

### Raising Awareness through Risk Communications

Diane Howe, CFM

Risk MAP Lead







## What our Customers are Saying.... Results from National Awareness Survey

#### Personal experience

 Most cited source of flood risk information was local media (61%) and personal experience (48%)



#### Availability of risk information

 Of the 23% who said they reviewed their map, 42% reviewed it in a public building or official's office

#### Customer Wants

 Many expect to hear about flood risk from their mayor (47%) or floodplain manager (32%)

10% expect to hear from FEMA.





### Summary and Key Takeaways

#### **Summary**

- Risk awareness among the general population is 30%
- Respondents recognize greater risk within their broader community than individually
- Risk communication is positively associated with increased risk awareness

#### **Key Takeaway**

- The level of risk awareness has been consistent over the last four years
- ✓ Communication should be tailored to bridge the gap in perception between community risk and home risk
- ✓ Local officials should increase the frequency at which they communicate about flood risk





### Summary and Key Takeaways (con't)

#### **Summary**

- Local media are the preferred channels and sources for flood risk information
- Moving to a new residence is the most frequently reported reason for searching for flood risk information
- Mitigation action among the general population is 76%

#### **Key Takeaway**

- Local media should be used for communicating flood risk
- ✓ Local officials should partner with realtors to target new residents with flood risk information
- ☑ Citizens are taking action across a variety of different mitigation activities





### Region 6 Piloting the New Awareness Metric

- Measure 1: Number of Outreach Activities
- Measure 2: Web and Call Center Traffic
- Measure 3: Risk MAP Engagement Effectiveness
- Measure 4: Community Awareness Indicators

Community Activities as a result of Risk MAP that demonstrate progress toward raising awareness





# Looking for New Risk Awareness Indicators: Outreach and Education to the Public as a result of Risk MAP

- High water mark information
- Promotion of website or tools that promote risk awareness or mitigation
- Completion of a Program for Public Information (a CRS activity)
- Flood and other natural hazard risk information on community's website
- Promotion of the purchase of flood insurance to property owners
- Increasing other public officials' awareness of community flood risk
- Community sponsorship of local workshops, presentations, and/or materials on natural hazard risk

WHEN

FLOODED

TURN AROUND

DON'T

**DROWN** 





### Your Turn to Share:



What are you <u>currently</u> doing in your community to raise awareness of natural hazard risk?





# Opportunities to Raise Awareness of Risk

- Community Outreach and Public Events
  - Community Websites and Social Media RiskMAP6.com and FEMA.gov
  - Programs for public natural hazard awareness HWMI, Ready.gov, others
  - Training and Education opportunities Virtual Brown Bags
- Discovery
  - Base Level Engineering Data and Flood Risk Report EstBFE Viewer, Flood Risk Report & Community links on RiskMAP6.com
- Risk Identification and Assessment
  - Resilience Meetings with Flood Risk Products Recipe Cards, VBB Webinars
- Regulatory Update
  - Flood Risk Open Houses Risk Communications Guidebook & RiskMAP6.com
  - Stakeholder Workshops FloodSmart Tools





### Status of Studies

ArcGIS Region VI Mitigation Awareness Portal

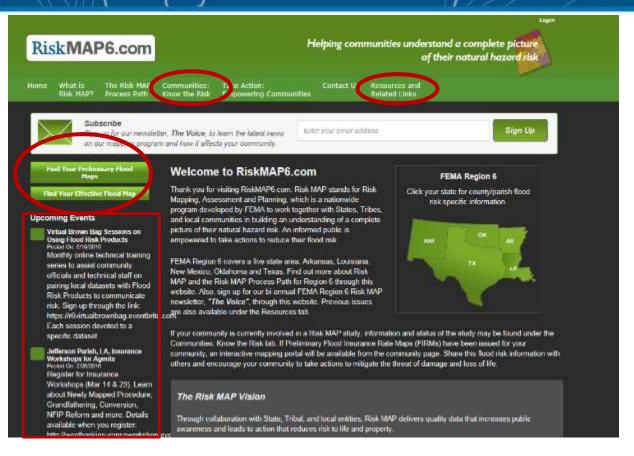
Modify Map

Share A Print A Measure Details BB Basemap Find address or place Content Legend Legend Amarillo **R6 Status Of Studies** Projects By Type PMR Studies MISSISSIN Levee Studies County Studies Watershed Studies Base Level Engineering Phase 0 Discovery Phase 1 Risk Identification & Assessment CHIEU ARUA Phase 2 Chihuahua' Regulatory Product Update Phase 3 COMPUTEA Reference Layers States. Esri.com Help Terms of Use Privacy Contact esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS | Halff Associates Inc. Esri Report Abuse





### www.RiskMAP6.com

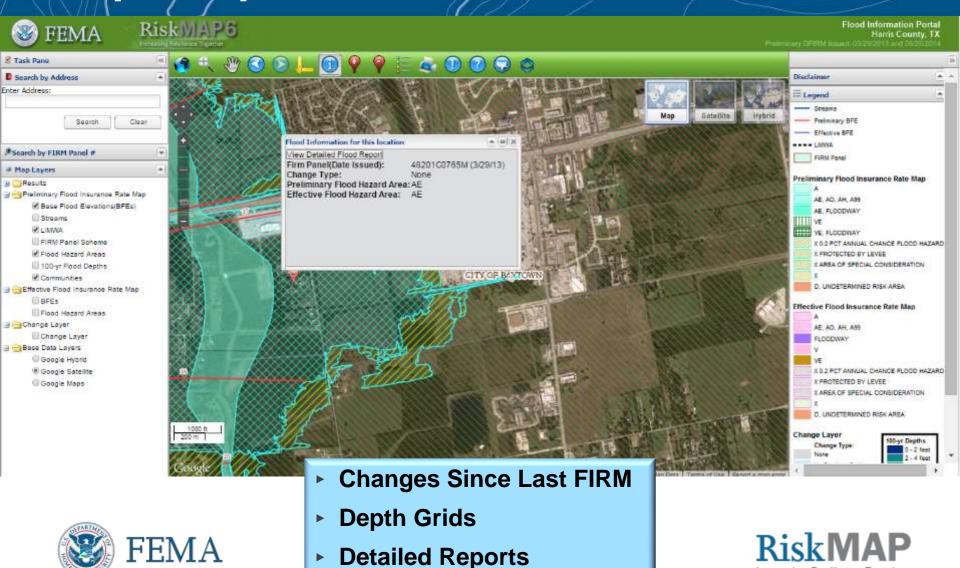


- Website designed to assist local officials in communicating risk.
- Project specific documents can be made available to share with citizens
- Links to Interactive Mapping Portal and Map Service Center
- Public Meeting notifications
- Community-specific materials
- Latest Resources





### http://maps.RiskMAP6.com



Increasing Resilience Together

### Tools from Region 6

- RiskMAP6.com- new website coming soon!
  - Share links to maps available online
  - Share information about upcoming meetings
- Risk Communication Guidebook for Local Officials
  - http://www.riskmap6.com/guidebook.aspx
  - Includes web content to be shared
- The Voice News and Information
  - Share stories and information in your message platform









### City of Leon Valley, TX: First HWMI Community in Region 6





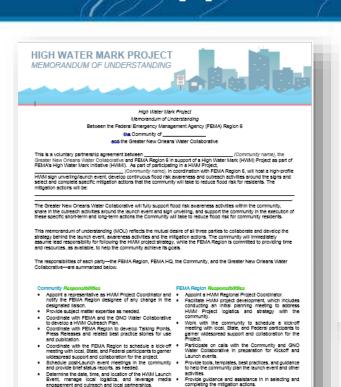






### **Building Products to Support the HWMI**

- Kick-off Webinar
- HWMI MOU
- Press Releases
- Talking Points
- HWMI Outreach Plan
- Best Practice Story
- News article for FEMA publications – In the Loop and The Voice
- Webcopy for FEMA.gov
- HWM Fact Sheet
- Overview Presentation for Local Officials
- HWMI Flyer



#### BALADIG SCHITS HIGH WATER MARK DISTATIVE - CITY OF LIGHT VALLEY Big West Mark Company

- Think you for the appearance to highlight the contrasting efforts of the Coy of Leon.
   Valley who is actively participating in the High Wine Mark Initiative, a reoperative affect to rescal resident, and visites afrost stops level floods and accompagnition to the contrast.
- The High Wear State Instanton (SWAD) was created by the Federal Emergency Management Agency (FEDAS) and second other parties Federal agencies<sup>44</sup> to bring emerges about four field with to communities.
- The City of Lam Volkey is deficient to minimizing the loss of life and property that is accordant with fineling events. They recognise that is settle constraint, is exceptible to flooding, only at these effectives in content within the Special Flood Officeral Asses.
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- Secure of their process affects to build finel real necession. IEEE has perturned with the Coy of Lam Valley and recognises there are port of the High Water Mark habitation. By transmissioning fixed reals in the House Coefe area, channe will be obtain to use just fore high the names cost to the House of Contract T. (1981).
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- The City of Loon Valley has potitional to be in the Community Enting System—disprogram provides discounts in Bood management premiums to maintain of communities that at become for maintaining intended in of Europhian to management.
- From Page to October 2010, is comparation with Barne Country Flood Discretiff. 47 single-flood books there after the collision or macroad from the Condition.
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#### News Release

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### https://www.ready.gov



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September is National Preparedness Month

Get the National Preparedness Month Social Media Toolkit, logo, & promote weekly tips!

# ROAD CLOSED ROAD CLOSED ROAD CLOSED ROAD CLOSED ROAD CLOSED

Please do not drive around barricades.

Be safe.

- Heavy rain can bring dangerous flash flooding.
  - 6 inches of moving water can knock a person down.
  - 2 feet of moving water can sweep a vehicle away.



#### Social Media Toolkit includes:

- Themes
- Hashtags and Emogi
- Graphics, logos, videos & links
- Outreach materials
- Twitter & Facebook Content
- Toolkit in Spanish







### Tools from FloodSmart.gov

- Social Media Messaging
  - Twitter content
  - Facebook content



https://agents.floodsmart.gov/Agents/social-media-messages





### FloodSmart Graphics and Social Media

#### ABFE Social Media Messaging Open House Messages Facebook: Do you know your flood risk? Join us at the Wimberley Community Center at 14068 Ranch Rd 12, Wimberley, Texas on Wednesday, Sept 2 from 2-8pm. If you're not able to make it, visit RiskMAP6.com to find your property's updated flood risk. FEMA is releasing new advisory flood risk information so Texans can rebuild to create a safer, stronger future. FEMA officials and partners are hosting an Advisory Base Flood Elevation Open House to ensure that Texans impacted by recent flooding have all of the information they need in order to rebuild and recover. e Photo: **FLOOD RISK** sale Hero Essente, the City of Workering, and



Attend the Upcoming Flood Risk Open House

Join Willacy County for an opportunity to view the newly updated Flood Maps

- · Find your property on new flood maps and learn your flood risk
- Get Answers to your question from Community, County, State and FEMA Representatives
- · Learn about Flood Insurance from the experts

November 18, 2-7 pm Tourist Center 700 FM 3168 Raymondville, TX

For more information, visit www.riskmap6.com











### Your Turn to Share:



What is the most common question you receive about flood risk in your community?





# Mapping Evolution Components Base Level Engineering

### ► This approach teams:

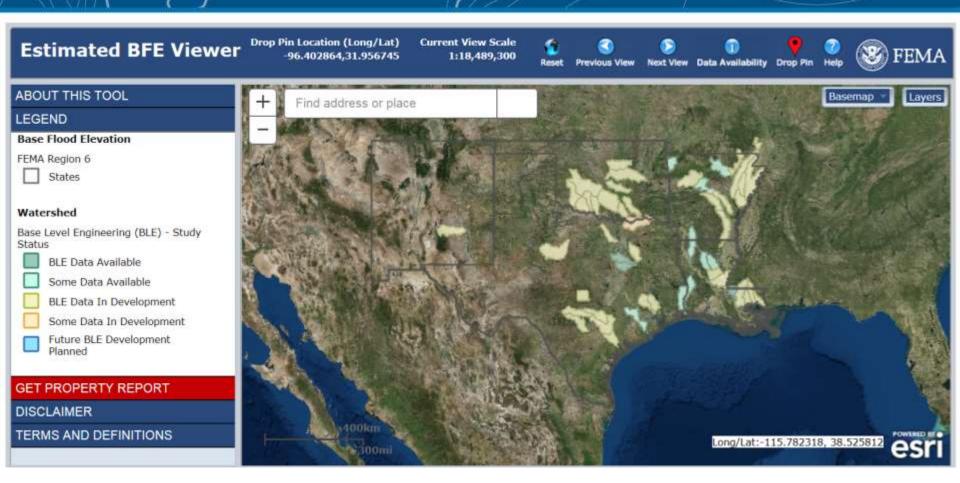
- + High resolution ground elevation data
- + Automated hydrologic and hydraulic modeling
- + Lessons learned in Map Modernization and Risk MAP
- + Cross-section location and orientation review
- + Recommendations from Congress and TMAC

#### ► To create:

- + Baseline modeling equivalent to Zone A floodplains
- + Scalable models that can be further refined
- + Refined data delivery to support immediate data availability and customer centric data release
- + Initiates national model framework to build upon



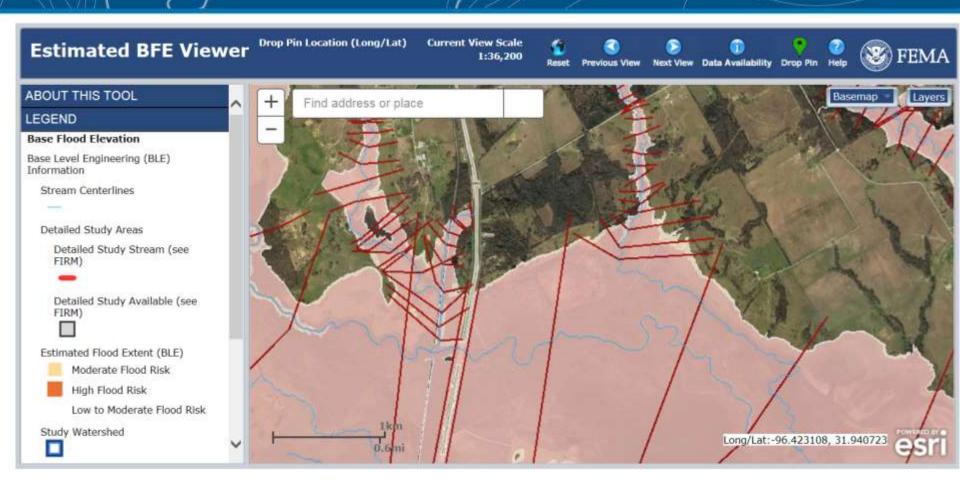
### **Base Level Engineering**







### **Estimated BFE Viewer**







### **Estimated BFE Viewer**



#### Estimated Base Flood Elevation (BFE) Viewer

#### Flood Risk Information Report

FEMA is providing a look at flood data availability and relative Base Level Engineering analysis through the Estimated Base Flood Elevation Viewer (Estimated BFE Viewer). Base Level Engineering uses high resolution ground elevation data, flood flow calculations, and fundamental engineering modeling techniques to define flood extents for streams. The viewer is an effective tool for property owners, community officials, and land developers to identify flood risk, estimated flood elevations, and flood depths for watersheds where Base Level Engineering has been prepared.

The Estimated BFE Viewer and the information generated are not for flood insurance rating purposes. Users should always consult community officials to discuss the flood risk for their area, obtain information on local building requirements and permits, or to view an official copy of the effective Flood Insurance Rate Map (FIRM). For National Flood Insurance Program insurance rating purposes, visit the FEMA Flood Map Service Center (https://msc.fema.gov) to view the FIRM online.



<sup>&</sup>quot;The Information for each report is dependent on the location of the Inquiry marker placed by the user. Address locators are not 100 percent accurate in identifying addresses, and results are not considered an official determination. Users should zoom in and verify the location of the marker prior for printing.

#### Using the Estimated BFE Viewer

As a part of the Risk Mapping, Assessment, and Planning (Risk MAP) process, FEMA is required to review the validity of the flood hazard information every five years. FEMA is currently preparing cursory flood hazard analysis at a watershed basis to support the assessment of the flood hazard data shown on their Flood Insurance Rate Maps (FIRM). The flood hazard duses high resolution ground elevation data, calculates high level flood flow estimations, and prepares hydraulic modeling to determine how natural water courses convey the predicted flood and define estimated flood extents. The analysis is also being made available to local communities and State entities who assist FEMA in the administration of the National Flood insurance Program (NFIP).

This analysis based on current conditions is informed by readily available land use data, providing valuable flood risk information for a number of streams that are currently not included in FEMA's flood inventory. This effort provides flood hazard data for the 1-percent annual chance flood event, providing data that can be used for local planning and development and in advance of a FIRM update.

To allow individuals, communities, States and Federal entities an opportunity to engage with the results, FEMA developed the Estimated Base Flood Elevation (BFE) Viewer. The viewer provides an estimated flood risk (high, moderate, low), returns site specific estimated flood elevations and flood depths. The



interactive viewer can be accessed at https://apps.femadata.com/estbfe

#### Steps for Viewing the Estimated BFE

After accessing the Estimated BFE Viewer at <a href="https://apps.femadata.com/estbfe">https://apps.femadata.com/estbfe</a>, users must first click "OK" to agree to the privacy and security terms of the site in order to use the application.

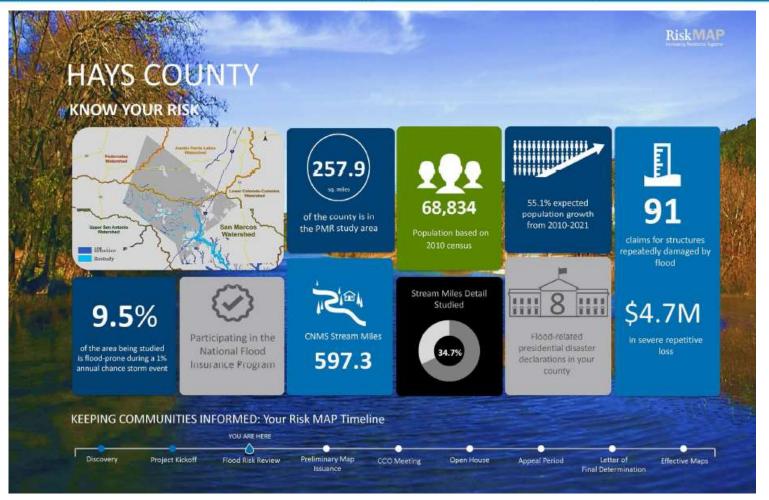
Step 1: A welcome window will provide an address search window, or users may click "continue" and type the address of interest on the search window above the map. Enter a street address or place either of these search tools.

Step 2: Verify the location of interest. Select the Drop Pin feature from the top tool bar and place the pin at the point of interest. If the pin is red, users should zoom in closer to best locate the area of interest. Users should locate their structure and place the "pin" at the farthest upstream edge of the building or property of interest.





### Flood Risk Report: Communities-by-the-Numbers







### Flood Risk Report: Potential Next Steps





Your Hazard Mitigation Plan is set to expire December 6, 2016.

The hazard mitigation goals identified projects for:

- Flood-risk reduction and acquisition of flood-prone properties.
- Streamflow monitoring.
- Higher floodplain management standards.
- Training and outreach.

Localized flood-risk reduction structures and the acquisition of flood-prone properties are eligible projects under FEMA's Hazard Mitigation Grant Program, Pre-Disaster Mitigation, and Flood Mitigation Assistance grants. Read more about the FEMA Hazard Mitigation Assistance grant programs on the <u>Texas Division of Emergency Management (TDEM)</u> fact sheet. Opportunities can be discussed with the TDEM mitigation team.

Monitoring river flows is a matter of public safety, environmental protection and wise economic development. WaterWatch is a U.S. Geological Survey (USGS) website that displays maps, graphs, and tables describing real-time, recent, and past streamflow conditions for local, State, and Federal needs. The USGS streamgaging network reports consistent results using standard techniques and technology. Visit the WaterWater? Website to learn more.

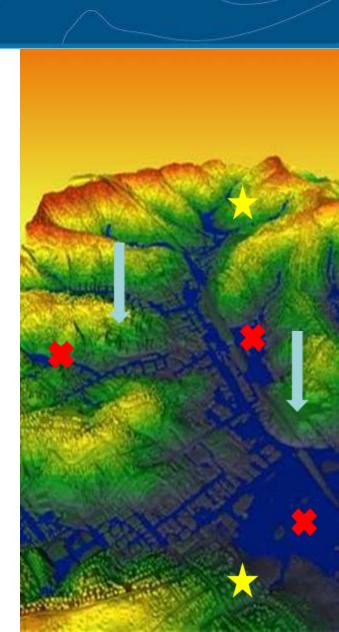
Issued by the Association of State Floodplain Managers, the <u>Guide to Higher Regulator Standards in Floodplain Management</u> describes stricter measures to minimize flooding impacts. Implementing higher development standards reduces the risk to life and displacement of residents, property and environment damage, and the burden on community infrastructure and services.

The Texas Floodplain Management Association (TFMA) is currently revisiting higher regulatory standards to transform the national guidance into a document applicable for communities in Texas. Stay informed of the progress by visiting their <u>website</u><sup>1</sup>, or by reading the TFMA newsletter<sup>5</sup>.

The Northern Service HWWs Storm to nov <sup>6</sup> program uses a grassroots approach to recognize communities who demonstrate severe weather readiness and are better prepared for increasing vulnerability to extreme weather events. Visit the StormReady website to learn more.

### Flood Risk Datasets

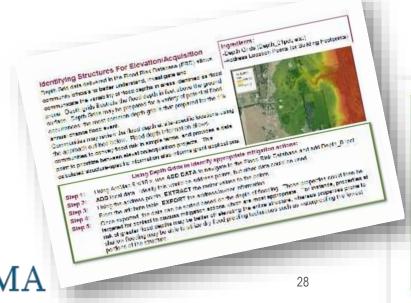
- Describes variability of risk within (and around) of the Special Flood Hazard Area (SHFA)
  - Water Surface Elevation Grids
  - Flood Depth Grids
  - Changes Since Last FIRM
  - Annual Percent Chance Grids
  - 30 Year Percent Grids
  - Areas of Mitigation Interest
  - Others as identified
- May be produced for other natural hazards



### Provide a Recipe for Resilience

#### Recipe Cards

- Show community officials how to pair our flood risk products with their local data
- Include step-by-step procedures for spatial analysis
- Build local knowledge, stimulates awareness, increases capability and capacity



#### **Evidence Drawn From Depth Grids**

#### Elected Officials and Community Staff

- Roley variability of flood risk within the identified Special Flood Hazard Areas on FIRMs.
- Identify populations and areas within the community at risk during various storm events
- Identify road crossings that may become impassable during a storm event and plan accordingly.
- Perform Cost penerit depth-damage calculations
- Provide a visualization too to be pibuliding permits and inspections staff explain flood risk to developers
- Assist with developing more stringent development building codes.
- Assist emergency response staff identify high risk areas
   Highlight areas of the community for outside and education efforts

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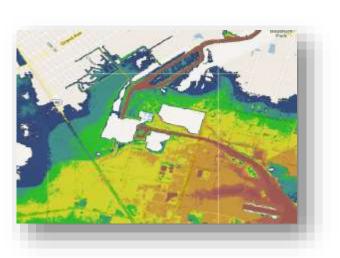
- Assist with in ligation prioritization activities and projects:
- Assist with advance recovery prainting and disaster preparechess.
- . Depict high flood risk greats for future planning needs
- Assist with Capital Improvements planning by guiding infrastructure investment away from high risk areas.

#### Engineering and Technical Staff

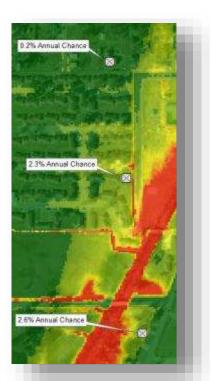
- Date point for use in priorizing mitigation projects
- Helps screen potential projects for ocal effectiveness.

### Resilience Toolkit

- FEMA Flood Risk Products with FloodSmart Tools
  - Depth Grids -> Cost of Flooding Tool
  - Percent Annual Chance Grids → What is your Flood Risk?
  - Changes Since Last FIRM → Agent Referral Service/Targeted Outreach











### Monthly Virtual Brown Bag Trainings

Suite of monthly trainings to help communities become more flood-resilient by using flood risk data for future development, emergency planning, and risk communications.

- Live tutorials on pairing local data with FEMA data to develop flood risk assessments;
- Understanding the LOMA process
- Tracking community progress toward resilience through mitigation action; and
- Enhancing risk communication through social media and other tools.

https://r6virtualbrownbag.eventbrite.com













### Get the Word Out About Your Event

- Invite: Insurance Agents, Real Estate Professionals, Lenders, Surveyors, Local officials
  - Register through EventBrite—free online tool, reminders, follow-up emails
- Announced through FloodSmart's Agent Database, GovDelivery, Floodplain Management Association, Local Officials, and Community Contacts
- Utilize State Contacts Insurance, Real Estate, NFIP

Subject Line: Important Information for Agents in Harris County, Texas

Flood Blaks Are Changing In Harris County, Texas, Be Prepared When Clients Call

Herris County Flood Control District in coordination with The Federal Emergency Management Agency (FEMA) is reacting an important miscoore in its effort to identify flood risk in the <u>Addicks</u> Reservoir watershed. Using the most current data and the latest modeling and digital mapping technologies, Herris County Flood Control District has created new preliminary Flood Insurance Rate Maps (FRMIs) desicting the current flood risks for seese of Harris County.

#### Innurance Workshops

To help you better understand the process used behind creating the new FRMs, what and where the changes are occurring, impacts of the RMF Reform Act, cost-taking option available to cleents, new tools and resources to essint you, and the latest on wind insurance, Harris Goorty Flood Control District has partnered with FEMA and the Texas Dept. of Insurance to held Stakeholder Workshops. Discussion topics will include information on the Newly Mapped Procedure, what to say when the Base Flood Elevation (BFE) changes, how changes to the NFIP could affect your cleents; what you need to know about TWM and required windstorm inspections; and where to find online maps and other resources.

Mark your calendar and register to attend the Harris County Insurance Workshop:

Harris County, February 2, 2016, from 10 a.m. to noon at the Richard and Meg Weekley Community Center, 8440 Greenhouse Koad, Cypress, TX 77433,

Register to attend at http://bcfcdinsuranceworkshop.eventbrite.com

#### Flood Risk Open House in Cypress, TX

A Flood Risk Open House will be held to allow residents and business owners to view the new preliminary flood maps and determine if and how their flood risk has changed. In addition, they will also be able to learn what options they have to reduce their flood risk, meet with LPCCD Representatives, FEMA and State officials representing the NFIF and Texas Dept. of Insurance, and local community officials. Tell your clients about the Open House happening in their area:

Harris County, February 2, 2016, from 2 p.m. – 6 p.m. at the Richard and Meg Weekley Community Center, 8480 Greenhouse Road, Cypress, TX, 77433

Your clients will view you as an important resource to accurately explain their changing flood risks. So, plan to attend this inportant Windshop to become better prepared when your clients call. For more information about the Hairis County Flood Control District, visit <a href="https://www.hctod.org">https://www.hctod.org</a>. To view the maps, visit <a href="https://www.hctod.org">www.hctod.org</a>. To view the maps of the maps of





### Get the Word Out About Your Event



To help you better understand where the changes are occurring on the new flood maps, more about the Newly Mapped Procedure and Grandfather rating options, Policy Conversion and retaining customers whose risk is reduced, impacts of reform legislation and upcoming changes to the NFIP, and using new tools and resources to assist you, Jefferson Parish has partnered with FEMA to hold two Insurance Workshops. This information is also valuable to Real Estate professionals, lenders, builders, and surveyors.

There is no charge for these workshops and we encourage you to share information about this event with other flood insurance agents, lenders, surveyors, builders and real estate professionals. An earlier Insurance Workshop is offered on March 14. Register for this event at: <a href="http://eastbankinsuranceworkshop.eventbrite.com">http://eastbankinsuranceworkshop.eventbrite.com</a>

Your clients will view you as an important resource to accurately explain their changing flood risks. So, plan to attend one of these important Workshops to become better prepared when your clients call. For more information about flood insurance, visit Agents.FloodSmart.gov.

#### WHEN

Tuesday, March 29, 2016 from 10:00 AM to 12:00 PM (CDT) - Add to Calendar

#### WHERE

West Bank Council Chambers - General Government Bldg - 2nd floor 200 Derbigny St., Gretna, LA 70053 - View Map

### FloodSmart Resources for Public Meetings

- Fact Sheets
- Pamphlets











### Insurance Workshops

- Coordinated with local communities, often with Flood Risk Open Houses
- Focused on Communities where new maps indicate risk is changing for significant numbers of structures
- Aimed at reaching Insurance Agents, Real Estate Professionals, Lenders, Surveyor, Community officials
- 2-Hour Workshop Course approved for 2-CEUs through TX Dept of Insurance, ASFPM and TFMA









### Insurance Workshops

- Announced through: FloodSmart's Agent Database, Local Officials, Community Contacts
- Invite: Insurance Agents, Real Estate Professionals Lenders, Surveyors, Local officials
  - EventBrite Free online tool, follow-up emails
- ► 2-Hr Workshop on Flood Study background, Flood Insurance, Resources, Preview of Maps (online)
  - Prior to each Flood Risk Open House
  - Covers the Effects of Map Changes on Insurance
  - Encourages use of FloodSmart Tools with customers
  - Hands-on digital map support
  - Follow up Resources and PPT emailed to attendees

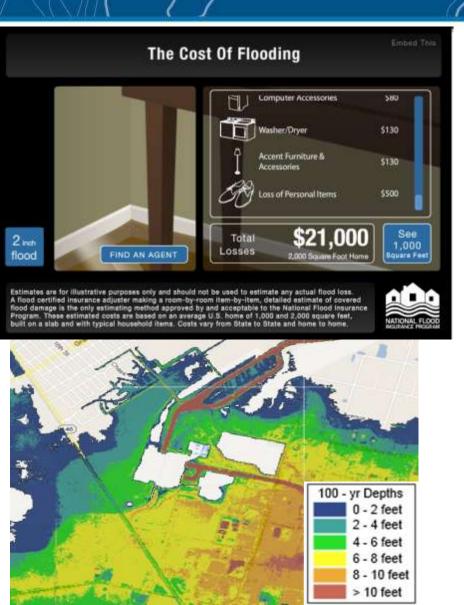








### Make it Relevant



- FloodSmart tools application
- Useful to starting conversations around risk
- Meaningful to residents/clients





# Community-Led/ FEMA-Supported Outreach









### Flood Risk Open House









### Setting up the Open House Event

- Coordination with FEMA: Mitigation staff (Risk Analysis/ Floodplain Management/ Insurance), External Affairs
- State: NFIP Coordinator

Communities: Local Floodplain Administrators, Public Works,

County/Parish officials

FEMA's Mapping Partners

Maps available for Citizens

- Location for event
- Publicity



tdoors

FEMA FLOOD MAPS INFORMATIONAL OPEN HOUSE

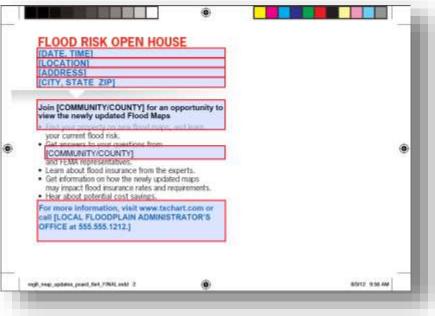
South Carolina Department of Natural Resources

Life's Better



### Flood Risk Open House—Postcard





- Provided to Communities at the CCO Meeting
- Riskmap6.com/documents/Guidebook/ResSection\_9/Template\_ Postcard\_for\_Open\_House\_Aug2014.pdf





### Postcard (cont'd)

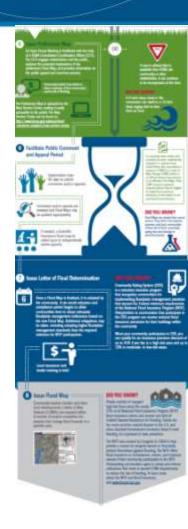






### Resources for Communities

- ► Infographic <a href="http://www.fema.gov/media-library/assets/images/92188">http://www.fema.gov/media-library/assets/images/92188</a>
- Risk Communication Guidebook for Local Officials http://www.riskmap6.com/guidebook.aspx
- RiskMAP6.com Resources tab -<a href="http://www.riskmap6.com/Resources.aspx">http://www.riskmap6.com/Resources.aspx</a>
- FloodSmart.gov Community Resources -<u>https://www.floodsmart.gov/floodsmart/pages/partner\_index.jsp</u>
- Risk MAP Information for Community Officials -<a href="http://www.fema.gov/risk-map-program-information-community-officials">http://www.fema.gov/risk-map-program-information-community-officials</a>







### Your Turn to Share:

# If you could develop a Risk Communication product, what would it be about?







### QUESTIONS?



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E-mail: **Diane.Howe@fema.dhs.gov** 







### We're Listening!





