

The National Flood Insurance Program in Vermont: Mad River Valley Case Study



Conclusions

The average Mad River Valley assessed property values line generally seems to correspond with the trends in the average value of homes actually sold for the Northeastern region. In 2010, the average Mad River Valley assessed property values begin to decline. This might be attributed to Hurricane Irene, which caused widespread flooding in Vermont and also caused a great deal of damage to many properties in the Mad River Valley. Based on our interviews, it seems that the NFIP and FEMA do not communicate effectively with local zoning administrators. Initially, this study set out to examine the relationship between NFIP premium rate increases and assessed property values. Due to our limited knowledge, time, and resources, we were not able to conduct a regression analysis on our data, control for many of the variables in a similar study (Holway, Burby 1990), or develop a hedonic pricing model, which greatly limits the conclusions that can be drawn from that part of the study. Instead, in this section, we will focus on conclusions arising from other aspects of this study.

FEMA put enforcement mechanisms in place to ensure performance, such as the mandatory flood insurance purchase requirement of any federally backed mortgage in a SFHA or requirements of certain disaster relief recipients to purchase flood insurance for future floods (or risk receiving no disaster aid in future floods according to the Flood Insurance Reform Act of 1994)¹. Despite these efforts, participation remains low. The Vermont Division of Emergency Management and Homeland Security reports that only 2% to 3% of property owners in the state have flood insurance². FEMA reports that, as of April 30th 2013, there were 4,504 flood policies in Vermont, 2,808 of which belonged to policyholders located in high-risk areas³. After a flood in August 1998 that caused considerable damage in northern Vermont, FEMA found that 84% of the homeowners in flood-prone areas did not have insurance despite 45% of the owners falling under the relevant criteria for mandatory flood insurance⁴. Our interviews suggest the lack of effective communication between FEMA's flood mapping staff, insurance agents, property owners, and local zoning officials in charge of permitting often leaves flood plain property owners unaware of their need for NFIP permits. Banks and government sponsored enterprises also fail to enforce mandatory NFIP participation for appropriate homeowners⁵. Additionally, individuals in flood prone areas often misunderstand that a "100 year flood" really means there is an annual 1% chance of flooding and these events can occur more than once within 100 years⁶. When property owners fail to recognize the actual probability of a flood and its relationship with the risk-spreading function of insurance, they are less likely to see flood insurance as a worthy investment. Property owners' flood risk perception and propensity to purchase flood insurance is also easily affected by how recent the last flood occurred in the given area and the severity of that flood⁷.

The authors strongly encourage further research on how the NFIP affects property values given the upcoming NFIP premium rate increases due to the Biggert-Waters Act. The NFIP could be a strong policy tool to discourage people from living in the floodplain, which is all the more important knowing that climate change will likely increase the frequency of flooding. The authors believe that it would be of great value to use the models and methodology developed Charles Nye in his thesis to examine how NFIP premium rates have affected property values during the 2000's and into the 2010's.

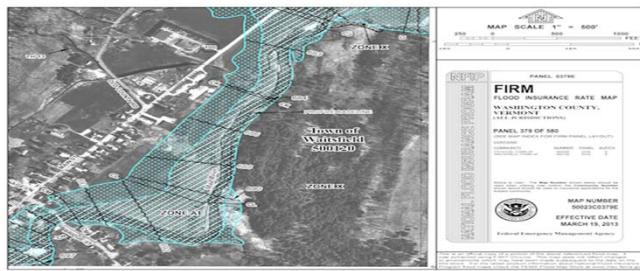


Photo: Damage to a home after photo: Jeff Magid, @jeff

Biggert Waters Flood Insurance Reform Act of 2012

The NFIP does not operate under traditional insurance industry practices of fiscal solvency that require the insurer to have a mandatory amount of reserves as a condition of their authorization to sell insurance in a given state. Instead, it's budget is connected to FEMA's and in turn the federal government. Due to the program's mounting debt and rather challenging future regarding projected climate change impacts, the Obama administration passed the Biggert Waters Flood Insurance Reform Act of 2012 on July 6, 2012⁸. Among various provisions, Biggert Waters aims to address the program's debt issues by phasing in a series of premium rate increases over the next few years, 25% a year or so⁹. The phase ins do not extend to certain situations such as second homes or if remapping takes place, in which case the program is accelerated and bills have to be paid up front. Biggert Waters will eliminate subsidies which kept premiums artificially low but affordable¹⁰. It is expected that aggressive remapping will subject more Vermonters to mandatory flood insurance⁸. In Vermont NFIP premiums, although they are determined on an individual basis, were \$100 to \$300 in low risk areas and about \$600 or \$700, even \$1000 depending on location, in high risk areas⁹. For Vermont Biggert Waters, attempting to reflect actual risk in its rates, means rates are climbing to the \$5000 to \$15000 range⁹.

Biggert Waters has been met with substantial opposition from concerned homeowners across the country and the Congressmen and Senators that represent them and as a result has been delayed from its October 1st, 2013 start date. Vermonters (and concerned homeowners around the country) fearfully point to the devastating economic affects caused by the phase in of substantially higher actual risk rates as well as the potential for these increases to be pass phase ins and immediately take place upon sale of a home, a lapse in a policy, new construction, or a new flood¹⁰. Homeowner and constituent concerns in Vermont focus primarily on the law's potentially devastating affects on property values of flood plain properties and the financial hardship and mortgage defaults the resident homeowners would face¹⁰. In response to these concerns, the Senate passed the Homeowner Flood Insurance Affordability Act in January and the House subsequently passed an updated version called the Grimm-Waters bill which is expected to be accepted in the Senate. The bills aim to address the concerns of homeowners by preventing FEMA from raising the average rates above 15% for a class of properties and from raising rates on individual policies as a whole above 18% per year¹¹. The bills also remove the immediate rate increase triggers (by-passing phase ins) due to the sale of a home, a lapse in a policy, new construction, or a new flood map¹¹. Additionally, the bills reinstate grandfathering (which the previous Biggert-Waters Act removed), refunds homeowners who overpaid, and requires FEMA to minimize the number of policies with annual premiums that exceed one percent of the total coverage provided by the policy¹.



Example of DFIRM map

Introduction

In accordance to the "general welfare" and "interstate commerce" clauses of the constitution, Congress assumes the responsibility to foster the nation's economic well-being¹. One criteria of economic well-being is the efficient and adequate functioning of insurance markets for natural disaster risk. In 1965, Hurricane Betsy caused widespread flooding and associated damages of \$1.5 billion along Louisiana's coast². In the aftermath of Betsy, the inadequacy of the private insurance market to cover flood losses became clear. Due to the high expected risk affiliated with living in a floodplain, private insurers are unlikely to provide flood insurance at generally affordable rates, let alone at all. In response to the lack of profit motivation for the private sector to provide suitable coverage, the US government created the National Flood Insurance Program (NFIP) to correct this market failure¹. NFIP possesses the authority to regulate the nation's floodplains through mandatory land use controls and building requirements that communities located in designated Special Flood Hazard Areas (SFHA) must adopt and enforce for property owners to be eligible for coverage¹. Nearly 90% of Vermont's 251 municipalities currently participate in the NFIP³. Approximately 17% have adopted regulations that protect river corridors or floodplains³. Towns in Vermont comply with the NFIP's land management requirements in order for their residents to be eligible for flood insurance. After towns make a decision to participate in the NFIP, state floodplain managers review and comment on the permit, with the ability to amend it, before a zoning administrator officially grants it. In the Mad River Valley, where our research was focused, Waitsfield, Fayston, and Warren all clearly define their compliance and cooperation with the NFIP within their most recent town plan documents.

As required for municipal participation in the NFIP, Waitsfield has adopted flood hazard area regulations to limit development within flood hazard areas and in 2010 implemented new floodplain and fluvial erosion hazard regulations and maps as mandated by FEMA and NFIP. Due to the increasing cost of taxpayer-funded flood recovery, the town is also committed to developing and implementing a flood hazard mitigation plan⁴. Warren's town plan has adopted regulations for flooding to allow property owners to obtain NFIP insurance but notes that flooding can occur outside Special Flood Hazard Zones due to human activities⁵. The Fayston town plan does not delineate a separate flood hazard district in zoning but instead just adopted flood hazard area regulations which apply to the special flood hazard areas as identified on Flood Insurance Study, Floodway map, and Flood Insurance Rate Map (FIRM) provided by FEMA⁶. The town plan recognizes that FIRM does not map all areas of possible flooding, incorporate the change in watershed hydrology due to development that has taken place over the last 25 years, map localized drainage issues, or consider possible erosion of the stream channel during flood events.

In Charles Nye's extensive dissertation, "Into Harm's Way: The Relationship Between Homeowners' Insurance Premiums, Property Values, and Natural Hazards", he theoretically and empirically shows that there is moderate support for an inverse relationship between insurance premium rates for homes and property values⁷. We seek to confirm his hypothesis that an increase in NFIP insurance premium rates will cause a decrease in the assessed property values of homes. This study will be specific to the Mad River Valley. To complement the assessed property value data, we will also conduct interviews with local actors in the Mad River Valley.

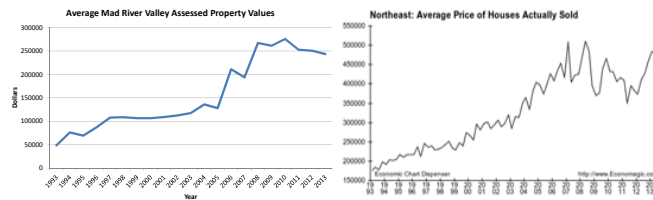


Mad River Valley Flooding Damage During Hurricane Irene
Image Source: VT Agency of Natural Resources

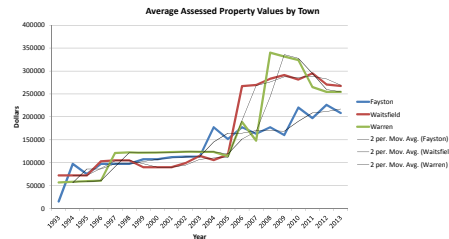
Methods

A methodology was developed to assess the impact of NFIP rate increases on property values. The Mapping and Planning Coordinator for the Watershed Management Division of VT DEC, provided us with the addresses of properties located in the NFIP SFHA's for Moretown, Fayston, Waitsfield, and Warren. Due to the low sample size of this list, the amount of property turnover would yield a low number of market-determined property values. Therefore, it was determined that we would use assessed property values, as the values were more readily available in local town offices. We then identified the parcel number for each property and used this information to record the property values for every year from 1993 until 2013. Throughout two weeks in August we traveled to the Fayston, Waitsfield, and Warren town offices where either the town clerk or zoning administrator directed us to the grand lists which are published annually. Rather ironically, Moretown's grandlists from 2011 and earlier were severely damaged in Hurricane Irene and were inaccessible. We tracked the parcel numbers of the floodplain properties throughout the 1993 through 2013 grandlists for each town and recorded the property value for each year. Our statistical analysis is limited to averaging the property values for each town and collectively, as well as taking the moving average for individual towns. We then graphed these results and compared these to available graphs on the average value of homes actually sold in the Northeast region of the United States. The moving average across all towns was not taken due to the average across all towns being a relatively smooth line of fit. We also looked for trends based on our knowledge of when floods occurred and when NFIP rate increases occurred. In addition to our analysis of assessed property values, we also interviewed local actors in the Mad River Valley to get a better sense of how the NFIP operates in Vermont and specifically in the Mad River Valley.

Results



The average cross-town assessed property values when plotted on a graph is generally upward sloping until 2010. The same can be said of Waitsfield and Warren town averages when plotted on a graph. Fayston's average assessed property values are upward sloping throughout the time period examined.



The Waitsfield zoning administrator, in an interview with us, revealed that FEMA public assistance and NFIP permitting are not coordinated well. She explained that the FEMA public assistance employees will come through and delineate flood zones without communicating with her to make sure there is a NFIP permit. She also noted that they often fail to alert the property owners they are required to purchase flood insurance.

On July 29th, 2013 we interviewed a local insurance agent, who asked not to be identified, regarding his relationship with FEMA and selling their NFIP policies. According to the agent, the average NFIP premium in the Mad River Valley is \$1,000. At the time, he had 13 NFIP policies out of 900 total customers so NFIP policies accounted for less than 1% of his customers. He told us that selling NFIP policies is more work than benefit due to the low commission he earns per insurance policy. He does not have contact with FEMA or the NFIP and instead deals with 2 or 3 of the NFIP's designated insurance companies who are paid a fee to sell the policies.

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