

FEMA's NFIP in Vermont



Danny Baker and Justin Barton

Project Overview

- Literature review, annotated bibliography
- Fieldwork, interviews, and data collection
- Data Analysis
- Results, discussion, conclusion

Study Area

Mad River Valley: Waitsfield, Fayston, and Warren (in blue)

Moretown Excluded



Research Questions and Goals

- Synthesize and analyze literature to frame the NFIPs current status on a national scale and its implementation and operation in Vermont
- Empirical study: How are property values affected by their location in FEMA's designated special flood hazard areas (SFHAs)?
- What is the regulatory and implementation structure surrounding the NFIP in the Mad River Valley?

The Literature

- Comprehensive annotated bibliography and literature review, approximately 35 sources
- Variety of sources: scholarly articles, news articles, FEMA documents, field interviews
- Topics addressed in literature: history of the NFIP, effects of climate change on NFIP, reasons for low market penetration, flood insurance rate maps (FIRMs), effects of 2012 Biggert Waters Act, empirical studies on flood plain property values

Biggert Waters Flood Insurance Reform Act of 2012

- Phases out subsidies for pre-FIRM second homes, business properties, and severe repetitive loss properties within five years
- Requires FEMA to establish an ongoing mapping program to review, update and maintain flood insurance rate maps
- Increased enforcement of mandatory NFIP purchase requirements
- Requires premium rate adjustment on any property located in an NFIP participating area to accurately reflect current risk

Past Studies

- Every study similar to ours uses hedonic regression modeling which decomposes the item being researched into its constituent characteristics, and obtains estimates of the contributory value of each characteristic. This requires that the composite good being valued can be reduced to its constituent parts and that the market values those constituent parts.
- The studies of Damianos and Shabman 1976; Muckleston 1983 both found that floodplain regulations (requirements to join the NFIP) had no effect on property values but, like our study, both of these were focused on developed residential properties.

Past Studies Continued

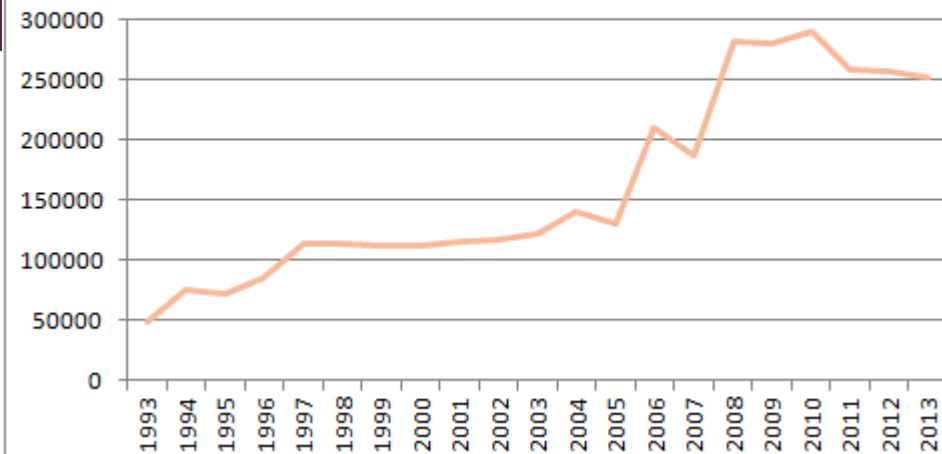
- Holway and Burby (1990), a study focused on land values, found that NFIP regulations were effecting land values but that its effect was amplified or subverted by local land-use decisions.
- Dehring (2006) found that NFIP regulations also reduced residential land values.
- Other studies were done on the effect of flood hazards on property values, most of which found that flooding decreases the demand for properties located and therefore decreases their value.

Data and Methods

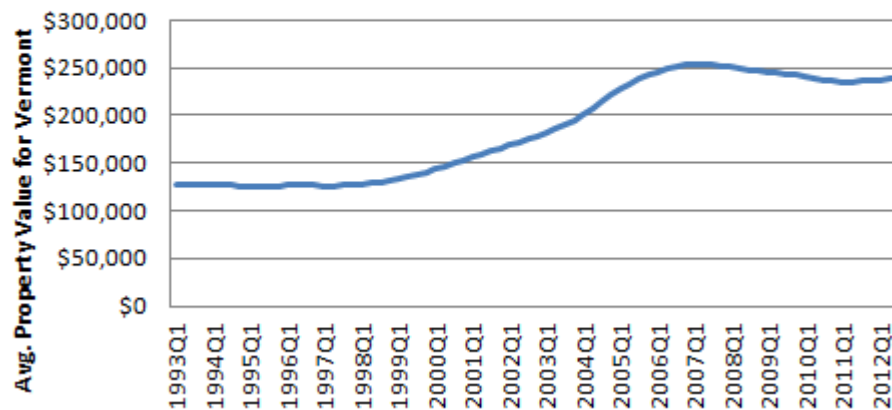
- We obtained a list of properties located in the Mad River Valley which are located in the NFIP's SFHA. We then found the appraised property values for these properties over the last 20 years and got any zoning permits which were issued for the properties in that period of time. We have yet to do analysis on this data yet.

Initial Results

**Avg. Prop. Values in Mad River Valley
Floodplain**



**Avg. Market Value for Properties in
Vermont Over Time**



Discussion

- We understand that our study will be extremely simplistic and we do not take into account many factors ranging from the effect recent flooding has had on the appraised values to the location, size, and characteristics (such as how much of the property is located in the floodplain) of the individual parcels.

Discussion

- Lack of communication between FEMA officials and local zoning administration
- NFIP has a nationally low market penetration and this is no different in the Mad River Valley
- FEMA has no contact with the private insurance agents who sell their policies in the Mad River Valley
- Premium hikes will have not taken place yet and some will not happen until the FIRMs are updated