Higher Ground

Best Practices for Floodplain Management

May 15, 2011

FEMA
Map Modernization
Risk MAP

- The vision for Risk MAP is to deliver quality data that increases public awareness and leads to action that reduces risk to life and property.
Activity

Imagine you are the new mayor or County Commissioner of a community which has limitless resources and the citizens of the community support your decisions without question.

What actions would you take to reduce flood losses in your community?
Mitigation Actions

- Open space preservation
- FRED
- Education & Training
- Outreach
- Flood Insurance
- Safer ordinance standards
- Hazard Planning
- Flood protection projects
- Warning Systems
- Others?
Who is the Whole Community?

- You know the players in your community best.
- Identify the local champions
- Who might have competing interests

- Community officials
- Insurance Agents
- Surveyors
- Citizens
- Lenders
- Non-profits
- Private Sector
Federal Minimum Requirements

- Require permits
- Elevate residential & elevate/dry flood proof non-residential structures
- Use flood resistant materials
- Elevate and anchor utilities
- Limit development in floodways.
- Minimize/eliminate flood damage to public utilities/facilities
- Anchor all structures
West Virginia Suggested Provisions

Higher standards include:

- 2 feet of freeboard
- 10 lots or 2 acres
- Cumulative substantial damage - 2 losses during a 10 year period that equal/exceed 25% market value
Safer Ordinance Standards

- Freeboard
- Cumulative Substantial Improvement/Damage
- Community Identified Flood Hazard Areas
- Approximate A Zones
- Subdivision Restrictions
- Stream Alteration BMPs
- Non Conversion Agreements
- Prohibitions
  - SFHA and/or FW development
  - Manufactured homes
  - Fill
  - Critical Facilities
- Historic Structures
- Certificate of Compliance
Community Identified Flood Areas

- The ____(Community)____ may identify and regulate new local flood hazard or ponding areas. These areas may be delineated on a “Local Flood Hazard Map” using best available topographic data and locally derived information such as flood of record, historic high water marks or approximate study methodologies.
Zone A Floodplains

- Mapped flood hazard vs. Studied areas:
  - WV has 12,200 miles with 3,350 of them, studied.

- Community is required to determine whether structures will be “reasonably safe from flooding”
Subdivision Restrictions

- **Lower threshold for BFE determination from 50 lots and 5 acres**
- **Require each lot to have a portion of land outside the SFHA**
Stream Alteration BMPs

- Wing walls
- Trash grates
- Requiring openings to be of sufficient size to pass debris and/or anticipated future increases in flood heights.
A Non Conversion Agreement shall be signed by the applicant whenever the community determines that the area below the first floor could be converted to a non-conforming use (generally applies to enclosed areas below base flood elevation that are 5 ft. high or more).
Prohibitions

- No development in Special Flood Hazard Area (SFHA) and/or Floodway (FW)
- No manufactured homes in SHFA or in FW
- No Fill in SFHA or in FW
- No Critical Facilities
Historic Structures

- Communities have the option of using either
  1. Excluding from substantial damage/improvement definition OR
  2. Requiring a variance

- Requiring a variance gives community more control over what floodplain mitigation methods are incorporated into the design.
Verification of Compliance

- Certificate of Occupancy compared to Certificate of Compliance
- As Built Elevation Certificates
- Permanent Utility Connection
- Community Assistance Visit (CAV)
Community Rating System (CRS)

- Higher standards = insurance discounts
- Savings stay in the community
- Improved flood protection
- Better organized programs
- Incentive to keep implementing

FEMA
Tips & Tricks

- Intergovernmental agreements
- West Virginia and Maryland Flood Hazard Determination Tool
- Language that requires applicants to submit LOMC
- Coordination of building code and floodplain management ordinance
- Market value

- Marcellus shale and your ordinance
- Coordination with health, police and assessors offices (unpermitted development)
- State Models are updated annually. If your ordinance is older than a couple of years, consider a review.
- Training
- Others?
Reducing Risk Saves Lives and $

- **NFIP premiums based on October 2011 rates**
- **One-floor residential structure with no basement built Post-FIRM**
- **$250,000 coverage for the building and $100,000 for contents**
- **At BFE Insurance Premium: $1,315 building, $380 contents**

<table>
<thead>
<tr>
<th>Zone AE</th>
<th>Annual NFIP Insurance Savings</th>
<th>Savings Over 30 Year Mortgage</th>
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<tbody>
<tr>
<td>1 ft. below BFE</td>
<td>-$3,415</td>
<td>-$102,450</td>
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<tr>
<td>At BFE</td>
<td>0</td>
<td>0</td>
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<tr>
<td>1 ft. freeboard</td>
<td>$675 (49%)</td>
<td>$20,250</td>
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<tr>
<td>2 ft. freeboard</td>
<td>$911 (69%)</td>
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<tr>
<td>3 ft. freeboard</td>
<td>$983 (75%)</td>
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</tbody>
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