What is Flood Safety Worth?

Eliminate the mystery of financing risk reduction in new building.

Louisiana Floodplain Management Association

36th Annual Technical & Business Conference

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“What we have here is a failure to communicate.”

Flooding can occur:
- In a desert
- In the mountains
- In the city
- In the suburbs
- Outside the Special Flood Hazard Area
- Above the Base Flood Elevation
Flood Insurance

- Is REQUIRED for every structure in the floodplain with a federally backed loan
- May be required outside the SFHA by lenders
- Mortgage companies have failed to require as many as 20-40% of borrowers to get or maintain insurance
- Anyone in an NFIP participating community not explicitly excluded CAN buy flood insurance for a price
- Private insurance is available
- Grandfathering may stabilize a premium, downplaying the risk and potential costs to the buyer
Building to the base flood elevation

- New construction
- Substantial improvement
- Substantial damage
Encouraging better new building or retrofitting/mitigation

- Individual discounts for freeboard

Under the Flood Insurance Reform Act of 2012, you could save more than $90,000 over 10 years if you build 3 feet above Base Flood Elevation.*

- Premium at 3 feet above Base Flood Elevation: $4,270/year
- Premium at Base Flood Elevation: $14,100/10 years
- Premium at 4 feet below Base Flood Elevation: $9,500/year

*Annual flood insurance: $1,050 without freeboard, $302 with 3' of freeboard.
Encouraging better new building or retrofitting/mitigation

- Community Rating System provides community-wide flood insurance discounts for:
  - Freeboard
  - Limits on building in the SFHA
  - Limits on fill/compensatory storage in the SFHA
Private Efforts to Reduce Risk

 Builders experimenting with freeboard to:
  ● Add value to the client through lower costs
  ● Distinguish their structures from others
  ● Enable more efficient use of property by building an elevated foundation

 Building to the safer standard is a loss of profit

 May need grants to pay for the difference in cost while the market adjusts to reflect the safety value
Private investment in flood safety not supported by current lending

- In many cases there is an upfront cost to the buyer
- Mortgage companies and appraisers show no recognition of the increased cost or value of flood safety other than presence in or out of the SFHA
- There is no valuation increase in appraisals for extra safety margins that reduce risk
Storm Safety Impact on Value

- Properties in the SFHA
  - Have a value 6-7% less than other zones based on comp sales
  - This is based on the flood zone, not compliance or additional safety
  - Lack of storms decreases difference between flood zones

- Fortified Home™ construction for wind
  - Adds ~7% value to a structure according to studies

- No studies completed to identify a value of the increased flood safety of a structure
Freeboard Amenity Valuation

- Include flood safety in the appraisal to enable lending
- Capture value of flood safety
- Stable, quantifiable, and relatable to mortgage

<table>
<thead>
<tr>
<th>Home with 1’ Freeboard</th>
<th>Monthly mortgage payments $1,266.71</th>
<th>Monthly flood insurance + $793.58</th>
<th>Total monthly cost = $2,060.29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home with 3’ of freeboard</td>
<td>Monthly mortgage payments $1,276.85 (+10.14)</td>
<td>Monthly flood insurance + $564.58 (-229)</td>
<td>Total monthly cost = $1,841.43 (-218.86)</td>
</tr>
</tbody>
</table>
## Vermont Outreach Material

<table>
<thead>
<tr>
<th>Insured Value</th>
<th>Total Insured Value (total value of structure or value of mortgage on structure)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$170,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Decade</th>
<th>30-Years</th>
<th>Savings over 30 years elevating from minus 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Feet Above BFE</td>
<td>$232</td>
<td>$2,320</td>
</tr>
<tr>
<td>3 Feet Above BFE</td>
<td>$268</td>
<td>$2,680</td>
</tr>
<tr>
<td>2 Feet Above BFE</td>
<td>$340</td>
<td>$3,400</td>
</tr>
<tr>
<td>1 Foot Above BFE</td>
<td>$536</td>
<td>$5,360</td>
</tr>
<tr>
<td>At BFE</td>
<td>$1,211</td>
<td>$12,110</td>
</tr>
<tr>
<td>1 Foot Below BFE</td>
<td>$3,707</td>
<td>$37,070</td>
</tr>
</tbody>
</table>
Capitalization Method Example of Savings on NFIP Premiums*

<table>
<thead>
<tr>
<th></th>
<th>V Zone$^1$</th>
<th>A Zone$^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual savings</strong></td>
<td><strong>30-year savings</strong></td>
<td><strong>Annual savings</strong></td>
</tr>
<tr>
<td>1' freeboard</td>
<td>$1,360 (25%)</td>
<td>$40,800</td>
</tr>
<tr>
<td>2' freeboard</td>
<td>$2,730 (50%)</td>
<td>$81,900</td>
</tr>
<tr>
<td>3' freeboard</td>
<td>$3,415 (62%)</td>
<td>$102,450</td>
</tr>
</tbody>
</table>

*NFIP premiums based on May 2007 rates for a one-floor residential structure with no basement built after a FIRM was issued for the community (post-FIRM rates differ from pre-FIRM rates). $500 deductible/ $250,000 coverage for the building/$100,000 for contents.
Mortgage

- A mortgage is a debt instrument, secured by the collateral of specified real estate property, that the borrower is obliged to pay back with a predetermined set of payments.

- A federally backed mortgage requires flood insurance:
  - If the structure is in the Special Flood Hazard Area
  - If the lender believes that the structure is at risk though not technically in the SFHA
  - With a policy value equal to that owed on the mortgage
  - Until the mortgage is paid in full
Measuring Flood Safety Benefits

- **Mortgage**
  - Qualifying ratio may allow buyers to buy more valuable house (incidentally valuing the flood safety)
    - Qualifying ratio is the maximum ratio of debt to income
    - Considers the cost of the mortgage including insurances and other maintenance costs v. the buyers income
    - A structure that has lower insurance will have a higher ratio with the same income
  - Does not increase the loan value if not captured in the appraisal
The Intended Use of an Appraisal

- To facilitate the transfer of ownership of real property
- To help prospective sellers determine acceptable selling prices or prospective buyers decide on an offer
- To assist the underwriter in establishing a value of security for a mortgage loan
- To provide an investor with a sound basis for the purchase of real estate mortgages, bonds or other types of securities
Appraisers

- When an appraiser considers any type of improvement to the land, the value associated must have a market value
- That can be difficult to identify when the mitigation method is not yet tested in the market
- Some markets capture the zone in comparative sales, but flood safety is not captured in detail
Why is safety not captured?

- There is no quantified evidence of the value added
- Skepticism - If it has value then why hasn’t the market acknowledged through paying a higher price?
- The new idea may be too new to have been tested for the market’s willingness to pay more
- The data is not always available to be assessed
- Mortgage broker looking to appraiser for value signal
- Other amenities more important to the buyer
Challenges to Building Safety Benefits

- How to capture these values and encourage builders to innovate and lenders to cooperate?
- Current capture = $0, so safe building is discouraged
- When appraisers do not take the value into account, it impacts the homebuilders
Recruit new actors to recognize the value of flood safety including:

- Assessors’ offices
- Appraisers
- Mortgage companies and other lenders
- Real estate professionals
Goal: Promote Private Investment by Providing

- Studies of current valuation of flood safety
- Tools for monetizing the value
- Education to professionals
Studies

- Study sales in the floodplain for value trends
- Study sales with first floor elevation on EC for safety margin and value
  - Data sets are available through public ECs
  - Sales can be compared in different regions
Sample Tools

- Standard Appraisal Methodologies
  - Market Value
  - Debt Coverage Ratio
- Reduce to an equation
- Enhance with FEMA Benefit Cost Assessment
  - Displacement costs per person
  - Business Interruption

- Model: Solar valuation from Energy Sense Finance - web-based calculator for appraiser's
Start Using Ei Value® for Free

This release is exclusively for licensed appraisers who are iPad® users.

Not an appraiser?

We'll release a version for other professionals soon, sign up now and you'll be the first to be notified when it's available for download.

First Name

Last Name

Valid Professional Email

Confirm Email

User Type
Measuring Flood Safety Benefits

- Appraisal
  - Additional amenity
    - More efficient due to durability
    - Less costly for lifetime maintenance
    - Less time away from dwelling during flood evacuation
    - No additional time needed for restoration
Direct Sales Comparison Approach

- Property compared to sales of similar properties in order to arrive at a value
- Identifies the comparable properties as being similar in age and somewhat similar in size, quality, use, and amenities
- Adjustments to the sales price of the comps, based on how they differ from the specific property
Lost in Translation to Present Value

- Flood insurance savings (over 30 years): $40,800
- Savings according to appraisers:
  - Discount rate: $20,906.53
  - Debt coverage ratio amount: $16,585.36
Costs associated with freeboard

- Incorporating freeboard into new structures adds about .25% to 1.5% to the cost of construction for each foot of added height (NAS, 2006)
- The marginal increase in monthly mortgage payments is more than offset by saving on NFIP premiums (for structures not built greater than 1’ on fill)
- In the A zone, the discounts are less, and may not alone be sufficient to draw a buyer to the safer house ($502 discount vs. $218 discount).
Takeaway

- Capture all flood savings to show the true value
- The tool must capture the present value
- It must be accessible and simple to use
- Provide a value for that amenity that is supported by evidence
Freeboard

- Can save flood policy holders up to 62%
- Savings can be projected over life of mortgage
  - Insurance is unlikely to go down
  - Simple calculations identify savings over time
  - Value can be reduced to present value
  - Can create materials to show the savings
  - Value is persistent and will transfer from buyer to buyer
  - NFIP standardization allows for consistent value and reliability
Education through Existing Channels

- Appraisers
- Elected officials
- Floodplain managers
- Real estate industry
- Insurance companies
- Banks and mortgage lenders
- Builders
- Consumers
Actions Necessary by Actor

- Mortgage
  - Communicate to appraisers that they want this information
  - Accept lesser qualifying ratio if there is additional flood safety
  - Accept that structure will retain value and marketability due to flood safety
  - Develop Cap Rate if that is more acceptable to the industry
Actions Necessary by Actor

- **Appraiser**
  - Request information on flood safety
    - Elevation Certificate
    - Current flood insurance premiums
    - FEMA history
    - Sellers disclosure document
  - Include valuation like other comp amenities
  - Suggest this added value to lending institution, with rationale for the additional value
  - Provide studies or access to the tool for documentation
Actions Necessary by Actor

- Floodplain management community
  - Provide information on flood safety
  - Enter into Memorandums of Understanding with local or other willing lending institutions
  - Provide consumer advice on safe buildings and savings
  - Educate builders, elected officials, and realtors
Actions Necessary by Actor

☐ The Flood Safety Valuation Team

- Create multimedia educational materials for
  - Appraisers
  - Mortgage/lending industry
  - Homebuilder associations
  - Chambers of commerce
  - Elected officials
  - The general public
The Flood Safety Valuation Team Updates

- Appraiser Training from Diana Jacobs
  - Provided training on the issue to appraisers in Texas, Louisiana, Wisconsin, Arizona, and Iowa
  - Incorporated freeboard in a weekly Tip of the Week for The Appraiser’s Business Companion
  - Included flood safety valuation in Looking for the Rainbow After the Storm textbook
  - Incorporated into webinars on disaster preparedness
Acknowledgments

Diana Jacob, AQB Cert. USPAP Instructor
Smart Home America
IBHS - Fortified Homes
National Association of Appraisers
The Appraisal Institute
FEMA
FIMA
Sandy Adomatis, Appraiser
Patricia Staebler, SRA,RS

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