“No Longer Stuck on a Piece of Paper: Converting Flood Risk Models into a Digital Data Environment”

Gary Thompson
NGAC Meeting, June 11, 2013
INGREDIENTS OF A DFIRM

Base Map + Topography + Engineering = DFirm
CURRENT SITE FMIS
Flood Mapping Information Systems
Benefits of Floodplain Mapping

Floods are among the most frequent and costly natural disasters in terms of human hardship and economic loss. North Carolina's Digital Flood Insurance Rate Maps (DFIRM) enable business leaders and residents to more accurately predict flood hazards and prepare for flood risks.

Go to NC Floodmaps for more information.
Do you need flood insurance? Homeowner's insurance does not cover losses from flooding. Property owners living in flood-prone areas can purchase flood insurance from the National Flood Insurance Program (NFIP), which is administered by FEMA. The Personal Vulnerability Index (PVI) helps determine if you are financially prepared in the event of major losses from flooding. The calculation below represents the average property in your area and is based on census data and insurance statistics. To determine your actual PVI, enter the flood insurance coverage you currently have, your annual income, and any other assets such as savings that you can apply to cover your losses.

Based on the building value of $107,159:
- If the building is 100% damaged, your uncovered structural losses are $107,159.
- It will take 182% of your yearly income and assets to cover structural damage.

The PVI rating for this location is Medium.

You also need to consider other losses from damages.
FRIS REDUCE MY RISK

Mitigation

This table shows mitigation options that reduce your risk from this hazard. Estimated costs for each option were used to calculate cost effectiveness (CE).

To recalculate the CE, click the calculator to the left of each option and revise the costs based on local conditions.

For more information on options and calculations, click the ?.

<table>
<thead>
<tr>
<th>Building Value</th>
<th>$107,159</th>
<th>Square Footage</th>
<th>1,584</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Risk Reduction</th>
<th>Option</th>
<th>Cost</th>
<th>Cost Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevation</td>
<td>$45,936</td>
<td>0.55</td>
<td></td>
</tr>
<tr>
<td>Relocation</td>
<td>$106,428</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>Dry Floodproofing</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Wet Floodproofing</td>
<td>$4,594</td>
<td>6.05</td>
<td></td>
</tr>
<tr>
<td>Leaves &amp; Floodwalls</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Mitigation Reconstruction</td>
<td>$188,496</td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td>Utility Elevation</td>
<td>$12,000</td>
<td>1.05</td>
<td></td>
</tr>
</tbody>
</table>

Print
IRISK
From Flood to multiple hazards
IRISK FRONT PAGE

Am I at risk?

Who am I?  General Public
Select a hazard:  Natural Hazards in North Carolina
Enter all or part of your address and click GO.

Address
City Zip  GO
Am I financially prepared?

Do you need flood insurance? Homeowner’s insurance does not cover losses from flooding. Property owners living in flood prone areas can purchase flood insurance from the National Flood Insurance Program (NFIP), which is administered by FEMA. The Personal Vulnerability Index (PVI) helps you determine if you are financially prepared in the event of major losses from flooding. The calculation below represents the average property in your area and is based on census data and insurance statistics. To determine your actual PVI, enter the flood insurance coverage you currently have, your annual income, and any other assets such as savings that you can apply to cover your losses.

<table>
<thead>
<tr>
<th>Personal Vulnerability</th>
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<tbody>
<tr>
<td>Insurance Coverage ($)</td>
<td>0</td>
</tr>
<tr>
<td>Yearly Income ($)</td>
<td>7154.86</td>
</tr>
<tr>
<td>Savings &amp; Assets ($)</td>
<td>0</td>
</tr>
<tr>
<td>Deductible ($)</td>
<td>0</td>
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Recalculate

Based on the building value of $37,392:
If the building is 100% damaged, your uncovered structural losses are $37,392.
It will take 523% of your yearly income and assets to cover structural damage.
The PVI rating for this location is High.

You also need to consider other losses from damages to the contents of your house as well as costs for temporary lodging if you need to leave your house during the event. The table below shows estimated values for these losses. Total destruction of the building was assumed.

<table>
<thead>
<tr>
<th>Other Losses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Relocation Cost</td>
<td>$14,293</td>
</tr>
<tr>
<td>Contents Cost</td>
<td>$40,545</td>
</tr>
</tbody>
</table>

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What are my risks?

Am I financially prepared?

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What are my county risks?
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