FEMA’s Non-Regulatory Flood Risk Products: What’s Next?

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June 22, 2016 (ASFPM)
Presentation Outline

- History of the Flood Risk Products (FRPs)
- FRP Availability
- Perceptions and Usage: Recent FRP Feedback
- Other FRP Efforts Underway
Flood Risk Product History

- Early Demonstration Projects completed
- Appendix N & O developed
- FRP-focused trainings for CTPs at EMI begin

10

- FRPs prototyped and developed
- Presented at ASFPM FEMA Town Hall

11

- First round of FRP feedback collected
- Coastal & Dams FRPs defined (draft)

12

- Levee FRPs defined (draft)
- Standards & Guidance published

13

- Flood Risk Assessment process redefined
- “Non-Regulatory” terminology changed to “Flood Risk”
- FEMA FRP IPT initiated

14

- Coastal FRP guidance published

15

- Levee & Dams FRP guidance published
- Removal of AAL as required dataset
- Effectiveness survey

16
FRP Availability

- Increased interest in multi-frequency depth and WSEL grid usage for “predictive analytics” – rapid response, insurance, other potential impacts, etc.

- Effort begun in February 2016 to identify where Risk MAP projects had produced multi-frequency depth grids

- Identification of the footprints of available data on the Map Service Center, plus information provided by Regions on where other flood risk data is planned, in-progress, or available through a CTP
Depth Grids that are Final and on the MSC

Data as of June 1, 2016
FRP Availability

- Depth Grids that are Final (MSC or Elsewhere)

Data as of June 1, 2016
FRP Availability

- Depth Grids that are Planned, In-Progress, or Final

Data as of June 1, 2016
FRP Availability – What’s Next?

- Define strategy for increasing awareness of FRP Availability
  - How to store the data?
  - What attributes to store?
  - How to access?
  - How to maintain?
FRP Perceptions and Use: Recent FRP Feedback

Flood Risk Products IPT (10/15–4/16)

EMI: CTP Feedback (Apr 2016)

Effectiveness Survey (Summer 2016)
Flood Risk Products
Integrated Project Team (IPT)

- **Goal**: Examine current FRP communication challenges and identify opportunities to enhance existing, or develop new, materials to improve FRP outreach and communication resources

- **Timeline**: October 2015 thru April 2016 (6 months)

- **Team Members**: FEMA HQ, FEMA Regions, FEMA Contractors (CERC, PTS, CDS, & PM teams, including RPMLs)

- **Format**: Regular meetings & discussions, online member survey
Flood Risk Products
Integrated Project Team (IPT)

- **Initial Challenges Identified:**
  - Limited training materials
  - Varied levels of internal knowledge of FRPs
  - Varied levels of community stakeholder buy-in
  - Varied levels of community technological know-how
  - Identifying relevant trainings and providing them to the appropriate stakeholders
  - Inconsistent communication and interaction with stakeholders post-resilience meeting
  - Having large amounts of data for communities to review in a short timespan
  - Keeping communities engaged with limited time and resources
Flood Risk Products
Integrated Project Team (IPT)

- Final Recommendations:
  1. Develop training materials/modules on how to use the FRPs
  2. Create a series of communication and outreach materials for each FRP, for multiple stakeholder audiences
  3. Create an IPT to evaluate and recommend FRP format, design, and related template changes
  4. Request the CNMS work group evaluate how the current CNMS system can be used to track FRPs
  5. Create an IPT to evaluate the use of FEMA’s GeoPlatform as a tool to host and access all FRPs
  6. Request the Mitigation Planners work to update the Local Mitigation Planning Handbook or develop a how-to guide to provide guidance on the use of the FRPs to meet the hazard mitigation planning requirements
Final Recommendations:

1. Develop training materials (e.g., webinars) about how to use the FRPs
2. Create a series of communication and outreach materials for each FRP, for multiple stakeholder audiences
3. Create an IPT to evaluate and recommend FRP format, design, and related template changes
4. Request the CNMS workgroup evaluate how the current CNMS system can be used to track FRPs
5. Create an IPT to evaluate the use of FEMA's GeoPlatform as a tool to host and access all FRPs
6. Request the Mitigation Planners work to update the Local Mitigation Planning Handbook or develop a how-to guide to provide guidance on the use of the FRPs for hazard mitigation planning requirements

#1 & #2: CERC-led; Efforts likely to begin later this calendar year
#3: PTS-led; Will likely be initiated once effectiveness survey results are received
#4 & #5: PTS and CDS-led; Will be part of the follow-up activities to the FRP Inventory efforts
#6: CERC-led; Will be identifying the need and timeline later this year
FRP Feedback at EMI (April 2016)

- CTPs in attendance
Interactive Feedback collected

3 questions asked per Product/Dataset:

1. Have you used it in community meetings?
2. How effective was it at communicating risk?
3. One custom question unique to each Dataset

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FRP Feedback at EMI (April 2016)

- Have you used this dataset in community meetings?

![Bar chart showing Flood Risk Dataset Use in Community Meetings](chart.png)

- **FRA (CB)** = Census Block-based Flood Risk Assessment results
- **FRA (SS)** = Structure-Specific Flood Risk Assessment results
FRP Feedback at EMI (April 2016)

- How effective was this dataset in helping you with risk communication?

**Effectiveness in Communicating Risk**

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<th>Rating</th>
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**FRA (CB)** = Census Block-based Flood Risk Assessment results

**FRA (SS)** = Structure-Specific Flood Risk Assessment results
FRP Feedback at EMI (April 2016)

- Examples of custom questions
  - Of all the different types of AOMIs that can be collected, which do you think is most beneficial to share with communities?
Examples of custom questions

- Do you think that WSEL grids are a viable alternative to eventually be used for regulatory purposes (for example, in place of using the flood profile for determining one’s BFE)?
Summary and “Conclusions”

- Small sample size, but...
- Depth/WSEL grids and Changes Since Last FIRM seem to continue to be the most popular
- Flood Risk Database complexity should be evaluated – are there features or attributes that are currently required but really shouldn’t be?
- Some interest in utilizing velocity data from 2D models, where available, even if only in a relative sense to identify higher velocity areas within mapped floodplains
FRP Effectiveness Survey

- 2-part survey administered by CERC (Resilience Action Partners)

Part 1: Online survey of multiple “internal” FRP stakeholders
  - Phase 1 (June) – questions around the 3 main Flood Risk Products (Flood Risk Report, Flood Risk Map, Flood Risk Database)
  - Phase 2 (August) – questions around the required Flood Risk Datasets (Changes Since Last FIRM, Areas of Mitigation Interest, Flood Depth & Analysis Grids, Flood Risk Assessments)

Part 2: In-depth interview of external stakeholders
  - 9 communities
  - To be conducted later this summer
  - Questions will be similar to those included in the Online surveys
FRP Effectiveness Survey

Sample of Questions for each Product and Dataset

- Have you used this product/dataset before?
- How important is it to helping you better understand flood risk?
- How satisfied are you with it?
- Which aspects/features are most valuable, and the most helpful for risk identification, risk communication, hazard mitigation, and planning efforts?
- How likely are you to recommend it to other key stakeholders who want to better understand flood risk?
- What enhancements or changes would you recommend?
FRP Effectiveness Survey

- **What’s Next?**
  - Finish conducting surveys
  - Analyze results
  - Survey 1 report – due in August
  - Survey 2 report – due in October
  - Identify product/dataset enhancements or changes, based on feedback
  - Incorporate changes to associated standards, guidance, and/or technical references – begin planning during Fall 2016, with likely incorporation during the Spring 2017 G&S maintenance cycle
Other FRP Efforts or Opportunities

- TMAC – example of items that may have an FRP component as implementation gets underway
  
  - **Annual Report** (December 2015)
    
    - Recommendation 10: “FEMA should transition from identifying the 1-percent-annual-chance floodplain and associated base flood elevation as the basis for insurance rating purposes to a **structure-specific flood frequency determination** and associated flood elevations.”
    
    - Recommendation 14: “FEMA... should transition to a **flood risk assessment focus that is structure specific**...”
Other FRP Efforts or Opportunities

- **TMAC** – example of items that may have an FRP component as implementation gets underway
  - **Future Conditions Report** (December 2015)
    - Recommendation 1.3-2: “FEMA should use future risk assessments...”
    - Recommendation 1.4-11: “FEMA should develop a policy and standards on how to consider and determine erosion zones that are outside of the SFHA”
    - Recommendation 2.3-7: “FEMA should publish multiple future conditions flood elevation layers that incorporate uncertainty”
    - Recommendation 3.5-13: “Maps displaying the location and extent of areas subject to long-term coastal erosion and future sea level rise scenarios should be advisory (non-regulatory) for Federal purposes”
    - Recommendation 4.4-9: “FEMA should determine long-term riverine erosion hazard areas for areas subject to high erosion and provide to the public in a digital layer”
Questions?