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## Watery Marauders

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How the Federal Government Obstructed  
the Development of Private Flood Insurance

Eli Lehrer  
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## *How the Federal Government Obstructed the Development of Private Flood Insurance*

Eli Lehrer

### **Executive Summary**

This paper describes how America's National Flood Insurance Program came into existence and seeks to explain why private flood insurance never developed in the United States on a significant scale. The paper consists of three sections.

The first section attempts to provide a brief theoretical framework for thinking about flood insurance. It describes what flood insurance does and presents a theory as to how it ought to work. The second section provides the early history of the flood insurance program. It outlines how the federal government first took on the responsibility of protecting the nation from flooding and how Congress failed in its first effort to offer federal flood insurance. The third section explains how America got the system of flood insurance that it has today. It tells how the Tennessee Valley Authority, U.S. Geological Survey, and a variety of local governments gathered enough risk data to make federal flood insurance palatable to Congress, how Congress implemented a program

with some risk-based characteristics, and then stripped it of its risk-based character.

The paper reaches a simple conclusion: Flood insurance, in its current form, did not emerge as a result of market failure alone. While some factors, including the role of state regulation, remain undetermined, the current situation represents an example of what economists call "government failure."

The federal government built levees that altered America's natural landscape and thus increased flooding, discouraged market entry by failing to repeal a calamitously impractical flood insurance law that was never implemented, supported mapping and zoning efforts that exacerbated flooding problems, and created a flood insurance program that priced policies well below market levels. Flood insurance exists as it does because political institutions sought to "correct" a perceived market failure and thereby made the emergence of private insurance unlikely, if not impossible.

# Watery Marauders

## *How the Federal Government Obstructed the Development of Private Flood Insurance*<sup>1</sup>

Eli Lehrer

America's littoral communities face a crisis. Years of land mismanagement, the destruction of wetlands, a pattern of increasing storm intensity likely to last for some time, the potential of global climate change, and the ongoing expansion of state-run and state-mandated residual insurance markets have resulted in a massive increase in the risks of flooding.

The National Flood Insurance Program (NFIP), the topic of this paper, is the major government response to flooding. Insofar as it functions, underwrites risks, and encourages flood-resistant construction in some places, it can be said that the program works.

In many important ways, however, the program has reached a point of crisis. Incentivized partly by the availability of inexpensive, implicitly subsidized flood insurance, states like Florida, South Carolina, North Carolina, Mississippi, and Louisiana have created residual wind insurance mechanisms that create further incentives for development. The result has been enormously increased coastal development and greater damage from hurricanes. While North Carolina, South Carolina, and Louisiana have made significant progress in rationalizing these markets and reining in their size, far too many Americans still live in dangerous areas. And they do so, in part, because of the National Flood Insurance Program. Yet the flood program has been a politi-

cal creature intended, over the years, to pursue a variety of goals rather than simply making flood insurance available. What applies to all insurance regulation applies to NFIP as well: as Kenneth Meier writes, "The goals of insurance regulation must be viewed as multiple and political rather than just in terms of correcting market failures."<sup>2</sup>

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Since civilization first arose in the fertile river valleys of the Middle East, humans have always clustered near water. Water irrigates fields, quenches livestock, and, of course, provides drinking water for humans. Nearly all major bodies of water overflow their banks at one time or another—major rivers tend to flood yearly, oceans and major lakes less often. But, in time, nearly all of them flood. Since the dawn of civilization, therefore, humans have had to deal with floods.

Before the twentieth century, however, society simply could not afford flood insurance or accomplish the technical tasks needed to underwrite it. From the time of the Romans—who built enormous breakwaters to prevent the Tiber from flooding—some efforts to control floods existed. But the great bulk of the population worked in subsistence agriculture and lived in crude structures that the occupants themselves often built. The wealthy, to vastly oversimplify things, either

lived in areas unlikely to flood with any regularity or built flood protection mechanisms. When individuals, corporations, and governments erected flood control measures, they did so with the goal of preventing floods altogether: a mix of public and private efforts built floodwalls around much of the Netherlands, raised the city of Chicago above Lake Michigan's water table, and erected walls to protect the Port of Boston.<sup>3</sup>

Flood insurance, broadly, represents a confession that human efforts cannot prevent floods altogether, but that instead we should pool the risks in a particular way. Any risk-transfer vehicle provides a form of flood insurance. Lloyd's associations, catastrophe bonds, and reserving practices all provide flood insurance of a sort. For a variety of reasons stemming from marketing, regulation, and wealth—reasons that lie beyond the scope of this paper—these vehicles have not proved viable for providing the types of insurance policies most American consumers seek to purchase.

Instead of exploring these options, this paper deals with “conventional admitted market flood insurance.” People overwhelmingly use conventional insurance to insure their homes, automobiles, and valuable property from a variety of risks such as fire, theft, and pests. It is reasonable to believe that they should be able to insure against floods in much the same way.

### **How Should Flood Insurance Work?**

Conventional flood insurance transfers the risk of floods in the same manner as conventional homeowners' insurance transfers the risk of fires. Policies may be different slightly, but for purposes of this paper, under a conventional flood insur-

ance policy a corporation or cooperative prices a risk-transfer contract for flooding in a predictable fashion based on standardized rating mechanisms and maintains a large degree of price consistency between similarly situated insureds. The policy, furthermore, is offered under the conditions normally associated with the “admitted market” in the United States.

Insurance, this paper seeks to emphasize, does not represent charity or government-provided welfare: it involves a mutually beneficial financial arrangement to transfer risk. Insurance providers—government or private—that fail to operate in a financially self-sustaining fashion convert themselves into conduits for relief payments. Following major floods, it is inevitable that some groups and people will need relief, particularly in the short term. Such provision of relief does not provide the risk-transfer inherent in insurance and is largely disconnected from the topic of this paper.

This paper premises itself on the belief that flood insurance should function in much the same manner from the consumers' perspective as other insurance. This functioning should extend to pricing, availability, financial responsibility, its impact on patterns of development, and status in the market economy.

Flood insurance should have six attributes. To begin with, flood insurance should price like risks alike and different risks differently. People who have less risk of flood should pay less for flood insurance. People who live at great risk of flood, on the other hand, should pay significant premiums for flood coverage.<sup>4</sup>

Second, people who want flood insurance should have few problems buying it at reasonable prices. Such “reasonable prices” may be quite high—a house built on a sand dune will face severe flooding and erosion with some frequency—

but they should provide good insurance value for people who buy them. In other words, the expected claim payouts, along with the value of risk reduction, will be worth the premiums.

Third, people who face increased risks of floods as a result of the places where they live should pay for those risks themselves. In other words, people who live far away from areas that flood frequently should not have to pay the bills for those who live in areas that flood all the time.

Fourth, flood insurance pricing in a market economy will almost certainly provide incentives to do some combination of these three things: (1) discourage development in areas likely to flood, (2) encourage mitigation against flooding, and/or (3) pay for a portion of the costs of periodic rebuilding in places where people can afford the cost and where mitigation is impossible.

Fifth, flood insurance should impact patterns of development in a way that either increases society's resistance to floods or creates a mechanism by which society finances rebuilding.

Last, if flood insurance is to work like other types of insurance, it should work largely through private means. Governments might provide certain types of subsidies for the poor (insofar as they engage in any income transfer programs at all) and even set up some sort of residual market for areas that society believes should be inhabited but are not insurable at rates that allow them to be inhabited. However, in theory, flood insurance should work through the same private market mechanisms that provide other types of property and casualty insurance.

This conventional flood insurance should be offered within the confines of the "admitted market."<sup>5</sup> Admitted market insurance (the insurance available through admitted companies) has two major qualities: it is "guaranteed," and it exists on

the basis of utmost good faith contracts. Within the admitted market some entity—always governmental or quasi-governmental—guarantees insurance by providing consumers assurance that even if a given company engages in mismanagement or fraud, or has an enormous string of bad luck, legitimate claims will still be paid. The second point, that admitted market insurance has utmost good faith contracts, means policyholders do not have to read or understand every piece of policy language in order to be assured that their policies will be followed.

Like consumers, insurance companies want the environment for providing flood insurance to look like the environment they experience for other types of insurance. In particular, they seek the opportunity to remain financially solvent, subject themselves to a proper level of regulatory oversight, and set prices based on risk. First, therefore, insurance companies cannot be forced to operate at a long-term financial loss when insuring against floods. Insurance on dwellings does not always produce underwriting profits (in other words, insurance companies typically pay out more in claims than they receive in premiums). Much of the time, insurance companies make money on homeowners' insurance by investing money they receive in premiums. Many insurance companies operate as nonprofit mutual insurers, but even these companies cannot stay in business if they cannot make profits. Nevertheless, in all circumstances, insurers need to make money to continue their work.

Second, like all other economic activity, insurance companies cannot operate in a vacuum: external forces such as the market and government discipline modify the way in which they work. Because of the nature of the insurance business—companies promise to provide coverage against

events that may or may not happen—it is vital that someone make sure that companies remain solvent enough to pay likely claims made against them. Insolvent companies engage in fraud if they sell insurance. Therefore, mechanisms (although not necessarily governmental ones) must exist to ensure that insurance companies remain solvent. Other types of regulation ranging from provisions specifying the nature of paperwork involved with insurance to the manner in which insurance companies set rates may also prove advantageous in certain cases. Insurance companies want a regulatory “sweet spot” that provides the appropriate level of regulation, no more and no less.

Third, insurance companies want to set prices based on risk. Risk-based pricing insures the most efficient and largest market for insurance and makes the largest number of people able to afford adequate insurance. Pricing on a basis other than risk (by, say, reducing prices for favored groups) almost always leads to corresponding increases for other groups. Externally mandated insurance rate cuts for given groups almost never save money for society as a whole. Instead, they tend to redistribute wealth from people who incur risks to those who do not. In the case of flood insurance—in modern times, people living near water are almost always wealthier than average—it’s worth noting that the wealth redistribution implicit in non-risk-based pricing will rarely serve egalitarian goals. Although individual consumers may benefit from pricing on a basis other than risk, it is highly likely that risk-based pricing does the most to advance overall consumer welfare.

America has ended up with a flood insurance system that is quite a long distance from what either consumers or insurance companies would expect in a free market situation. Exploring it requires a look at how the federal gov-

ernment took over responsibility for managing America’s floods.

Although one might trace the history of America’s flood insurance program back to early nineteenth-century efforts to provide disaster relief, the analysis that follows begins with the events that resulted in the system America has today. The following section describes how the federal government took on responsibility for protecting all Americans from flooding, provides theories as to the manner in which political forces and factors intrinsic to the industry made the development of flood insurance difficult, outlines America’s first efforts at establishing flood insurance, and describes how these efforts further suppressed private market participation. Finally, the paper outlines the manner in which government agencies added a measure of risk-awareness to America’s flood planning, established floodplain zoning, and thus set the stage for the adaptation of a politically palatable federal flood insurance program.

### Setting the Tone

The path that leads to America’s current national flood insurance regime began in 1936 with a 932-word policy statement called the national Flood Control Act (FCA). This handful of words from Congress would have enormous consequences for the entirety of America’s coastal and riverine landscape. The most important section—the one that would set the tone for national flood insurance—reads as follows:

It is hereby recognized that destructive floods upon the rivers of the United States, upsetting orderly processes and causing loss of life and property . . . that it is the

sense of Congress that flood control on navigational waters or their tributaries is a proper activity of the Federal Government in cooperation with States, their political sub-divisions and localities thereof; that investigations and improvements of rivers and other waterways, including watersheds thereof, for flood-control purposes are in the interest of the general 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.<sup>6</sup>

As Gilbert Fowler White describes, this rather momentous act federalizing the entire risk of flood appears to have passed Congress as an afterthought. It presented few words attached to a laundry list of flood control proposals of the sort Congress passed every year.<sup>7</sup> A massive flood in New England, White recounts, gave an extra push to write an overall policy into law. At the time, it did not appear as a major change. The Army Corps of Engineers had engaged in flood control efforts since the early nineteenth century, and Congress had appropriated disaster relief as early as 1803.<sup>8</sup> Torrential, deadly floods on the Mississippi-Missouri system in 1927 had destroyed enormous amounts of property, swept away many flood-control measures, and resulted in a massive and then-unprecedented flood relief effort under Herbert Hoover's leadership.<sup>9</sup> The Corps had gained enormous new authority in the flood's wake and used it widely.

While it passed with little debate, the act does signal a clear dividing line. Before the 1936 FCA, Congress provided relief but considered floods a largely local matter. Afterward, it made an implicit promise: the federal government would prevent floods so long as “the benefits to whomsoever they may accrue are in excess of the estimated costs.” (The act, in a sign of things to come, neither specifies nor requires any particular type of cost-benefit calculus.) The act's text—by calling for “flood control” rather than “management” or “mitigation”—implicitly endorses what the Corps already did: treat floods as “watery marauders which do no good, and against which society wages a bitter battle.”<sup>10</sup> Every single one of the 250 projects funded following the policy statement involves either “bank protection works” or “levees” along America's major river systems. In other words, the Corps and the government would battle floods.

The act had an immediate impact. Spending on flood control mechanisms doubled in the four years after the report came out, predictably declined during World War II as resources became scarce, and then skyrocketed in 1946 as soon as the war ended.<sup>11</sup> Relief efforts moved forward at a similar pace. Each time cropland flooded, each time people died in a flood, each time a town found its doom in the waters of a rising river, the federal government would step in with help. There was no cost sharing from property owners and, with each major flood, the risk to the federal treasury grew larger.

Amidst this background, flood insurance did not develop the way one might have expected. The next several pages address three sets of factors that retarded the development of flood insurance: federal regulation, state regulation (about which little information is available),

and the intrinsic nature of flood risk between the 1930s and 1950s.

### **Why Private Industry (Mostly) Did Not Develop in the 1930s or 1940s**

Federal efforts obstructed the development of flood insurance by building breakwaters that reduced the value of flood insurance over the life of a typical mortgage, by tacitly encouraging development in frequently flooded areas, and by preempting the need for private insurance.

By shielding much of the country against minor floods, the Army Corps of Engineers moved floods outside of ordinary experience. Though neither the Corps nor any other agency gave an explicit guarantee that the projects would guard against catastrophic losses, they did reduce the risk of floods in any given year. This made it harder for the private sector to write insurance policies that it could market. An example can illustrate this point. Let us assume that, in a given town, the Corps of Engineers builds floodwalls that engineers believe waters will breach only once in one hundred years. After the wall goes up, a flood insurance policy purchased over the life of a thirty-year mortgage would have only a 30 percent chance of ever proving useful at all. While some people might still buy such a policy, their willingness to pay a given premium declines significantly since the event becomes much more unlikely. For insurers, however, the risk of a catastrophic flood resulting in the maximum claim does not decrease. This makes flood insurance much harder to market: the product remains similarly priced, but over a given mortgage term, it becomes much less useful.

Floodwalls create moral hazards and make it relatively more attractive for private parties to build on land likely to flood. Over a period of years, this moral hazard modifies the built environment a good deal. While developers and property owners may take calculated risks building behind “100 year” floodwalls, insurers have little upside in insuring such properties. Vigorous federal efforts to build floodwalls thus result in construction that a private insurance industry cannot insure using conventional insurance policies that it could market successfully.

In addition, federal relief efforts reduce the need for insurance. Certain types of floods certainly mandate external relief and, in many cases, preserving lives may require federal relief. However, any relief beyond short-term efforts to meet basic human needs will likely reduce some amount of insurance. As John Barry documents, from the 1920s on, the federal government typically helped white Americans get back on their feet after floods while only doing the bare minimum to meet basic needs for African Americans. Since nearly all people with assets significant enough to buy insurance were white, this further reduced the need for insurance.

A preliminary literature review did not prove sufficient to determine the consequences of state regulation. It remains undetermined to what extent state regulations impeded or facilitated the development of private flood insurance. It is unclear to date what impact state regulatory environments had (or failed to have) on flood insurance: according to one source, at least forty-six states had some form of insurance price regulation in 1951—the earliest compilation the author can find.<sup>12</sup> It is unclear what flood insurance programs, if any, existed before 1936: John M. Barry does not mention any particular

insurers in his massive study of the 1927 Mississippi floods, but this is not determinative. More research is needed in all of these areas. We can safely say, however, that the general climate in insurance was heavily regulatory during the 1930s and 1940s: nearly all states passed rate regulatory laws of one sort or another (forty-three had them by 1952) and this discouraged risk-based pricing. The McCarran-Ferguson Act of 1945 required that insurance companies subject themselves to state regulation in return for antitrust provisions.<sup>13</sup>

Even so, a small handful of private flood insurance programs—all single-state domestic insurers—did exist. White himself found that “more than 31 organizations wrote some type of policy covering flood damages.”<sup>14</sup> But coverage was scanty in one massive Los Angeles flood; private flood insurance paid benefits of \$320,000 to cover gross damages of \$25 million.<sup>15</sup> Still, some evidence exists that the market was growing: in 1956 (after the first proposals to offer flood insurance were made) at least five more companies were offering flood products than had been ten years earlier during White’s review.<sup>16</sup> In a limited sense, private flood insurance did exist and people did buy it, but by the late 1930s a number of political factors were already suppressing the development of private flood insurance.

### **Flood Insurance and the First Mover Disadvantage**

Politics played a major role in the suppression of flood insurance, but the intrinsic nature of the market made it relatively unattractive for insurers to enter. The nature of flood insurance’s risk

profile, weather patterns, and the nature of the insurance market all retarded the development of flood insurance.

Quite simply, the distribution of flood risk is different from the exposures against which most people buy insurance. Flood risks are highly correlated and knowable while other risks are not. Although it’s possible for a single home to flood, most floods impact dozens of different homes in some same area at a different time. Entire river systems can flood spreading devastation over multi-state areas. The result is that flood risks are highly correlated, and providing indemnity for a certain quantity of flood risk requires much larger capital reserves and a more significant catastrophe load than writing other types of insurance. Since homeowners’ insurance in general produces scant underwriting profits—insurers make money largely through investments of premium payments—flood is simply not an attractive business to enter in any circumstances. It requires lots of capital and does not provide a large chance for earning a good return on that capital.

Weather may have also had an impact on the market for flood insurance. Most major floods correlate with hurricanes and hurricanes appear to come in cycles. Between 1944 and 1954, the years when one might have expected a private flood insurance market to develop, no major hurricanes struck anywhere on the American mainland.<sup>17</sup> This further reduced the apparent market for flood insurance. Disasters provide very good advertising for insurance and, for a ten-year period, America avoided major flood disasters.

Finally, flood coverage simply presents a smaller market than other types of property and casualty coverage. Nearly every home runs a risk of damage from fire, wind, and falling trees. Some homes, however, have a much smaller

chance of flooding than others. Although even homes in desert areas can sometimes fall victim to flash floods, a house near a lake, the ocean, or a river is at much greater risk of flooding than one far from these things. A rational insurance company would likely work to exploit these other opportunities before spending profits to enter a flood market. Between the beginning of the Depression in 1929 and the end of World War II in 1945, Americans had few opportunities to buy many types of consumer goods. In the late 1940s and mid-1950s, the nation had enormous unmet consumer needs. Millions of new housing units were built and Americans bought new cars in droves. These things needed insurance, and the mechanisms for writing this insurance already existed. Because people had not lived near water in significant numbers, however, no unified mechanism existed for writing flood insurance across the country. Offering it simply was not a priority for insurance companies that saw growth opportunities elsewhere. This further retarded the development of a market for flood insurance.

### **A First, Failed Effort**

In 1951, following a particularly severe flood season in the Southwest, President Harry Truman laid down the first serious national proposal for flood insurance intended to force property owners to pay a portion of their own relief bills. “At present,” the President claimed, “insurance against flood damage is . . . unobtainable from private insurance companies.”<sup>18</sup> Truman, as discussed above, wasn’t entirely correct—about forty companies did offer flood insurance. Partly as a result, the proposal went nowhere. Although

the Senate held some brief hearings on Truman’s proposal, it never received a committee vote and never moved forward.

Four years later, however, Truman’s successor made a similar proposal; this time Congress acted. In the wake of a particularly active 1955 hurricane season that saw twelve tropical cyclones hitting the Eastern seaboard and causing a record amount of damage, Congress created America’s first residential flood insurance program at the request of President Eisenhower (the Federal Flood Insurance Act of 1956).<sup>19</sup> In his January 10, 1957, State of the Union address, Eisenhower explicitly presented flood protection as part of a plan for cooperative water use planning:

The whole matter of making the best use of each drop of water from the moment it touches our soil until it reaches the oceans, for such purposes as irrigation, flood control, power production, and domestic and industrial uses clearly demands the closest kind of cooperation and partnership between municipalities, States and the Federal Government. Through partnership of Federal, state and local authorities in these vast projects we can obtain the economy and efficiency of development and operation that springs from a lively sense of local responsibility.

Until such partnership is established on a proper and logical basis of sharing authority, responsibility and costs, our country will never have both the fully productive use of water that it so obviously needs and protection against disastrous flood.<sup>20</sup>

Eisenhower's other communications never explicitly mention the word insurance (although they use the term indemnity once.) Nonetheless, the bill that resulted from Eisenhower's policy—largely shaped through the efforts of Senator Prescott Bush—set up what appeared to be an actual insurance program.

Congress, however, left things vague and the program never even had a director named. The bill Eisenhower signed provided little guidance, offered only short-term borrowing authority rather than appropriations, and required Congress to approve funding after the agency established a premium structure.<sup>21</sup> Written in very broad language, the bill authorizes the creation of a Federal Flood Indemnity Administration to “make available flood insurance.” The act offers a flat 40 percent subsidy to homeowners on “risk-based insurance premiums” and requires that states wanting to participate put up half of the money for that subsidy.<sup>22</sup> It requires the federal government to pay the program's overhead in full and contains no provision for allowing private companies to sell or service policies. It sets caps for coverage, but allows the Housing and Home Finance Agency administrator to set premiums and “provide for floodplain management.” The bill promises to encourage the private sector to write insurance policies above its statutory cap of ten thousand dollars—according to the bill's preamble, a sum that covered the structure value of about 75 percent of all homes standing in 1957. It does not, however, provide any inducement for the private sector to do so. While it gives borrowing authority to stand up the administration and begin operations, it does not actually authorize the sale of products or provide operating funds.

With a vague mandate and no assurance for its future, the Federal Flood Indemnity Ad-

ministration nonetheless set up office space and began developing its approach; the plan it proposed—but never even published in the Federal Register—had severe flaws.<sup>23</sup> Under the 1957 plan, all property owners desiring insurance would be subject to a so-called “postage stamp” premium—a flat even-rate premium within each state. The only adjustments would exist for construction type and properties directly abutting a stream or river.<sup>24</sup> Given that the legislation did not authorize it, no mapping would take place.

As David Grossman—a Kentucky floodplain administrator in the 1950s—explains, this system is rather absurd on its face: it takes only two risks (construction type and immediate proximity to water) into account and then only very crudely. Such a program would almost certainly attract only the people facing the greatest risks. In other words, it would have had an enormous adverse selection bias. It seems impossible that this system could ever achieve the self-sufficiency the legislation promised.

Even worse from the standpoint of those who favored the program, many states, Grossman observes, could not have participated at all due to the mandatory subsidy structure that provided direct subsidies to individual homeowners and would thus violate state prohibitions on appropriating public money for private purposes. While the guidelines did anticipate land use planning efforts going forward, the program would launch, the Housing and Home Finance Agency decided, without any such land use guidelines in place. The agency, furthermore, proposed no mechanisms to implement them.

The insurance industry opposed this plan for practical and self-interested reasons. Edward Overman, at the time a leading spokesman for

the insurance industry in his capacity as the assistant dean of the American Institute for Property and Liability Underwriters, explained the industry's position:

The [insurance companies'] argument [against the program] is somewhat paradoxical. They are in general agreement that private carriers cannot provide insurance against the peril of flood on fixed property. At the same time, they object to the government's entry into the field. The objection is based not only on the fact that the flood peril is such that it cannot be insured properly by any institution. They contend also that the government's entry into the field marks a step in a movement towards greater government activity in what has been recognized as the private sector of the economy.<sup>25</sup>

One insurance industry-supported study attacked the very idea of such insurance. Flood insurance, the study concluded, could never work under the plan and would, in fact, amount to "relief in the guise of insurance."<sup>26</sup> Political support ebbed quickly once the specifics of the bill became clear. The author's partial review of United States Senate floor debates in the period before the bill received approval shows three speeches against the bill and only one (from Prescott Bush) for it. Thanks in large part to the insurance industry's persistent lobbying against it as well as the plan's self-evident absurdity, no funding bill for the program ever made it to the House or Senate floor. But Congress never repealed the statute creating it.<sup>27</sup>

### **Insurers Ask: Why Bother?**

Although it did nothing to begin the federal provision of flood insurance, the 1956 flood insurance act surely chilled the market. By 1960, Best's ratings show that only twenty-one companies were writing flood policies—a decline of almost 50 percent (from a very low base). A portion of this may have resulted from a general trend toward consolidation in the industry, but, in any case, flood coverage remained unavailable in most of the country. When Gilbert White again surveyed the flood insurance landscape in 1962, he found that things had gotten worse for those seeking insurance. In one town he studied nobody had flood insurance or could find anyone besides Lloyd's of London willing to write it: "Although a few . . . thought they were covered under all risk policies, none was supported by the fine type of his policy."<sup>28</sup>

This likely happened for a simple reason: not only did companies continue to face all the risks described above, but they knew that an existing law would let the federal government take away all of their resources at any moment. Hydrologic data collection to support the setting of premiums must also have looked particularly unattractive after 1956: even with the vast resources of the federal government, the HHFA had decided that it would not compile any risk data before it began writing policies.

Of course, creating a feasible flood insurance program without the manifest flaws of the 1956 proposal was difficult. To make a program politically palatable, Congress needed some assurance that the program would have a relationship to the risk involved and thus needed to collect some risk data.

## Making Flood Insurance Feasible

Just as the 1956 flood insurance act was failing on the floor of Congress, a series of government actions created a body of risk data that would later facilitate the creation of a non-postage-stamp premium system. Although government agencies developed some useful scientific methodologies, these efforts did not improve the nation's resistance to hydrologic disasters. Instead, they replaced efforts to calculate the actual risk of flooding with mapping efforts that avoided collecting data that would prevent development. Rather than improving risk-transfer mechanisms, these new calculations existed to facilitate economic development goals disconnected from the risks they were creating. In all these efforts, the Tennessee Valley Authority led the way while local and other federal efforts helped build the necessary body of data.

As the Tennessee Valley Authority, a federally chartered power company with a broad social mission, represented the high-water mark for explicit regional economic planning in the United States, it appears obvious in retrospect that government efforts at massive land use planning would begin at the TVA. Through the 1950s a variety of TVA projects both coined the term "floodplain management" and contributed a great deal to the environment that made flood insurance feasible.<sup>29</sup> Beginning in 1953 the TVA funded an all-out effort to map the flood plains of 150 frequently flooded communities in its service area.<sup>30</sup> At first, TVA efforts, although free of direct cost, faced enormous resentment from local communities that saw them as federal meddling in local land use decisions.

The TVA managed to overcome this resistance by changing its methodologies in a manner that likely reduced the nation's resistance to floods.

In the beginning of their efforts, the TVA's engineers used a "maximum probable flood" standard drawn from the Army Corps of Engineers. This calculation essentially consisted of an engineering estimate of the worst-case-scenario flood whether or not such a flood had actually taken place.<sup>31</sup> Although creating such a model provided the best estimate of what a community had to do to actually protect itself against flooding, its widespread use in planning would almost certainly have foreclosed on development that those communities wanted. As an agency with the political charge of improving a region's economy, the TVA found its mandates conflicting: it could not simultaneously promote as much short-term economic development as it wanted to and act to reduce flood risk.

Thus, in catering to local opinion and promoting its own economic development goals, the TVA decided on another model: rather than calculating hypothetical future flooding, it would make planning estimates based on "regional floods" that had actually taken place during recorded history within sixty or one hundred miles of areas where development was proposed. As James Wright notes, this flood area was almost always "significantly smaller and [thus] . . . became the standard for floodplain regulations."<sup>32</sup> Through the 1950s and 1960s, the TVA produced flood studies for most of its service area. While they did not have any legal force, communities through the TVA service area as well as the TVA itself did begin to make use of these maps in zoning and planning. In 1959, the TVA even submitted a report to Congress calling for a national floodplain management agenda.<sup>33</sup>

On balance, the TVA's mapping effort made it harder to write actual useful, financially viable insurance policies: the TVA wanted to transfer water rather than risks. Since mechanisms used

for flood control tend to move water rather than making it vanish, they simply reduce the risks of flooding in some areas while increasing it in others. They do not transfer risks in any real sense. Flood insurance, on the other hand, shifts the financial risks associated with flooding rather than moving water itself. Although one could use the TVA's maps in setting relative insurance premium levels—they included risk data—these maps were not developed using the methodologies an insurer would use.

Coincident with the TVA's work—and partly supported by the “regional flood” techniques it developed—communities both inside and outside its service area began implementing formal floodplain zoning ordinances. These laws, today virtually universal in littoral settlements, specify when, how, and even if development can take place in an area likely to flood. Their enforcement by definition requires mapping where floods would take place. Thanks to the TVA's efforts, many communities now had these maps. Between 1955 and 1958, the number of governmental jurisdictions with floodplain zoning rose from eight to forty-nine.<sup>34</sup> Beginning with Washington State legislation in 1962, furthermore, states began implementing statewide flood control policies.<sup>35</sup> The growth of these mechanisms and the techniques for replicating them made it possible for more and more communities to implement floodplain ordinances.

At the same time, the United States Geological Survey in cooperation with the Corps of Engineers began producing a series of flood atlases and maps for areas outside the TVA's service area.<sup>36</sup> Although presented in a different form, these maps followed the TVA's pattern of basing predictions on floods that had actually taken place rather than on floods that might one day

take place. While maps did include “500 year floods” roughly equivalent to the Army Corps' “maximum probable flood,” the analysis included always emphasized mitigations against the “100 year” regional flood. This was essentially the same standard that the TVA used.<sup>37</sup>

By the mid-1960s the combination of these efforts quickly gave the United States the rudiments of a national floodplain map for its high-risk areas. Localities had data upon which they could write useful zoning ordinances to keep structures away from the worst flooding. Experts, furthermore, had calculated the relative risk of a variety of different types of floods. Based on this data, the government could write flood insurance without resorting to the impractical and uniform “postage stamp” premiums. Apparently, however, they did nothing to germinate the creation of a private market.

### Government Failure

In fact, the mapping effort provided fatally flawed data, distorted development patterns, and made market entry even more unattractive for private insurers.

Because they stemmed from the TVA's “regional flood” model, nearly all risk data compiled by the mid-1960s and the floodplain zoning ordinances that it inspired had a laughably fatal flaw: they assumed that flooding would never get worse than it had in the past. While government data existed, in other words, the great bulk of it was worse than useless for private insurers that were worried about whether risks were declining or increasing. A different data collection effort might have jump-started private insurance, but the existing data collection effort actually retarded it.

These mapping projects also created a false sense of security on the part of builders, businesses, and homeowners. While they impeded the most obviously unwise development—development that few lenders, even public ones, would have funded in the first place—early TVA-inspired efforts at floodplain zoning introduced a significant moral hazard problem. In many cases, they encouraged development in areas where it otherwise would not have happened. An enormous number of people moved into floodplain areas.

The data, furthermore, presented insurers with a massive political risk if they did enter the market. Even if an insurer were willing to spend millions of dollars to redo the TVA's work mapping floodplain areas, it would face major political problems if it sought to price risks in ways that differed markedly from the government data. Homeowners hit with high rates to insure property that the government had said was “safe” would likely have protested and quite probably managed to secure rate regulation favorable to their own interests. Because the zoning ordinances were new, furthermore, no useful experience-based risk data existed anyway, so insurers would have had to charge sizeable risk premiums to secure a return on investment. This made the market even more difficult to enter.

In a different situation, insurers might well have entered the market and priced policies using a variety of deductibles, risk premiums, and the like to protect themselves and market the product. But, as discussed above, given the nature of the regulatory climate, the growth the market was experiencing anyway, and the risks associated with government data collection, it became far less attractive for insurers to enter the market. Thus the market remained greatly underserved.

## The System We Have

The modern flood insurance system emerged in the wake of the TVA's mapping efforts. Its forms, as this section discusses, come from two major studies: one, written largely by Gilbert F. White, which proved prophetic about its likely problems, and the other, a far more political document, that proposed the specifics of the program. As initially passed, the National Flood Insurance Program required the use of a fair amount of risk-based data, but, in the first four years of the program's existence, a series of actions gutted the program's risk-based character altogether. Even potentially effective flood maps required under the program were essentially ignored. The program that exists today resulted: a program that takes risk into account but does so in a way far different than the private sector might.

## Toward the National Flood Insurance Program

In 1965, Hurricane Betsy scoured the Gulf Coast, leaving \$1.42 billion (\$9 billion in 2006 dollars) of damage in its wake. In a foreshadowing of 2005's much more severe Hurricane Katrina, “billion dollar Betsy” dumped millions of gallons of water into Lake Pontchartrain, breaching several levees and inundating much of New Orleans. Very soon after the hurricane, the Army Corps of Engineers began to focus explicitly on hurricanes, creating its own hurricane protection programs.<sup>38</sup> Congress, following a long-established pattern, quickly appropriated over \$500 million to repair the damage through the Southeast Hurricane Disaster Relief Act of 1965.<sup>39</sup> In his signing statement for the bill, President Lyndon Johnson described

what he saw as its objectives: immediate relief “to those victims of the hurricane who suffered losses for which no insurance was obtainable” and study of “programs which could be established to help provide financial assistance in the future to those suffering property losses in floods and other natural disasters, including but not limited to disaster insurance or reinsurance.”<sup>40</sup>

In fact, two studies emerged from the bill: a presidential commission of floodplain management experts, and a Department of Housing and Urban Development commission operating under the direction of the Senate’s Committee on Banking and Insurance. Both considered the creation of flood insurance programs and came to strikingly different conclusions about how the country should manage flooding. The former report proves prophetic about the problems of flood insurance; the latter had enormous impacts on the policies that Congress approved. Both merit exploration.

### **The White Commission**

Under the leadership of the omnipresent Gilbert White, the presidential commission (the Bureau of Budget Task Force on Federal Flood Policy) far exceeded its legislative mandate and in 1966 proposed a major rethinking of floodplain management policy that did not include a national flood insurance program in the short term.<sup>41</sup> Rather than simply considering the flood insurance question the president emphasized, the commission issued sixteen recommendations. Among other things, the commission called for greater attention to flood hazards in nearly all land-related federal programs, increased state and local cost sharing for flood-

control projects, and revised land acquisition efforts to prevent unwise floodplain development.<sup>42</sup> Its report emphasizes personal responsibility. “Floods are acts of God,” the commission writes, “flood damages result from the actions of men.”<sup>43</sup> Further, the commission expressed skepticism about the Corps’ work. “Individual beneficiaries from engineering protection do not, in many instances, bear an adequate share of the cost,” it states. On page after page, in fact, the report attacks the Corps’ efforts to prevent floods, pointing out that, since the 1936 Flood Control Act, the nation had spent nearly \$6 billion of federal money on levees and less than \$500 million on other measures to prevent erosion and redirect development.

Addressing the topic of flood insurance, the commission report says that a flood insurance system (implicitly private) is “theoretically ideal” but “further study must be completed” before taking any concrete action.<sup>44</sup> In particular, the commission recommended a five-phase program to pilot flood insurance beginning with the construction of new flood-risk models based on: “Hydrological and statistical studies [that] evaluate average annual damages and their variance, geographic distribution and required rates.” The studies, the commission notes, “also should investigate differences in land use, age of structures, type of hazard, local planning, and other factors as they affect the feasibility of insurance coverage.”<sup>45</sup> Only after rigorous measures to verify these studies with “a range of areas, types of structures, and other conditions” did the commission say that it would even be wise to “recommend a course of action.”<sup>46</sup> Contrary to what some authors say, White’s commission did not recommend that the government fund a program of national flood insurance. It proposed

that the government simply begin to collect the data the private sector likely would have eventually collected absent the Corps' persistent flood control efforts and the TVA's poorly conceived mapping schemes.

If implemented and coupled with land use policies that moved away from the TVA's "regional" flood model, it appears quite possible that the commission's proposal could have encouraged a private or largely private market for flood insurance in states where the regulatory climate allowed it.<sup>47</sup> Although the existence of the federal statutes creating a federal flood insurance program as well as ongoing Corps of Engineers efforts to prevent floods would certainly have retarded market entry, no federal regulation seems to have stood in the way of the creation of a private market. Some states almost certainly had regulations that might have retarded market entry, but it appears likely that market entry would have been possible somewhere. The studies envisioned—which included a long period of testing—would have allowed the setting of true risk-based premiums on floodplain land.

As White himself noted two years earlier, any flood insurance system would work best if information about flood coverage is "available and known to financial officers, [so that] they will automatically inquire about it each time a property is transferred or that a mortgage is negotiated. [And thus] force direct decision on flood adjustment."<sup>48</sup> Today's flood insurance system, as the next paper in this series discusses, still lacks an effective way to do just this.

Although it proves prescient in many respects, White's commission had rather little influence in the short term. The nature of America's building environment and the public demand for some sort of flood insurance made its leisurely pro-

posed timetables and ambivalence about flood insurance a political non-starter.

### The Evans Commission

Instead, the National Flood Insurance Program found itself shaped by a far more political commission under the leadership of resource economist Marion Evans. The commission, supervised by the Senate Committee on Banking and Insurance came to a strikingly different conclusion than White's commission.<sup>49</sup> Issued the same year as White's report, the Evans Commission report recommends "a national system of flood insurance . . . with government assistance or participation to the extent necessary" on the fourth page and then devotes the bulk of its length to exploring its theoretical benefits and detriments. Unlike White's caution to do numerous studies to determine risk-based flood premiums, the Evans report simply says, "It has been estimated that the Corps of Engineers with the assistance of other Federal and State agencies, could [map] all flood prone areas (coastal as well as riverine) in ten years at a total cost of \$60 million."<sup>50</sup> In making this estimate, the report cites a passage on page 22 of White's report that makes this estimate. In the context of White's report, however, it's quite clear that the maps produced are simply intended as a preliminary tool to help localities improve floodplain zoning and move away from the TVA-influenced model, not as a tool for setting insurance premiums (which White's commission believed wasn't possible in the short term). But the Evans report goes on to assume that these maps would be useful for setting risk-adjusted premiums while White's team—which included actual floodplain-management experts—knew

that they would provide little more than a rough baseline. The Evans report also suggests that the program be limited to communities that adopt floodplain zoning. Although it does not explicitly recommend a particular way of administering the program, the report's text has the most favorable assessment of the option that Congress would adopt in the end: "Private Insurance Industry Operates a Federal Flood Insurance Program."

### The Program

Congress's 1968 legislation<sup>51</sup> that passed in the wake of the Evans report established the outlines of the program that still exists today, what Rutherford Platt has aptly called "two programs rolled into one."<sup>52</sup> One part of the flood program (sections 1331 and 1332 of the original act) provides federally backed insurance against flooding; the rest of the act encourages municipal, county, and occasionally state level "permanent land use and control measures"—floodplain zoning—intended to direct flooding away from high-risk areas. The two parts work in tandem: only communities with floodplain zoning ordinances that meet administratively determined federal standards can get insurance. Although the statutory language allows the program to cover nearly anything, the 1968 legislation and all updates since then make the program's primary objective the coverage of single-family homes and apartment buildings with four or fewer units.<sup>53</sup> With a few small exceptions, this is all the program has ever covered. The legislation also sets a structure coverage limit (\$30,000 in 1969, \$250,000 today). The National Flood Insurance Program's initial authorizing legislation lets the administrator contract out nearly all sales and servicing activi-

ties through what is today called the "write your own" program, private insurers market, and service policies that the National Flood Insurance Program (NFIP) prices and underwrites.

The program had a number of limitations and flaws that seem obvious in retrospect. Neither the initial legislation nor any succeeding legislation places substantial limits on the number of times a property could be rebuilt. Structures built before 1970 in floodplain zoning communities were grandfathered into the program. Under the original program, the Corps of Engineers would produce data about the relative risk of property codified into Flood Insurance Rate Maps (FIRMs).<sup>54</sup> Although existing FIRMs have some serious problems (discussed in the next section), there's no reason to think that they are particularly biased. The methodologies used to create them, in fact, offer a reasonable semblance of those that private insurance companies would use, and, at least in the short term, it's likely that insurance companies would contract with the same private companies that currently work for the NFIP. Rather than attempt to interfere with the FIRMs themselves, forces seeking to create less stringent floodplain zoning have simply substituted other, less rigorous methods of determining flood risk. FIRMs themselves, however, have remained reasonably scientific. Within the last decade, in fact, Federal Emergency Management Agency (FEMA) staff has stood against the FEMA director's efforts to modify FIRMs to appease a politically connected developer.<sup>55</sup>

Although the Evans report said that floodplain studies for the nation could be completed within ten years, the act's section 1361 offered a leisurely fifteen-year timetable for preliminary mapping of the nation's floodplain. To pay for the insurance coverage, the act deposits premiums into a special

fund at the Treasury while authorizing an initial borrowing limit of \$1 billion to cover whatever premiums couldn't (currently \$22.3 billion). States and localities must enact zoning codes to take part but do not have any actual financial responsibility for the program.<sup>56</sup> To encourage purchase, section 1314 of the act denies any federal disaster relief to people eligible to purchase flood insurance who do not do so.

From an administrative standpoint, the program appears rather clever: it creates a strong local interest in floodplain zoning throughout the country without having the federal government impose it. Communities that did not want to take part in the program could avoid enacting ordinances, but would thus leave their citizens without any viable flood insurance coverage options. Since the program was voluntary and did not explicitly require any tax revenue or local match, nobody had a vested interest in opposing it.<sup>57</sup> In theory, the program contains a strong enforcement mechanism: the denial of disaster relief to anyone who can purchase flood insurance but does not.

This approach had obvious appeal and, in the main, had broad support in 1968. Although Congress's testimony suggested dozens of minor modifications, executives from the National Association of Independent Insurance Adjusters, State Farm, the National Association of Mutual Insurance Companies, Travelers, the Hartford Insurance Group, and dozens of other companies and organizations all expressed support for the program's broad outlines as described above. T. Lawrence Jones, the president of the American Insurance Association (AIA), made a typical comment: "The need for flood insurance is too great," he said, "and the present governmental flood relief programs too costly, wasteful,

and inefficient to permit further delay."<sup>58</sup> Very few organizations spoke against the program in principle; one of those—G. Richard Challinor, the president of a small wholly private Missouri flood insurance mutual insurer—warned that the subsidy structure proposed could "make it very much like running a national lottery or gambling at Las Vegas."<sup>59</sup> People like Challinor, who says in his testimony that his company has only fifty policyholders, seem rare. Only two private flood insurers testified and, according to Jones, none of the AIA's large members were writing flood insurance for homeowners in 1967.

Although it probably would have had to either borrow from the Treasury or engage in the profit-seeking investments common to private insurance carriers, well-designed FIRMs based on the research of the sort that White had recommended and the legislation envisioned could have made risk-based pricing a reality. Although White himself later expressed regrets about the program, the 1968 legislation is potentially consistent with his vision of piloting flood insurance toward true risk-based pricing. The NFIP could have simply delayed the issuance of FIRMs and refused to write policies until it had sufficient risk data. Political forces would have made things much messier in reality, but, in its outlines, the original 1968 program appears as sound as one could reasonably expect. But politics, of course, quickly got in the way.

### **The Flight from Risk**

As might be expected given its heavy requirements for risk-based pricing and the need to enact special ordinances and create special maps, the National Flood Insurance Program began

with a whimper. In 1968, the first year of the program's existence, only sixteen property owners purchased policies and only four sizeable communities (Fairbanks, Alaska; Alexandria, Virginia; Metairie, Louisiana; and Mobile, Alabama) developed the maps and zoning ordinances needed to take part. All, not surprisingly, were among the nation's most flood-prone. Progress seemed slow, and, in August of that year, Hurricane Camille slammed the Gulf Coast. Causing over \$1 billion in damage and killing 250 people, the storm resulted in another legislative frenzy: nobody with flood insurance suffered any storm damage and the program had done nothing to mitigate the damage.

In addition to sending a by-then customary relief package, Congress also changed the flood insurance program in Camille's wake. These reforms gutted the risk-based nature of the 1968 programs. Through Section 408 of the Housing and Urban Development Act of 1969 (PL 91-152)—passed without detailed hearings—Congress backed off the fundamental financial attributes of the 1968 design while leaving the insurance legislation intact. Under the law, Flood Hazard Boundary Maps (FHBMs) replaced FIRMs on a “temporary” basis to let communities enter the program without risk programs. Although they have a slightly different form, FHBMs are essentially updated versions of the TVA regional flood estimates: rather than modeling potential future floods, they simply record boundaries of actual floods that have taken place in the past. They provide an element of risk awareness but, unlike FIRMs, do not even vaguely resemble the types of data private companies might use. Deadlines for moving away from FHBMs and mapping the nation's entire floodplain were repeatedly extended and, even in 2007, some com-

munities continued to use FHBMs rather than FIRMs.<sup>60</sup> Many FIRMs, furthermore, remain significantly out of date, and, as a following paper will discuss, efforts to update them have fallen behind. Although a series of reforms in the 1990s limited communities' ability to do so, buildings insured under FHBMs that the FIRMs make uninsurable can still typically qualify for flood insurance indefinitely. This creates just what the insurance industry feared in 1957: a charity—an open-ended entitlement to be made whole after a flood—in the guise of insurance.

Even with these changes, flood insurance remained slow to catch on. Premiums in communities that drew FIRMs were almost always high largely because the first communities to enter the program were among those most at risk for flooding. In smaller communities, the cost of compiling FIRMs themselves added to the premiums. In the first three years of the program's existence, only about 500 communities signed up, and all but seventeen used FHBMs. In July of 1972, the National Flood Insurance Program simply cut premiums across the board by 37.5 percent to encourage participation.<sup>61</sup> Thus, even in communities using FIRMs, prices of flood insurance no longer correlated with risk in a fashion anywhere close to what the private sector would use. In the wake of this rate cut, not surprisingly, participation soared; by the end of 1973, over 2,850 communities had joined the NFIP.<sup>62</sup> Over 80 percent used FHBMs.<sup>63</sup> The program had lost its risk-based character altogether.

Although the program had begun to expand nicely, Congress again revisited it in 1973 and passed a series of reforms that proved the last gasp for the risk-based pricing model of five years earlier. Under the 1973 reforms (PL 93-288), Congress extended the “emergency” program, allow-

ing the use of FHBMs until 1980, and removed the provisions denying emergency relief to people eligible to purchase flood insurance who did not do so.<sup>64</sup> The following year, the flood program again cut insurance rates—an additional 10 percent for most policyholders but as much as 20 percent for some—to encourage participation in communities where few had signed up.

Although created as a reasonable insurance product in 1968, by 1973 the National Flood Insurance Program had given up its risk-based character altogether. By using Flood Hazard Boundary Maps, ending the denial of relief to people who failed to purchase flood insurance, and engaging in reckless across-the-board premium cuts, the program transformed itself from an insurance product to a voluntary tax intended to fund some portion of relief efforts. While private “write your own” carriers—private companies that serviced policies and reaped profits (or at least broke even) doing so while still leaving actual risks and pricing decisions to the government—continued to provide a patina of free market participation, the 1973 reforms snuffed out the last possibility that the private market would ever take an interest in the product.

The program’s evolution over the subsequent three decades would result in numerous changes and even some moves toward greater risk awareness. But flood insurance would remain a largely political creature disconnected from risk calculations.

### **Conclusion: Government Failure**

A recent study’s definition of “government failure” provides a good summary of how the National Flood Insurance Program emerged in the manner that it did:

Government failures appear to be explained by the self-correcting nature of some market failures, which makes government intervention unnecessary; by the shortsightedness, inflexibility, and conflicting policies of government agencies . . . officials initiate and maintain inefficient policies.<sup>65</sup>

The simple fact that insurance has become a political game also played a major role in the type of political structure that emerged. As Kenneth Meier notes, insurance in general is a high-complexity, low-salience issue: it’s difficult to understand and isn’t relevant to many people.<sup>66</sup> Furthermore, since most people do not live in areas where flood is a major factor in daily life, flood insurance simply doesn’t matter to a large number of people one way or the other, and, even for those whom it does impact, the issue is often too complex and tangential to spend much time on. The resulting system, therefore, probably does not reflect the will of a large number of people but, rather, those groups that decided they had some particular interest in it: the TVA, communities interested in development, and insurers that did not want to write flood insurance.

A real market failure, of a sort, did slow the emergence of flood insurance. As described above, the very nature of the market—its reasonably small size—and the need to prepare complex hydrologic studies in order to price conventional insurance meant that flood insurance would emerge more slowly than other types of insurance. Although it’s impossible to know for certain, these problems do not appear irremediable; in the long term, with the right database, no enormous problems seem to exist with writing flood insurance. Today, in fact, Chubb writes

flood insurance policies that cover damages above the \$250,000 limit of the National Flood Insurance Program, and USAA offers renters insurance that covers flood damages. In the long term, floods are not uninsurable.

However, four major factors resulted in this government failure: the Army Corps of Engineers' massive levee-building project, the Tennessee Valley Authority's mapping efforts and the spin-off zoning ordinances they spawned, market suppression via an enacted but unfunded flood insurance statute, and Congress's decision to remove risk-based pricing from the flood program to encourage participation.

To begin with, the Army Corps of Engineers' levee system gave Americans living in frequently flooded areas a sense that they had a right to near-total freedom from flooding, believing that the government could always keep them safe from the worst of Mother Nature. As discussed earlier, this same system of levees often served to reduce the value of insurance without resulting in a significant reduction in the premiums that insurance companies would have to charge to break even on underwriting. Simultaneously, it encouraged development that would not have taken place absent the levees. Congress's heavy use of earmarking to decide where levees were built—the 1936 Flood Control Act named 250 particular projects—ensured that nearly all levees got built as a result of political pressures rather than economic or scientific concerns. America's built landscape thus changed drastically with little regard to the danger of flooding involved.<sup>67</sup>

The Tennessee Valley Authority's regional flood modeling and the FHBMs that followed made an already bad situation worse. Rather than mapping based on the best possible hydrological engineering estimates, the TVA distorted mapping

to achieve its economic development objectives. This created an even larger moral hazard and resulted in even more development in areas that market forces probably would not have developed on their own. The spread of the TVA's own methods across the nation resulted in floodplain zoning ordinances that, in many cases, replicated the worst aspects of the TVA's efforts.

The 1956 Federal Flood Insurance Act further discouraged private participation in flood insurance markets. Since Congress never actually repealed the act, its very existence on the books made the expensive, risky process of market entry much less likely. Companies would not enter the market because they needed to invest a lot to enter in the first place, and, since the government was involved, they had good reason to think that a government program would replace any investments they made.

The TVA's efforts, while useless from the standpoint of private insurance, also made possible the setting of risk-aware policy premiums for the National Flood Insurance Program. These premiums made the program politically palatable for Congress while simultaneously making it a foregone conclusion that the program would lose money year after year. While the initial program passed in 1968 required superficially strong risk-based pricing, Congress quickly gutted the program's risk-based character by allowing the use of deeply flawed Flood Hazard Boundary Maps, removing penalties for failing to purchase flood insurance and allowing across-the-board premium cuts that undermined the program's financial stability.

It's impossible to know for certain, of course, how or even if the private market would have developed flood insurance products. The evidence relating to flood policy, however, indicates that the government efforts made the emergence of

private flood insurance—or even the slow development of a private system—more problematic. The political system saw a small market failure and greatly overcompensated. The failures of flood insurance, ultimately, are political rather than purely a matter of policy. America ended up with a system of political insurance that has placed an enormous burden on the Treasury and created a moral hazard. The creation of such a system, this paper has argued, did not result from inevitable, unavoidable market failures but, rather, from several deliberate, interconnected political actions.

Reforming the national flood insurance program will not be easy. In fact, many of the problems that plagued its early years continue to represent grave challenges. As of late 2009, the program stands \$19 billion in debt and, despite significant expenditure, still does not have up-to-date flood maps of the entire country. Many consider it a lost cause.

But it's not. Reform is possible. If NFIP is to survive and accomplish its original task of making America safer against floods, however, it must change and adopt many of the ideas that White and his colleagues proposed. The program should create truly accurate maps, get its fiscal house into order, and aim to discourage—rather than encourage—development in the most flood-prone areas. Congress and the program's administrators should also work to attract private capital to underwrite flood insurance.

Government-run flood insurance probably didn't need to exist in the first place, but now that it does exist, the nation ought to run it much better. Good administration, however, will not improve everything. In the long term, the government should get out of the flood insurance business altogether. Eventually, the market forces,

scientific knowledge, entrepreneurial skills, and private investments that Congress ignored when it created NFIP can give America a safe, secure, and environmentally sound form of protection against the nature's watery marauders.

## Notes

1. Previously published in a different form by the Competitive Enterprise Institute, August 2007.
2. Kenneth J. Meier, "The Politics of Insurance Regulation," *The Journal of Risk and Insurance* 58, no. 4 (1991): 700.
3. See, e.g., Rutherford H. Platt, *Land Use and Society: Geography, Law, and Public Policy* (Washington, D.C.: Island Press, 2004), 4–5.
4. As the chances of a disaster hitting an area approaches 100 percent, the premiums necessary become equal to the cost of the property insured. While it's still possible to market insurance policies in this situation, the insurance policies do not serve to transfer any risk.
5. Peter M. Lencis, *Insurance Regulation in the United States: An Overview for Business and Government* (Santa Barbara, CA: Greenwood Press, 2004), 19–25. 49 USC 15 1.
6. 49 USC 15 1.
7. Gilbert Fowler White, "Human Adjustment to Floods: A Geographical Approach to the Flood Problem in the United States" (research paper, University of Chicago, Department of Geography, 1942, 1945): 11–12.
8. In 1803, Congress passed America's first disaster relief bill, primarily a system of tax supports and tariff relief for Portsmouth, New Hampshire, following a disastrous fire there. "Bills and Resolutions, House of Representatives, 9th Congress, 2nd Session, Read the first and second time, and committed to a committee of the whole House, to-morrow. A Bill, For the relief of the sufferers by fire, in the tow of Portsmouth, New Hampshire." Available online at [http://memory.loc.gov/cgi-bin/query/D?hlaw:1:./temp/-ammem\\_aL20](http://memory.loc.gov/cgi-bin/query/D?hlaw:1:./temp/-ammem_aL20).
9. John M. Barry, *Rising Tide* (New York: Simon and Schuster, 1998).
10. White, "Human Adjustment to Floods," 1.

11. Author's calculations based upon data in A. Willis Robertson et al., "Insurance and Other Programs for Financial Assistance to Flood Victims: A Report from the Secretary of HUD as required by the Southeast Hurricane Disaster Relief Act of 1965" (Washington: U.S. Government Printing Office, 1966): 3.
12. See, e.g., Edward Overman, "Flood Peril and the Federal Flood Insurance Act of 1956," *The Annals of the American Academy of Political and Social Science* 309, no. 1 (1957): 98–106.
13. 15 USC 20.
14. White, "Human Adjustment to Floods," 201.
15. White, "Human Adjustment to Floods," 201.
16. A.M. Best and Company, *Best's Directory of Insurers and Underwriters*, 1953.
17. National Oceanic and Atmospheric Administration, "Hurricane History, 2007," <http://www.nhc.noaa.gov/HAW2/english/history.shtml>.
18. Harry Truman, "119—Special Message to the Congress Transmitting Proposed Legislation on a National System of Flood Disaster Insurance" (May 5, 1952), <http://www.presidency.ucsb.edu/ws/index.php?pid=14105>.
19. On the hurricane season see: Jerry D. Jarrell et al., "The Deadliest, Costliest, and Most Intense Hurricanes from 1900 to 2000," National Oceanic and Atmospheric Administration (2001), <http://www.aoml.noaa.gov/hrd/Landsea/deadly/index.html>.
20. For Eisenhower's request, see President, January 10, 1957, "Annual Message to Congress on the State of the Union," <http://www.presidency.ucsb.edu/ws/index.php?pid=11029>.
21. PL 566 (1955).
22. In theory, here is how it worked: the flood program would set a premium identical to the one a private company would charge for the same risk. The homeowner would pay 60 percent of that amount, the homeowner's state would pay 20 percent, and the federal government would pay 20 percent. The legislation did not provide guidance as to how this premium might be set.
23. The information about the proposed regulations is drawn from David Grossman, "Flood Insurance: Can a Feasible Program Be Created?" *Land Economics* 34, no. 4 (1958): 352–357.
24. Most existing private risk-transfer mechanisms, according to White, "Human Adjustment to Floods," 21, would not have insured these structures at all.
25. Edward Overman, "Flood Peril and the Federal Flood Insurance Act of 1956," *The Annals of the American Academy of Political and Social Science* 309, no. 1 (1957): 98–106.
26. American Insurance Institute, "Studies of Floods and Flood Damage, 1952–1955" (New York, 1956).
27. Overman, "Flood Peril," 105.
28. Gilbert White, "Choice of Adjustment to Floods" (research paper no. 93, University of Chicago, Department of Geography, 1964): 78. (White, it should be noted, did the actual research two years before the publication date.)
29. For a history of the TVA flood program, see James M. Wright, "The Nation's Responses to Flood Disasters: A Historical Account" (Association of State Floodplain Managers, 2000): 16–21. [http://www.floods.org/PDF/hist\\_fpm.pdf](http://www.floods.org/PDF/hist_fpm.pdf).
30. Wright, "Nation's Responses to Flood Disasters," 18.
31. The TVA, of course, faced no market forces to make sure it got these estimates right. Given the extreme difficulty of making them—even today—it is likely that initial estimates would not have been very good.
32. Wright, "Nation's Responses to Flood Disasters," 19.
33. United States Senate, "A Program for Reducing the National Flood Damage Potential: Memorandum of the Chairman to Members of the Committee on Public Works." 86th Cong., 1st sess., August 31, 1959.
34. American Institute for Research et al., "A Chronology of Major Events Affecting the National Flood Insurance Program" (FEMA, 2002): 8.
35. American Institute for Research, "Chronology of Major Events," 27.
36. The first in the series: *Floods of the Kansas River, Topeka, Kansas, in 1935 and 1951: U.S. Geological Survey Hydrologic Investigations, Atlas HA-14* (Washington, D.C.: U.S. Government Printing Office, 1959).
37. More research is needed to determine the exact shape of the TVA's influence on the USGS process for developing maps.
38. Greg Brouwer, "The Creeping Storm," *Civil Engineering* 73, no. 6 (2003), <http://www.pubs.asce.org/ceonline/ceonline03/0603ce.html>.
39. 79 Stat. 1301 (1965).

40. Lyndon Johnson, “605—Statement by the President Upon Signing the Southeast Hurricane Disaster Relief Act of 1965,” November 8, 1965.

41. Task Force on Federal Flood Control Policy, *A Unified National Program for Managing Flood Losses*, August 10, 1966 (Washington, D.C.: U.S. Government Printing Office).

42. Task Force, *Managing Flood Losses*, 1–2.

43. Task Force, *Managing Flood Losses*, 14.

44. Task Force, *Managing Flood Losses*, 38–39.

45. Task Force, *Managing Flood Losses*, 39.

46. Task Force, *Managing Flood Losses*, 38.

47. As noted above, more research is needed on the nature of state regulatory climates.

48. White, “Adjustment to Floods,” 78.

49. U.S. Congress, *Insurance and Other Programs for Assistance to Flood Victims: A Report from the Secretary of Housing and Urban Development as Required by the Southeast Hurricane Disaster Relief Act of 1965*, 89th Cong., 2nd sess. (Washington, D.C.: U.S. Government Printing Office, 1966).

50. Congress, *Programs for Assistance*, 128.

51. H.R. 11197, 1967, PL-90 448 codified in Title XII of the Housing and Urban Development Act. Note that nearly all significant hearings on the program took place during 1967 and both chambers passed the great bulk of the program. Despite agreement in principle, several differences between the House and Senate bills held up establishment of the program for a year.

52. Platt, *Land Use and Society*, 391.

53. Separate SBA programs provide low-interest loans to small businesses damaged by flood.

54. Today, private companies create the FIRMs under contract with the National Flood Insurance Programs. The process seems reasonably immune from political pressure because the contracts for writing the FIRMs are assigned by means of random selection and even the FEMA administrator cannot overturn FIRMs. Joseph Albaugh, in fact, tried to do so during early 2001 and found himself rebuffed and publicly embarrassed.

55. Michael Grunwald, “For S.C. Project, a Torrent of Pressure; Developer Wins Reprieve from FEMA on \$4 Billion Project in Columbia Flood Plain,” *The Washington Post*, July 13, 2001.

56. As Overman *supra* discusses, many states would have had a difficult time participating in a program that so

blatantly provided grants to purely private homeowners.

57. It’s interesting to note that no environmental groups appear to have testified for or against the program.

58. U.S. Congress, Committee on Banking and Insurance, “Hearings Before the Subcommittee on Banking and Insurance on H.R. 11197,” 90th Cong., 1st sess., 166.

59. Congress, “Hearings on Banking and Insurance,” 74.

60. American Institute for Research, “Chronology of Major Events,” 14.

61. American Institute for Research, “Chronology of Major Events,” 15.

62. American Institute for Research, “Chronology of Major Events,” 16.

63. American Institute for Research, “Chronology of Major Events,” 18.

64. It did, however, continue to deny participation in some particular programs—such as SBA loans—to flood-insurance-eligible individuals who did not purchase. Even this requirement, however, has been obeyed only in the breach.

65. Clifford Winston, *Government Failure Versus Market Failure: Microeconomics Policy Research and Government Performance* (Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies, 2006), 4.

66. Meier, “The Politics of Insurance Regulation,” 19.

67. As Gilbert White observed, lenders’ lack of information about flooding also made it hard to include it in their calculations.

## References

- American Institute for Research et al. 2002. A Chronology of Major Events Affecting the National Flood Insurance Program. 8.
- Barry, J. M. 1998. *Rising Tide*. New York: Simon and Schuster.
- Best’s Directory of Insurers and Underwriters*. 1953. A.M. Best and Company.
- Brouwer, G. 2003. The Creeping Storm. *Civil Engineering* 73 (6). <http://www.pubs.asce.org/ceonline/ceonline03/0603ce.html>.
- Eisenhower, D. D. 1957. Annual Message to Congress on

- the State of the Union. January 10. <http://www.presidency.ucsb.edu/ws/index.php?pid=11029>.
- Floods of the Kansas River, Topeka, Kansas, in 1935 and 1951: U.S. Geological Survey Hydrologic Investigations*. 1959. Atlas HA-14. Washington, D.C.: U.S. Government Printing Office.
- Grossman, D. 1958. Flood Insurance: Can a Feasible Program Be Created? *Land Economics* 34 (4): 352–357.
- Grunwald, M. 2001. For S.C. Project, a Torrent of Pressure; Developer Wins Reprieve From FEMA on \$4 Billion Project in Columbia Flood Plain. *The Washington Post*, July 13.
- Jarrell, J. D. et al. 2001. The Deadliest, Costliest, and Most Intense Hurricanes from 1900 to 2000. National Oceanic and Atmospheric Administration. <http://www.aoml.noaa.gov/hrd/Landsea/deadly/index.html>.
- Johnson, L. 1965. 605—Statement by the President Upon Signing the Southeast Hurricane Disaster Relief Act of 1965. November 8.
- National Oceanic and Atmospheric Administration. *Hurricane History, 2007*. <http://www.nhc.noaa.gov/HAW2/english/history.shtml>.
- Overman, E. 1957. Flood Peril and the Federal Flood Insurance Act of 1956. *The Annals of the American Academy of Political and Social Science* 309 (1).
- Platt, R. H. 2004. *Land Use and Society: Geography, Law, and Public Policy*. Island Press.
- Robertson, W. et al. 1966. Insurance and Other Programs for Financial Assistance to Flood Victims: A Report from the Secretary of HUD as required by the Southeast Hurricane Disaster Relief Act of 1965. Washington, D.C.: U.S. Government Printing Office.
- Studies of Floods and Flood Damage*. 1952–1955. New York: American Insurance Institute.
- Task Force on Federal Flood Control Policy. 1966. *A Unified National Program for Managing Flood Losses*. Washington, D.C.: U.S. Government Printing Office.
- Truman, H. 1952. 119—Special Message to the Congress Transmitting Proposed Legislation on a National System of Flood Disaster Insurance. May 5.
- U.S. Congress. 1966. *Insurance and Other Programs for Assistance to Flood Victims: A Report from the Secretary of Housing and Urban Development as Required by the Southeast Hurricane Disaster Relief Act of 1965*. 89th Cong., 2nd sess. Washington, D.C.: U.S. Government Printing Office.
- U.S. Congress, Committee on Banking and Insurance. 1967 Hearings Before the Subcommittee on Banking and Insurance on H.R. 11197. 90th Cong., 1st sess.
- U.S. Senate. 1959. A Program for Reducing the National Flood Damage Potential: Memorandum of the Chairman to Members of the Committee on Public Works. U.S. Senate, 86th Cong., 1st sess., 31 Aug.
- White, G. F. 1942. Human Adjustment to Floods: A Geographical Approach to the Flood Problem in the United States. University of Chicago, Department of Geography, Research Paper.
- White, G. 1964. Choice of Adjustment to Floods. University of Chicago, Department of Geography, Research Paper No. 93.
- Winston, C. 2006. *Government Failure Versus Market Failure: Microeconomics Policy Research and Government Performance*. Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies.
- Wright, J. M. 2000. The Nation's Responses to Flood Disasters: A Historical Account. Association of State Floodplain Managers. [http://www.floods.org/PDF/hist\\_fpm.pdf](http://www.floods.org/PDF/hist_fpm.pdf).

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