Sandy + BW-12: Changing the Equation for Building Safer, More Resilient Communities

Grant Smith | Jerry Sparks
Jean Huang | Ken Logsdon | Stephanie Routh
Session Agenda

• **Moderators: Grant Smith & Jerry Sparks**

• The Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12): An Overview
  
  *Grant Smith*

• The Confluence of Sandy and BW-12: The Changing Equation
  
  *Jean Huang*

• Developing an Integrated BW-12 Adaptation Strategy to Achieve Community Resiliency
  
  *Ken Logsdon*

• Building Safer and More Resilient Communities: Proactive Response
  
  *Stephanie Routh*

• Closing Remarks
  
  *Jerry Sparks*
Be an Active Part of this Session!

• If you haven’t already, vote in our poll at:

www.dewberry.com/News/Events/ASFPM2013
The Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12)

An Overview

Grant Smith, PE, CFM, PMP

Dewberry
Biggert-Waters 2012 (BW 12)

• Passed by Congress in July 2012

• Will make the NFIP more financially stable by raising rates on certain classes of property to reflect true flood risk; and

• Will trigger rate changes for certain properties within the SFHA to accurately reflect the flood risk.
Summary of BW-12 Changes On the Way

• The Facts:
  • ~ 20% of NFIP Policies receive subsidies
  • Changes will be phased in over time

• What to expect
  • Eliminates artificially low rates (Section 205) and discounts (Section 207)
  • Transitioning of rates to reflect full risk is achieved
  • Will change how FIRM updates impact policyholders
Full-risk rates apply to property not previously insured, newly purchased, or to a policy which is repurchased after a lapse.
Insurance Changes Already Implemented

- Premiums for older (pre-FIRM) non-primary residences in SFHAs will increase by 25% percent each year until they reflect the full-risk rate – applies to policy renewals after January 1, 2013
BW-12: Changes Coming in October 2013 (Section 205)

- 25%/year increase on Pre-FIRM policies for:
  - Severe Repetitive Loss (SRL)* properties
  - Properties with cumulative flood damage exceeding the fair market value
  - Business properties

*Severe Repetitive Loss - A residential NFIP-insured property that:
  a) has at least 4 NFIP claim payments over $5,000 each, and the cumulative amount exceeds $20,000; OR
  b) At least two separate claim payments with the cumulative amount of the building portion of such claims exceeding the market value of the building.
Grandfathered rates

Premiums for properties affected by map changes will increase at a rate of 20% per year until the premium reaches full-risk rate (five years max).

Implementation in late 2014; Details TBD
# BW 12 – Potential Impact

## Potential Increases in FY 2014 - St. Petersburg, FL

<table>
<thead>
<tr>
<th>Breakdown by Pre/Post-FIRM and In/Out of SFHA</th>
<th>Total Policies</th>
<th>Current Total Premiums</th>
<th>Potential Premiums (FY14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-FIRM (SFHA)</td>
<td>20,662</td>
<td>$22,552,991</td>
<td>$27,458,417</td>
</tr>
<tr>
<td>Pre-FIRM (Non-SFHA)</td>
<td>3,715</td>
<td>$1,594,246</td>
<td>$1,676,985</td>
</tr>
<tr>
<td>Post-FIRM (SFHA)</td>
<td>12,569</td>
<td>$7,481,098</td>
<td>$8,364,712</td>
</tr>
<tr>
<td>Post-FIRM (Non-SFHA)</td>
<td>1,641</td>
<td>$597,568</td>
<td>$642,240</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>38,587</td>
<td><strong>$32,225,903</strong></td>
<td><strong>$38,142,354</strong></td>
</tr>
</tbody>
</table>

**Percentage of Current Premiums**  
- **100%**  
- **118.4%**

**Note:** These potential increases are likely **LOWER** than what will actually be experienced.
Poll #1

• On a Scale of 1-5 (1 being ‘No impact’ and 5 being ‘Major impact’)

What impact do you feel BW-12 will have on your community?

• If you haven’t already, vote now at:

www.dewberry.com/News/Events/ASFPM2013
The Sandy Experience

• Tools for rebuilding safer and to lessen the impacts of BW-12
  • Advisory Base Flood Elevation (ABFE) Initiative
  • Community Engagement and Outreach
  • Higher standards
  • Mitigation Focus
Adaptation Strategy to Achieve Community Resiliency

• What is the impact to your community?

• What opportunities exist to mitigate those impacts?
Impact Assessment

• How will the rate changes impact your community?
  • Second Homes
  • Severe Repetitive Loss Properties
  • Commercial Properties
  • Grandfathered Properties
Poll #1: Results

• On a Scale of 1-5 (1 being ‘No impact’ and 5 being ‘Major impact’)

What impact do you feel BW-12 will have on your community?
Conclusions

• Subsidies and discounts are ending

• Significant insurance increases may have economics consequences for individuals and communities

• The pool of willing and able buyers will decrease

• Even non-subsidized flood insurance premiums will increase an average of 10%
Conclusions

Community Options:

• Stay ahead of public calls and concerns:
  • Understand the location and types of existing flood insurance in their community
  • Look at impacts from these items relative to community design, planning, and mitigation initiatives

• Join or improve your Community Rating System (CRS) class
Questions?
The Confluence of Sandy and BW-12: The Changing Equation

Jean Huang, PE, CFM
Dewberry
Background - Programmatic

• Hurricane Sandy

• National Disaster Recovery Framework
  • http://www.fema.gov/national-disaster-recovery-framework

• BW-12 + Sandy
  • Sandy arrived just as the implications on flood insurance were beginning to be understood
  • Creating tools to help the recovery effort and minimize the impact of BW-12 became mission critical
Background: Post-Sandy

- State and local officials face major decisions as they plan the rebuilding and recovery efforts throughout local communities.
- Property owners with damaged or destroyed property face major decisions about rebuilding their homes or businesses.
- Existing Flood Insurance Rate Maps (FIRMs) do not reflect the current coastal flood risk for the New Jersey and New York Atlantic Coast.
- Decisions made today can help provide a safer, stronger future for communities, families, and business owners.
- Providing reliable and timely flood hazard data is one way FEMA is helping decision makers ensure that coastal communities recover smarter and stronger in the wake of this devastating event.
Background – Effective Studies

• Age of Effective Studies
  • Community-based
  • Typically 1980s

• Age of Stillwater Elevations
  • On average, 25+ years old
  • Delaware Bay, 1964-1968

• All of New Jersey lacks wave setup

• Topographic data is ancient
**Background – Ongoing Coastal Study**

- Currently restudying entire coastal shoreline of NJ and NYC
  - Updated topographic data overland and bathymetric data along shore
  - Updated coastal storm surge study (AdCIRC and other components)
  - Updated coastal overland wave height study (WHAFIS and other components)

- This data was leveraged to generate ABFE maps and have them in community hands within 6 weeks after Sandy hit
What are Advisory Base Flood Elevations (ABFEs)?

- Updated estimates of the 1% annual chance flood elevations
- Derived from new coastal flood analyses and data
- Reflect higher elevations than BFEs shown on current effective FIRM
- Updated coastal flood zones extend further inland than Special Flood Hazard Areas shown on current effective FIRM
What did we do?

• Leveraged ongoing coastal study
• Developed ABFEs for:
  • New Jersey
    • Atlantic, Cape May, Cumberland, Essex, Hudson, Middlesex, Monmouth, Ocean, Salem, and Union Counties
  • New York
    • New York City, Westchester County
    • Rockland County ongoing
Development of ABFEs

• RAMPP developed a solution that included:
  • Customized coastal analysis methodology using available data
  • Leveraged existing ongoing study
  • Developed ABFEs and Mapping for over 200 miles of coastline
Development of ABFEs (continued)
What Is On The ABFE Maps?

• Advisory flood hazard zones:
  • Advisory Zone V
  • Advisory Zone A
  • Advisory Zone X

• Advisory Base Flood Elevations for 1% annual chance flood (100-year)

• Advisory elevations for 0.2% annual chance flood (500-year)

• Area of Moderate Wave Action (Coastal A zone)

• Preliminary Hurricane Sandy high water marks

• Coastal Barrier Resources Areas

Notes & Overview Map
What else did we do?

- Disseminated essential data for the recovery efforts
- Supported FEMA meetings
  - State and community officials meetings
  - Public open house meetings
  - Speakers bureau meetings
- Answered over 1,500 public inquiries and letters
- Provided on-site Joint Field Office support
- Developed a one-stop-shop to share key messaging and tools with the public
What information is available?

- www.region2coastal.com
  - View/download ABFE data
    - Printable Panels (pdf format)
    - GIS format
  - Address look-up capability – What’s My ABFE?
  - GeoPlatform Web Portal
  - Fact sheets
  - Ask-the-Expert
Hurricane Sandy Advisory Base Flood Elevations (ABFEs) in New Jersey and New York

Know Your Risk.
View the Advisory Flood Hazards for your Location Today!

ABFE Information is Now Available for the Following New Jersey Counties: Atlantic, Bergen, Burlington, Cape May, Essex, Hudson, Middlesex, Monmouth, Ocean, and Union.

Know Your Role.
Learn Why ABFEs are Important to You!

FEMA will assist communities in applying the ABFEs as they evaluate their risk during the long term recovery and re-building phase. The ABFEs will also be provided to other Federal and State agencies and local governments to assist in carrying out their recovery efforts. Find out below why ABFEs are important to you.

Take Action!
Explore How You Can Take Action Now!

As communities begin to recover from the devastating effects of Hurricane Sandy, it is important to recognize lessons being learned and to employ mitigation actions that ensure structures are rebuilt stronger, safer, and less vulnerable to future flooding events.
Welcome to the FEMA Region II Coastal Analysis and Mapping website. Get the latest information on Hurricane Sandy recovery efforts and Hurricane Sandy Advisory Base Flood Elevations available to support rebuilding efforts in coastal New Jersey and New York.

Video: Learn about coastal flood risk in New Jersey and New York.

Welcome

**Vertical Datums and Advisory Base Flood Elevation Maps: What You Need to Know**

When comparing elevations on the Advisory Base Flood Elevation (ABFE) maps with elevation information on Elevation Certificates and other documents from different sources, care must be taken to ensure all...

Posted Feb 8, 2013, 5:34 AM by Samara Ebinger

**Summary of Advisory Base Flood Elevation (ABFE) Map Panel Updates Now Available**

Since the original release of certain ABFE maps...
What’s My ABFE?

Advisory Base Flood Elevation Information
This information is for advisory purposes for rebuilding activities. The information in the Advisory Base Flood Elevation table does not identify elevations to rate your property’s insurance policy.

Effective Flood Insurance Data
This information is from the effective Flood Insurance Rate Map for your community. It is used to determine who must buy flood insurance and how much it costs. It is also used by your community to regulate development in flood prone areas.

<table>
<thead>
<tr>
<th>Attribute Name</th>
<th>Attribute Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is my property’s Advisory Base Flood Elevation</td>
<td>5 feet (NAVD88)</td>
</tr>
<tr>
<td>What is my property’s current effective Base Flood Elevation</td>
<td>AE</td>
</tr>
<tr>
<td>What is my property’s current effective Flood Zone?</td>
<td>5 feet (NAVD88)</td>
</tr>
</tbody>
</table>
FEMA GeoPlatform Interactive ABFE Map
BW-12 Driving Mitigation Action

• Higher Standards
  • NJ Emergency Rule
  • NYC Executive Order
  • Federal Flood Risk Reduction Standard

"It is absolutely critical that we take this opportunity to rebuild New Jersey smarter and stronger in the aftermath of Sandy...As New Jersey recovers from Sandy, utilizing the best available data provided in these FEMA maps will give our communities the ability to rebuild with the least possible risk from future storms moving forward."
- Governor Chris Christie, November 13, 2012
Conclusion

• Advisory Base Flood Elevations (ABFEs) offer the best available data for post-disaster recovery and rebuilding

• The timely release of the ABFEs following Sandy allowed communities to more quickly recover

• Strong messaging regarding mitigation best practices will ensure the affected communities build back stronger

• The widespread use of the ABFEs and freeboard will minimize the effects of BW-12
Questions?
Developing an Integrated BW-12 Adaptation Strategy to Achieve Community Resilience

Ken Logsdon, Dewberry
Resiliency

• Community resilience is a measure of the sustained ability of a community to utilize available resources to respond to, withstand, and recover from adverse situations – perils

• Multi-perils or stressors
  - Natural – flood, hurricane, tornado, tsunami
  - Man-made – crime, terrorism, economic, legislation

• Community dynamism
Adaptation Framework

- Hazard mitigation and planning
- Social Vulnerability
- Community Capital
- Community Resiliency Baseline
- Natural systems and exposure
- Built environment & infrastructure

Anticipate Stressors | Strengthen Invulnerability | Response | Recovery
Resiliency – Preparing for the Rebound

Stressor / Disaster Impact

Anticipate Stressors
Strengthen Invulnerability
Response
Recovery

Sandy + BW-12: Changing the Equation for Building Safer, More Resilient Communities
June 11, 2013
**BW12 Adaptation Opportunities**

**Property owners**
- Increased flood insurance premiums
- Disposable income reduced
- Resale value decrease
- Longer time on market
- Smaller pool of able buyers

**Community impacts**
- Property values
- Tax base
- Business economics
- Foreclosure cycle

**Property owners**
- Obtain elevation certificate
- Elevate, rebuild, relocate
- Increase deductible

**Community**
- Understand and pursue grants
- Elevate
- Strategic retreat
- Flood control projects
- Join CRS / improve CRS rating
- Implement higher standards (Freeboard, future conditions modeling, zoning)
- Mass property/EC surveys
- Community engagement

**Property owners**
- Reduced flood risk
- Higher property value
- Better prepared for future stressors

**Community**
- Mitigation efforts
- Safer new construction
- Higher resolution property and structure data
- More ownership of recovery initiatives
Adaptation Assessment

- Continuous adaptation assessment
- Community engagement
- Increasingly granular knowledge base
- Scenario analysis
- Prioritization
- Align with programmed funding
- Adaptive management
Questions?
Building Safer and More Resilient Communities –
Proactive Response

Stephanie Routh, CFM
Dewberry
When your Public Officials Come Calling…

• Will you be ready to answer their questions about your BW-12 impacts?

• Will you be ready to discuss what your plans are to address any challenges?
Proactive Response
Why Do a BW-12 Assessment?

• Maricopa County, AZ
  ✓ Understand their BW-12 Exposure
  ✓ Range of Policy Increases
  ✓ Validate Best Sources of Data
  ✓ Initiate/Augment Community Rating System (CRS) Efforts
  ✓ Evaluate Mitigation Scenarios
  ✓ Public Outreach
  ✓ Be Prepared to Respond to Community Official and Citizen questions
Poll #2  How Proactive Are You?

Question A

I have _____________ understanding about the statistics, information, spatial patterns, and extent of my Community’s Flood Insurance Policies.

1. Excellent
2. Moderate
3. Limited
4. No

• If you haven’t already, vote now at:

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Poll #2  How Proactive Are You?

Question B

I am ______________ prepared to answer questions about the implications and plan forward for BW-12 in my Community.

1. Well
2. Moderately
3. Slightly
4. Not

• If you haven’t already, vote now at:

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CRS Activity 370 (Flood Insurance Promotion)

• Step 1: Flood Insurance Coverage Assessment

• Step 2: Create a coverage improvement plan

• Step 3: Implement coverage improvement plan
Defining the Questions to Answer

• Begin with data in-house or accessible through FEMA
  ✓ Policies, claims, RL/SRL properties, parcels, elevation certificates, LOMCs, political boundaries, census data, SFHA, zoning, others..
  ✓ Some datasets will need to be geo-located

Table 3.12 Florida Flood Policies

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>The total amount of premium for policies in Florida</td>
<td>$1,021,351,301</td>
</tr>
<tr>
<td>The total coverage for all policies within the state</td>
<td>$476,463,660,400</td>
</tr>
<tr>
<td>The average coverage of a Florida policy</td>
<td>$219,180</td>
</tr>
<tr>
<td>The total number of claims reported within the state for all claims</td>
<td>238,547</td>
</tr>
<tr>
<td>The total amount paid on claims within the state since 1978</td>
<td>$3,693,593,921</td>
</tr>
</tbody>
</table>
Geo-Location of Policies

• Critical Path!

• Quality Validation

Matching a Policy to a Structure
Matching a Policy to a Parcel
Matching a Policy to a Zip Code, Census Block, Community, or other coarser spatial unit

Reminder: Privacy Act applies to this type of data

Easy to Geo-Locate Policy Address:
200 E. Hideaway Lane

Challenging to Geo-locate Address:
Units 222, 224, and 228
Summarizing BW-12 Data
BW-12 Assessment
Which Topics Interest You?

#1 – Your Impacts as of Today - (2nd Homes, SRL, Commercial, Real Estate Turn-Over/New Policies)

#2 – Understanding Policy Exposure in Map Change Areas

#3 – Statistical information for Your Policies

#4 - Analysis of your Potentially Grandfathered Policies

#5 – Impacts to PRP Extension Areas

#6 – Missing Policies?

#7 – How CRS is Helping
#1 Your Impacts as of Today

• Identify the number, of and potential rate changes to:
  ✓ Second Homes
  ✓ Severe Repetitive Loss Properties
  ✓ Commercial Properties
  ✓ Turn-over of properties resulting in New Policies
#2 Understanding Policy Exposure in Map Change Areas

- Data layer for pending LOMRs, PMRs, or other map changes
  - Total the policies impacted
  - Key locations for hot spots
  - Estimated policy’s premium with zone rate changes (e.g. Zone AE to Unshaded Zone X with map action)
#3 Statistical Information for Your Policies

- Ave/Min/Max/Range/Skew of policies rated at grade, above or below
- Statistics of policies with contents coverage in addition to structure coverage

![Graph](image-url)

# Policies

- Community 1
- Community 2

-2 feet -1 foot at grade +1 foot +2 foot
#4 Analysis of your Potentially Grandfathered Policies

- Statistical analysis for the grandfathered policies in your community
  - Zone Grandfathered
  - BFE Grandfathered
  - Hot spots for Pre/Post FIRM Flags
#5 Impacts to PRP Extension Areas

- Where are the Preferred Risk Policies (Using the PRP flag in the Policy data)
  - Total or Summarized
  - Hot spots
#6 Missing Policies?

• Understanding Variance Areas
  ✓ LOMAs, home-ownership vs. rental properties, older neighborhoods, or areas where a community has allowed a floodplain zoning variance

• Estimate what the policy premium would be (generically) for the at grade scenario for the properties that do not have flood insurance, but should.
#7 How CRS is Helping

• Evaluate if participation in the Community Rating System (CRS) may offset some of the potential increase in rates.
What’s Next?

• Maricopa County, AZ
  ✓ Perform Activity 370 analysis
  ✓ Begin BW-12 study
  ✓ Capture building footprints
  ✓ Summarize for all communities in their County to share information
  ✓ Plan mitigation for BW-12 impacts
  ✓ Target information by October 2013
  ✓ Start outreach to agents
Brainstorming of BW-12 Mitigation Strategies with all Communities in County

• County takes the lead in discussions, but joins with communities to talk about:
  ✓ Increasing their CRS class.
  ✓ Increasing Freeboard requirements.
  ✓ Investigating negative rated policies for errors.
  ✓ Exploring low cost mitigation options such as elevating equipment, installing flood vents, etc.
  ✓ Exploring other more extensive mitigation options such as stormwater projects, elevation/buy out of flood prone structures, etc. – MOU projects?
  ✓ Ensure local flood maps properly convey the risk – More LOMRs???
Poll #2 Results

How Proactive Are You?

Question A

I have _____________ understanding about the statistics, information, spatial patterns, and extent of my Community’s Flood Insurance Policies.

1. Excellent
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Poll #2 Results

How Proactive Are You?

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I am _______________ prepared to answer questions about the implications and plan forward for BW-12 in my Community.

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Questions?
Closing Remarks

Jerry Sparks, PE, CFM, PMP
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