Short Course on Floodplain Management

A Reconnaissance Study on the Market Impacts on Elevated Homes in Known Floodplains
City of Snoqualmie Case Study

By Ron Throupe, Bob Freitag, Rhonda Montgomery
Market Impacts on Elevated Homes

SUMMARY OF CONCLUSIONS:

BACKGROUND SNOQUALMIE:

DISCUSSION:

The process of retrofitting, Value added, Perception through time

Return on investment.

Policy Implications

METHODOLOGY:

QUESTIONS:
What effect does elevating a home have on the selling price and time on market?

- The market price applied a penalty to non-elevated homes within the floodplain. This was reflected in both times on market and on selling price.

- The market price of elevated homes was higher than non-elevated homes with the difference in price ranging 25% to 75% of the cost of the retrofit.

SUMMARY AND CONCLUSIONS:
BACKGROUND: The City of Snoqualmie
BACKGROUND: The City of Snoqualmie
Floodplain - Floodway
BACKGROUND: The City of Snoqualmie

- Non elevated, elevated and new elevated homes.
DISCUSSION: The Process of Retrofitting
DISCUSSION: The Process of Retrofitting
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- Minimal value added -- no additional floor space.
DISCUSSION: The Process of Retrofitting

Minimal value added -- no additional floor space
DISCUSSION: The Process of Retrofitting

- Value added -- Garage
DISCUSSION: The Process of Retrofitting

- Value added -- Floor space added above garage/carport.
Retrofitted
DISCUSSION: Elevation at time of construction
Market Impacts on Elevated Homes

- Methodology
Homes Elevated and Sold
Market Impacts on Elevated Homes

The results suggest that:

✓ When elevated homes are not perceived as being out of character with the neighborhood

✓ Non-elevated flood prone homes are discounted and

✓ The cost of the retrofitting approaches the value of the discount from expected market prices.
Market Impacts on Elevated Homes

Questions:

• Is what is experienced in Snoqualmie true for other Riverine floodprone communities - coastal communities?
• When do elevated homes begin to reflect the larger non-floodprone community - are there significant benchmarks, what factors are involved.
• What factors are considered by buyers - sellers?
• What affect do appraisers have?
• What affect do real estate agents have?
• Buyer and seller perceptions?
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The Bottom Line

• The dollar value of home elevation reflected in the market is 50% of the average cost of elevation in today’s dollars.
• If a home cost $35,000 in today’s dollars to elevate a home,
• The home would return on average $17,463 dollars in a market value adjustment.
• Most of the homeowners elevated their homes through HMGP funds and were required to pay between 12.5 and 25 percent of the cost of elevation.
• Conclusion – elevation is a sound investment for the property owner.
BACKGROUND: The City of Snoqualmie
BACKGROUND: The City of Snoqualmie

- Non elevated, elevated and new elevated homes.
Retrofitted
Snoqualmie, WA

- History of flood events
- Participates in the National Flood Insurance Program, NFIP
- Hazard Mitigation Grant program, HMGP
- Flood Mitigation Assistance Program, FMAP
- State sponsorships
Literature

- Flood zone discounts
- Knowledge of buyers of the floodplain
- Flood risk vs. actual flooding
Preliminary Research

- Value added
- Elevations perception
- Market acceptance
- Public Policy implications
Data

- Sales data from Jan 1998 to June 2002
- 240 sales
- Reduced sample, Ridge Community
- Tom
- Elevation variable
## Rational Market Prices

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<th>A</th>
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<tbody>
<tr>
<td></td>
<td>Non floodplain home</td>
<td>Floodplain home -- Pre FIRM, <strong>not elevated</strong></td>
<td>Floodplain home -- Pre FIRM, <strong>elevated</strong></td>
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<tr>
<td><strong>Cost bases market price of home = $195,500 (145/sq.ft)</strong></td>
<td>Cost bases market price = <strong>$191,000</strong> (&quot;A&quot; - Cost of Flood Insurance or (195,500 - 4,500))</td>
<td>Cost Bases Market Price = <strong>194,000</strong> (&quot;A&quot; - Cost of Flood Insurance or (195,500 - 1,500))</td>
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<td>($360/Yr for 30yrs at 7% = $4,500)</td>
<td>($120/Yr for 30yrs at 7% = $1,500)</td>
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## Market Prices Adjusted by Reconnaissance Study Results.

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<tr>
<td><strong>Non floodplain home</strong></td>
<td>Cost bases market price of home = ( ($195,500) ) ( (C \times \text{cost of Flood Insurance}) )</td>
<td>Cost bases market price of home = ( $177,000 ) (&quot;A&quot; - Cost of Flood Insurance - perception of risk)</td>
<td>Cost bases market price of home = ( $194,000 ) (&quot;A&quot; - Cost of Flood Insurance - perception risk + betterments)</td>
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<tr>
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<td>( (194,000 + 1.500) )</td>
<td>( ($194,000 - $17,000 = $177,000) )</td>
<td>( ($120/Yr for 30yrs at 7% = $1,500) )</td>
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Results

• $17,463 value for elevation
• Represents approx 50% of costs to elevate
Policy Implications

The state and federal agencies that support floodplain management can learn from this investigation in several ways.

- They can be confident that the moneys spent on elevation created usable dwellings.
- The sales price gain from elevation is within the cost of construction.
- The State of Washington is prevented from providing public investment for private gain. The community at large benefits and it represents a sound investment for the federal government lowering future insurance claims and demands on FEMA personnel.
- Coordination of federal and state programs to expedite elevation may be warranted. Although this has been a successful program in Snoqualmie, less than 15% of the homes affected have been elevated.
Further Study

• Additional communities
• Buyers depth of knowledge
• investigation of value added