. Hence, in either case, the federal government is on the hook for any loss.

While ceasing federal mortgage insurance for sub-prime purchasers may be perceived as a draconian measure that goes against homeownership and decreases the number of potential purchasers for many, if not most, flood-risk properties—resulting in a reduction in the value of these properties (a cost to current owners)—it ultimately forces potential new owners to assume their fair share of risk.

Given that federal mortgage insurance is generally only available to sub-prime borrowers, the measure would prevent purchasers who are already at increased risk of triggering a federal insurance claim (*e.g.*, defaulting on their mortgage) from incurring disproportional federal benefits where it is not necessary. Just as the Internal Revenue Service employs a policy that discourages not-for-profit corporations from “double-dipping” tax benefits, so too should individual borrowers who obtain federally-backed mortgages be disallowed from obtaining additional benefit by obtaining subsidized flood insurance.¹⁴⁷

Even if the NFIP were to allow such double-insurance, and not subsidize premiums on flood insurance for coverage on flood-risk properties obtained by federally insured mortgages, flood insurance premiums would in many cases elevate a borrower’s homeownership costs to a high level, such that they would be at increased risk of defaulting on their mortgage compared to a scenario that did not dictate that they obtain flood insurance.

Absent the pairing of flood-insurance and federal mortgage insurance for flood-risk properties, the market would demand that borrowers be credit-worthy enough to not only obtain a mortgage without federal backing, but also be able to afford the actual cost of flood insurance. This is because, presumably, lenders would require that borrowers who secure their mortgage with a flood-risk property obtain flood insurance to protect that security. This would shift the burden and blame of increased property ownership costs to the mortgage instrument rather than flood insurance.¹⁴⁸

147. See, *e.g.*, *Education Benefits—No Double Benefits Allowed*, IRS (Dec. 8, 2015), <https://www.irs.gov/Individuals/Education-Benefits-No-Double-Benefits-Allowed>.

148. See Fox, *supra* note 15, at 216. (“Financial institutions may also require flood insurance for properties in participating communities outside SFHA.”).

Financial institutions may oppose this measure given that it could reduce the value of flood-risk properties on which they have secured mortgages and reduce the pool of potential borrowers. However, the measure would be popular among free-market proponents and concentrate risk management on the mortgage underwriting process. This is efficient and logical. Mortgage underwriting should comprehensively consider risk and banks that underwrite new loans for properties in high-risk flood areas should demand larger down payments or higher borrowing costs. In this way, mortgage underwriters could deter borrowers from purchasing homes in high-flood risk areas and in some cases reward borrowers who obtain adequate flood insurance with lower interest rates.

Lastly, banks could even incentivize borrowers to take flood mitigation measures if their collateral was in a flood zone.¹⁴⁹ For example, a bank could adjust its interest rate if the borrower raised their home or installed breakout walls on the first floor. That way, private landowners would be encouraged to account for their own risk through personal mitigation and rely less on public infrastructure measures like levees, dikes, and dams.

C. Replacement Land Tax Credit and Land Buy-back Program

Property owners in flood plains, especially those in repeat flood areas or high-risk zones should be encouraged not to rebuild in the same place. Because property owners are currently only required to insure for the amount of any federally-backed outstanding mortgage on their property, many will not receive insurance payments adequate to rebuild, let alone purchase land elsewhere.¹⁵⁰

One way to soften the blow, while also encouraging development on high land, would be for the federal government to offer an

149. See Anderson, *supra* note 88. Consider, the affect mitigation can have on the cost of risk—this example is in the context of post Biggert-Waters NFIP insurance rates.

George Kasimos . . . in Toms River [New Jersey] was put in a V Zone [“Velocity Zone”], which would have taken his rates to over \$30,000 annually. Now he is in a less risky zone, but he still has to raise his home three feet. His flood insurance will be \$8,300 a year.

Id.

150. See 42 U.S.C. § 4012a(b) (2012).

investment tax credit for land purchases following a flood disaster. Perhaps the credit would be offered for two years following a flood disaster and be available to any property owner in the affected area, regardless of whether their land improvements were destroyed. The program could be further strengthened by states, which could enact similar tax motivations.

The tax credit would incentivize property owners who had suffered flood damage and been awarded a flood insurance payment not to rebuild in an area with high flood-risk. The credit could be offered as a one-time investment tax credit structured as a percentage of the value of land purchased as a substitute for their flood-damaged property.

The credit could also be scaled. For example, if a property owner moved from a SFHA to a moderate or low risk area they would be awarded a 20 percent credit, from SFHA to no risk area a 30 percent credit, or from moderate or low risk to a no risk area a 20 percent credit.

The credit program could be renewed every five years, until a large portion of high-flood risk populations relocated. This action would benefit the homebuilding and real estate industry as it slowly incentivizes depopulation of flood-risk areas.

Further, Congress should empower the National Parks Service (NPS) and the Bureau of Land Management (BLM) to offer to purchase certain land tracts from affected property owners. These land purchases would need to be in line with the NPS and BLM's growth strategy. Nonetheless, Congressional authorization and funding of NPS and BLM land acquisitions from affected owners is a way for some repeat disaster areas to slowly come under the designation of protected federal land, shift development to more suitable areas, and reunite the country with its holistic hydrologic heritage espoused through avoidance and resilience techniques.¹⁵¹

151. See Helms, *supra* note 26.

III. CONCLUSION

The political dismantling of Biggert-Waters puts FEMA in a precarious position. As currently constructed, the NFIP will continue to accrue debt, property owners will not be compelled to avoid development in non-flood prone areas, and the flood risk pool will grow without adequate premium funding. There is no easy solution to NFIP reform. Residents in flood risk areas will need to pay more or move away. The eventual imposition of actuarial rates is likely unavoidable.

Politicians can both please their constituents and bolster the NFIP by instituting premium increases—albeit, slower than directed by Biggert-Waters—as they simultaneously encourage policyholders to move out of floodplains and low-lying coastal areas, and allow the free market to take a larger role in controlling prudent land use decisions.