Now You’re Cooking! Recipes for Resilience

Diane Howe, FEMA Region 6
diane.howe@fema.dhs.gov
Are you hungry?

Photo Credit: The Very Hungry Caterpillar
Ingredients on hand…

**Regulatory Products**
Continually updated as risk is revised

- Flood Insurance Rate Maps
- Flood Insurance Study texts
- DFIRM Database

**Flood Risk Products**
Make it easier for communities to understand and identify their risk

- Flood Risk Report
- Flood Risk Database
- Flood Risk Map
Flood Risk Products

- Describes variability of risk within (and around) of the Special Flood Hazard Area (SFHA)
  - 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
Variability of Flood Risk

- FIRMs define the location and extent of a calculated floodplain
- The analysis may be presented in a number of different ways to better understand the variability of risk within the floodplain

**FIRM Panel**
Am I IN or OUT?

**Flood Risk Product**
How deep is the water at any one location?

Flood Depth = 4 feet
What's Cooking?
Picky Eaters?
Areas of Mitigation Interest (AoMI)
The Community Resilience Kitchen
*Flood Risk Datasets*

- Flood Depth Grids
- Percent Annual Chance Grids
- Changes Since Last FIRM
- Water Surface Elevation Grids
- Flood Risk Assessment (AAL)
Changes Since Last FIRM

**Intended Users**
- Community officials and leaders
- Planners
- Engineers
- Developers
- Insurance Agents, Realtors, Lenders
- Citizens

**Features and Benefits**
- Captures changes in mapped floodplain and floodway boundaries as well as flood zone designations
- Makes it easy for communities and homeowners to identify the impacts of new maps on the regulatory floodplain.
- Helps identify reasons for changes
- Assists in prioritizing mitigation actions
Flood Depth Grids

Features and Benefits
- Flood Depth Grids for 10%, 4%, 2%, 1%, and the 0.2% annual chance flood events
- Percent annual chance of flooding over average mortgage (30-year) time period
- Assists with mitigation prioritization based on risk
- Assist local permit officials by identifying areas of high hazard
- Assists with cost effectiveness screening
- Effective visual tool to communicate risk to public

Intended Users
- Planners
- Local permit and construction inspection officials
- Officials preparing mitigation grants
- Elected officials and local leaders
- Home owners/Home buyers
- Realtors

RiskMAP
Increasing Resilience Together
Percent Annual Chance Data

- Helps officials identify and communicate the chance of flooding at a given location.

- Two separate data sets illustrate flooding potential:
  - **Percent Annual Chance** grid (PctAnnChance) defines the chance that a given location will flood in any single year.
  - **Percent 30-Year Chance** grid (Pct30yrChance) defines the chance that a property will experience a flood event during a 30-year window, or the length of a home mortgage.
Water Surface Elevation Grid Data

- Helps community officials interact with **Base Flood Elevations** and stream profile data.
- Illustrates water surface elevation in feet above mean sea level.
- Commonly prepared for the 1-percent annual chance flood event
  - May be prepared for various flood frequencies (0.2-percent, 2-percent, 4-percent, 10-percent, etc.)
Freeboard Grid

- Helps community officials interact with Higher Standards related to freeboard.
- Illustrates areas that are BFE+1, BFE+2 and BFE+3 allowing proactive construction.
Velocity Grid

- Helps community officials interact with **Stream Flow Velocities**.
- Identify locations where erosion, scour, or other structural instability may occur.
My Delicious Idea
Teach them to cook...

- Identify how local officials, planning staff and technical staff benefit from the analysis
- Determining BFEs for Approximate Zone A
- Identifying structures for Elevation/Acquisition
- Identifying structures newly at risk of flooding
- Identifying vulnerable populations for Emergency Planning
- Targeting Mitigation to High Risk Properties
Base Ingredients: the Datasets

▸ Fact Sheets
  • About the data, not the instructions

▸ Key Messages
  • http://riskmap2go.riskmap6.com
Provide a Recipe

- **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**
The Cooking Channel

- **Self Paced Tutorials (Audio PowerPoints)**
  - Includes teaching moments
  - Walks through recipe card instructions
  - Provides additional resources

- **Virtual Brown Bag Sessions**
  - Monthly beginning July 2015
  - Register through Eventbrite
  - Opportunity for Q&A with SMEs
  - Rotation of Products and Uses
  - [https://r6virtualbrownbag.eventbrite.com](https://r6virtualbrownbag.eventbrite.com)
One more solution…
### Resources and Related Links

**Risk MAP and Region 6**
- What is Risk MAP? - May 2011
- Risk MAP Fact Sheet
- Risk MAP Discovery (June 2010)
- Risk MAP - View Process (July 2011)
- Risk MAP and the NFIP - Published - March 2011
- Guidebook
  - The Voice - Volume 1 - October 2002
  - The Voice - Volume 2 - March 2005
  - The Voice - Volume 3 - October 2006
  - The Voice - Volume 4 - June 2007
  - The Voice - Volume 5 - December 2007
  - The Voice - Volume 6 - March 2014
  - The Voice - Volume 7 - July 2014
  - The Voice - Volume 8 - October 2014
  - The Voice - Volume 9 - December 2014
  - The Voice - Volume 10 - March 2015

**Identify Your Risk**
- Floods and Floodplain Information
  - National Flood Insurance Program (NFIP)
  - Floods and Floodplain Information (May 2011)
  - Floods and Floodplain Information (November 2011)
  - Floods and Floodplain Information (September 2012)

**Know Your Risk**
- Floods and Floodplain Information (May 2011)
- Floods and Floodplain Information (November 2011)
- Floods and Floodplain Information (September 2012)

**Understand Your Risk**
- Floods and Floodplain Information (May 2011)
- Floods and Floodplain Information (November 2011)
- Floods and Floodplain Information (September 2012)

**FEMA**
- Fema.gov - Key Messages online
- Fema.gov - Changes Since Last FIRM
- Fema.gov - Depth Grids
- Fema.gov - Hydrology
- Fema.gov - Local Levee Partnership Team
- Fema.gov - National Flood Hazard Layer
- Fema.gov - Flood Risk Report
- Fema.gov - Geospatial PDF
- Fema.gov - Water Surface Elevation Grids
- Fema.gov - Percent Annual Flood Data
- Fema.gov - Using the Changes Since Last FIRM
- Fema.gov - Using the Depth Grid Data
- Fema.gov - Using the Percent Annual Change of Flood Data
- Fema.gov - Using the AAL Data
- Fema.gov - Using Water Surface Elevation Grids
- Fema.gov - Using the Water Surface Elevation Grids
- Fema.gov - Using the Water Surface Elevation Grids
- Fema.gov - Using the Water Surface Elevation Grids
- Fema.gov - Zone A Requirements Summary
- Fema.gov - Zone A0 Requirements Summary

---

**Information for Local Officials**

- **GUIDEBOOK** - Risk Communications Guidebook for Local Officials
- FEMA's National Flood Hazard Layer (Official site)
- Tutorial: FEMA's National Flood Hazard Layer GeoPlatform
- RiskMAP2go - Key Messages online
- Fact Sheet - Changes Since Last FIRM
- Fact Sheet - Depth Grids
- Fact Sheet - Hydrology
- Fact Sheet - Local Levee Partnership Team
- Fact Sheet - National Flood Hazard Layer
- Fact Sheet - Flood Risk Report
- Fact Sheet - Geospatial PDF
- Fact Sheet - Water Surface Elevation Grids
- Fact Sheet - Percent Annual Chance Data
- Audio-recorded PPT - Using the Changes Since Last FIRM
- Audio-recorded PPT - Using the Depth Grid Data
- Audio-recorded PPT - Using the Percent Annual Chance of Flooding Data
- Audio-recorded PPT - Using the AAL Data
- Audio-recorded PPT - Using Water Surface Elevation Grids
- Audio-recorded PPT - Using the Water Surface Elevation Grids
- Recipe Card - Using the Changes Since Last FIRM
- Recipe Card - Using the Depth Grids
- Recipe Card - Using the Percent Annual Chance Flooding Data
- Recipe Card - Using the AAL
- Recipe Card - Using the Water Surface Elevation Grids
- Zona A Requirements Summary
- Zona A00 Requirements Summary
Gov-Delivery

GovDELIVERY is FEMA’s most effective email communication tool when it come to receiving information about specific FEMA programs, in addition to information throughout the course of a disaster.

Subscribing is Easy

Go to FEMA.gov and click on 💌

Then, select which program(s) you like, and when new information is available, we will email you.
Looking for a FEMA resource?

The FEMA Library is an online, searchable database of publicly available resources for downloading at no cost.

You can find:

- Publications, posters, brochures, flyers, and forms
- Reports and presentations
- Training materials and instructions
- Policy papers and program guidelines

Simply go to [https://www.fema.gov/resource-document-library](https://www.fema.gov/resource-document-library) to view items in the library. You can order hard copies of publications through email at: FEMA-Publications-Warehouse@dhs.gov.