



# Floodplain Management and Hazard Mitigation Planning

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FEMA

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# Webinar Housekeeping

- Attendees **are currently muted** to reduce background noise.
  - Please do NOT put your phone on “hold”, it plays the hold music for everyone else on this call.
  - If you have to step away, please hang up and rejoin the call later.
- Use “Chat” panel **to all** to ask questions.
  - The chat will be open for 10 minutes following the training.
- **The PowerPoint slides will be emailed to participants afterwards.**
- **You may be eligible for Professional Credits:**
  - American Institute of Certified Planners (AICP) Self-Reported Certification Maintenance Credit;
  - Association of State Floodplain Managers (ASFPM) Certified Floodplain Manager (CFM) Continuing Education Credit;
    - Participation certificates and agendas will be sent by request to all participants who attend the whole session and participate in the polls.



# Welcome and Overview

## ■ Presenters

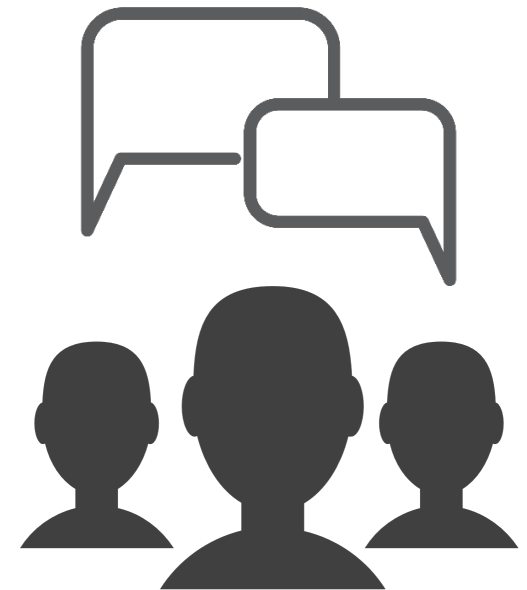
- Mari Radford, Lead Community Planner, FEMA Region III
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## ■ Presentations

## ■ Next Steps

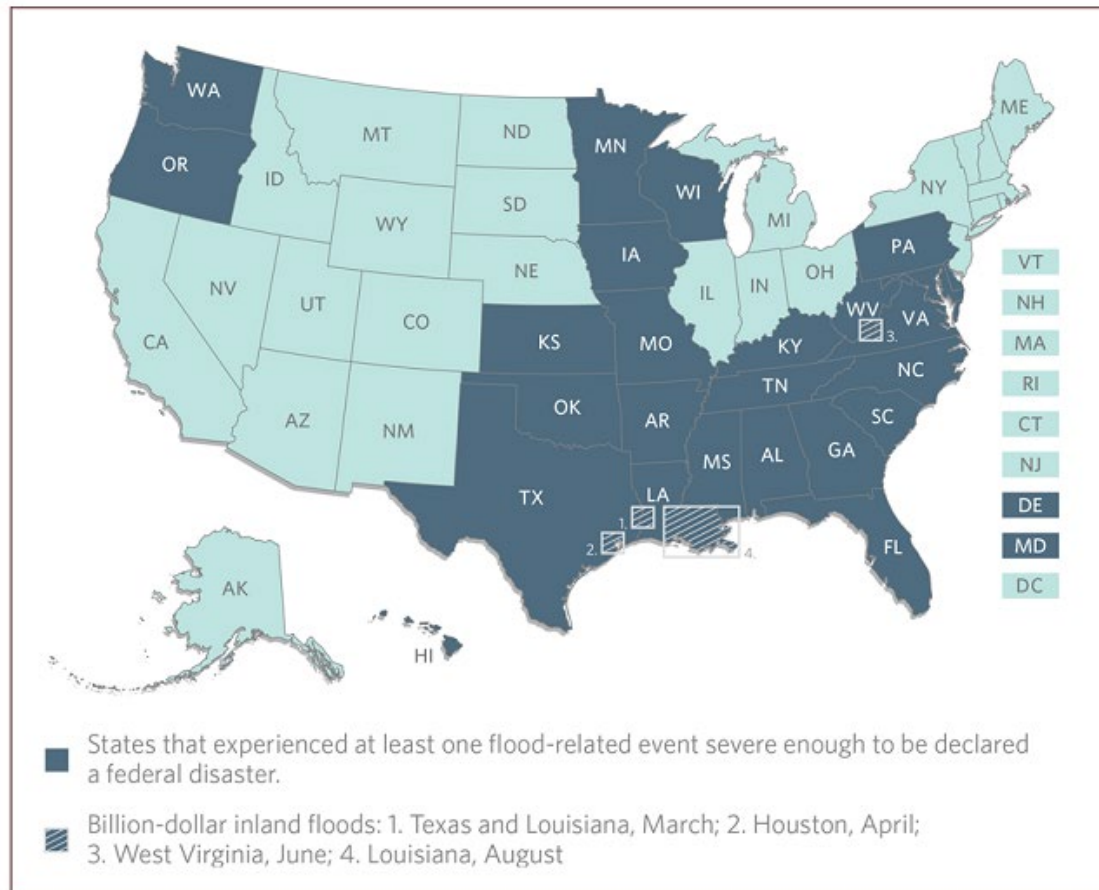
- Future Coffee Break Webinars
- Receiving professional credits

## ■ Wrap-Up and Q&A



# Flooding – The Nation’s #1 Natural Hazard

## Billion-Dollar Flood Events and Disasters in 2016



Sources: National Oceanic and Atmospheric Administration and Federal Emergency Management Agency

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# Flooding – The Region’s #1 Natural Hazard

 17 Severe Storm(s)

 16 Hurricane

 15 Flood

 8 Fire

 6 Snow

 2 Drought

 1 Earthquake

 1 Freezing

 1 Terrorist

- Virginia disasters since 1953
- <https://www.fema.gov/data-visualization-floods-data-visualization>

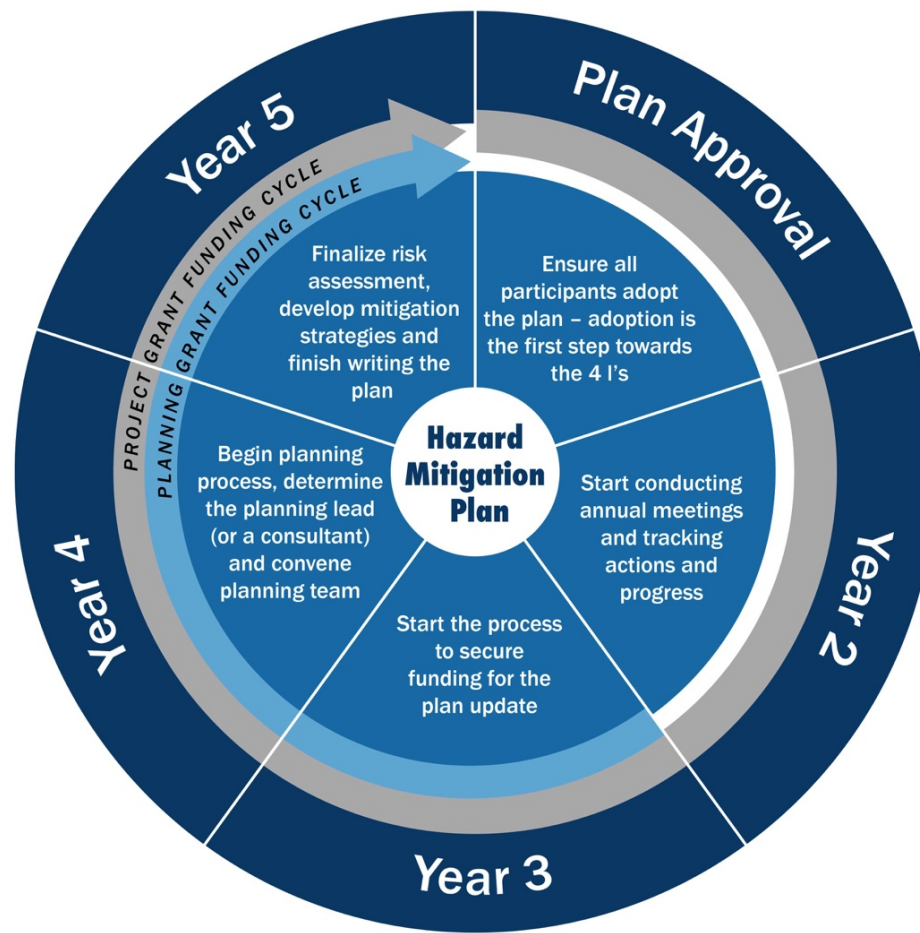


# Floods Cause Damage, but not all are Disasters





# Connecting to the Planning Cycle



# Polling Question 1

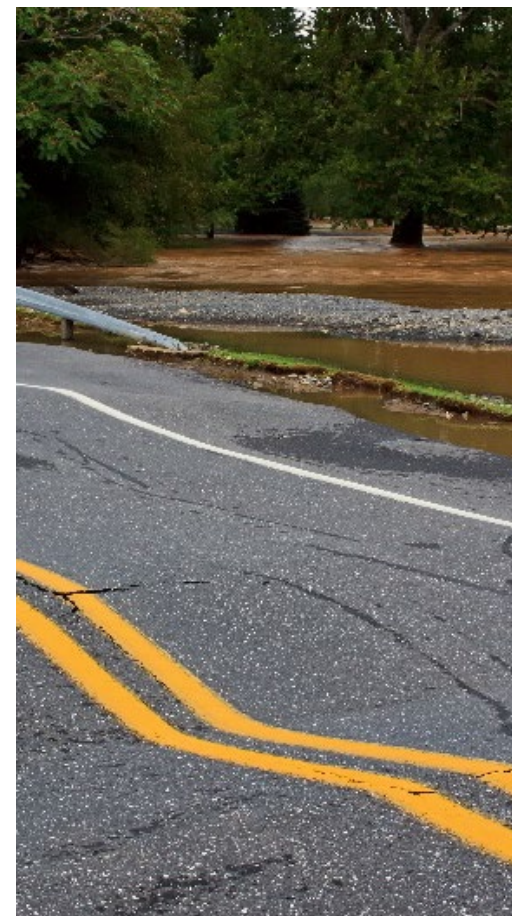
- **Do your local Floodplain Managers participate on your Planning Team?**
  - All local/ municipal Floodplain Managers participate
  - Some local/ municipal Floodplain Managers participate
  - No local/ municipal Floodplain Managers participate





# Planning Requirements

- A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))
- B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))
- B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))
- B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))
- B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))



# Planning Requirements

- **C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))**
- **C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))**
- **C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))**
- **C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))**



# Hazard Descriptions: Previous Occurrences

Date of Flood	Property Damage
September 12, 2002	\$25,000
July 30, 1999	\$2,000
July 14, 1999	\$60,000
September 6, 1997	\$175,000
July 31, 1976	\$50,000
September 18, 1972	\$385
July 29, 1969	\$1,250
August 2, 1963	\$5,000

Date of Flood	Property Damage
August 19, 2010	\$2,500,000
August 28, 2007	\$1,000
July 23, 2007	\$1,000
October 14, 2006	\$15,000
October 9, 2006	\$20,000
October 6, 2006	\$500,000
October 3, 2006	\$25,000
July 10, 2006	\$25,000
September 9, 2005	\$3,000

Source: <http://webra.cas.sc.edu/hvri/products/sheldus.aspx>



# Including Changing Condition Impacts in the Plan

- ▶ Hazard Mitigation Plans should identify changing conditions in their community and the effect of these on the community's vulnerability to hazards
  - Changing conditions of the impact of hazards due to climate change, including, but not limited to the following hazards:
    - **Flood**
    - Drought
    - Extreme temperatures
    - Pandemic
    - Hurricanes
    - Others?
  - The plan must include data sources that support analysis
- ▶ The FEMA “State Mitigation Planning Key Topics Risk Assessment Bulletin” has tips, guidance, and resources to support planning for changing conditions



# Data, Data, Data



# Overlap with Floodplain Management and Insurance



Floodplain Mapping



Floodplain Management



Flood Insurance





# Overlap with Floodplain Management and Insurance



**Floodplain Mapping**



**Floodplain Management**



**Flood Insurance**





# Repetitive Loss: NFIP Definition

## ► NFIP definition:

- A Repetitive Loss property is any insurable building for which **two or more claims of more than \$1,000** were paid by the NFIP within any rolling ten-year period, since 1978
- A Repetitive Loss property may or may not be currently insured by the NFIP



# Repetitive Loss: HMA Definition

- ▶ HMA Definition (Biggert-Waters Flood Insurance Reform Act):
  - ▶ A repetitive loss property is a structure covered by flood insurance under the NFIP that:
    - Has incurred flood-related damage on 2 occasions, in which the cost of the repair, on the average, **equaled or exceeded 25 percent of the market value** of the structure at the time of each such flood event
    - At the time of the second incidence of flood-related damage, the contract for flood insurance contains **increased cost of compliance coverage**



# Polling Question 2

**Do you discuss your floodplain ordinance as a mitigation strategy?**

- Yes
- No
- Other (please write in chat box)

**Consider these opportunities to have your floodplain ordinance do more:**

- Higher standards such as freeboard
- Buffers to the SFHA
- Cumulative damage
- Require variances for historic structures
- Locally identified flood hazard areas

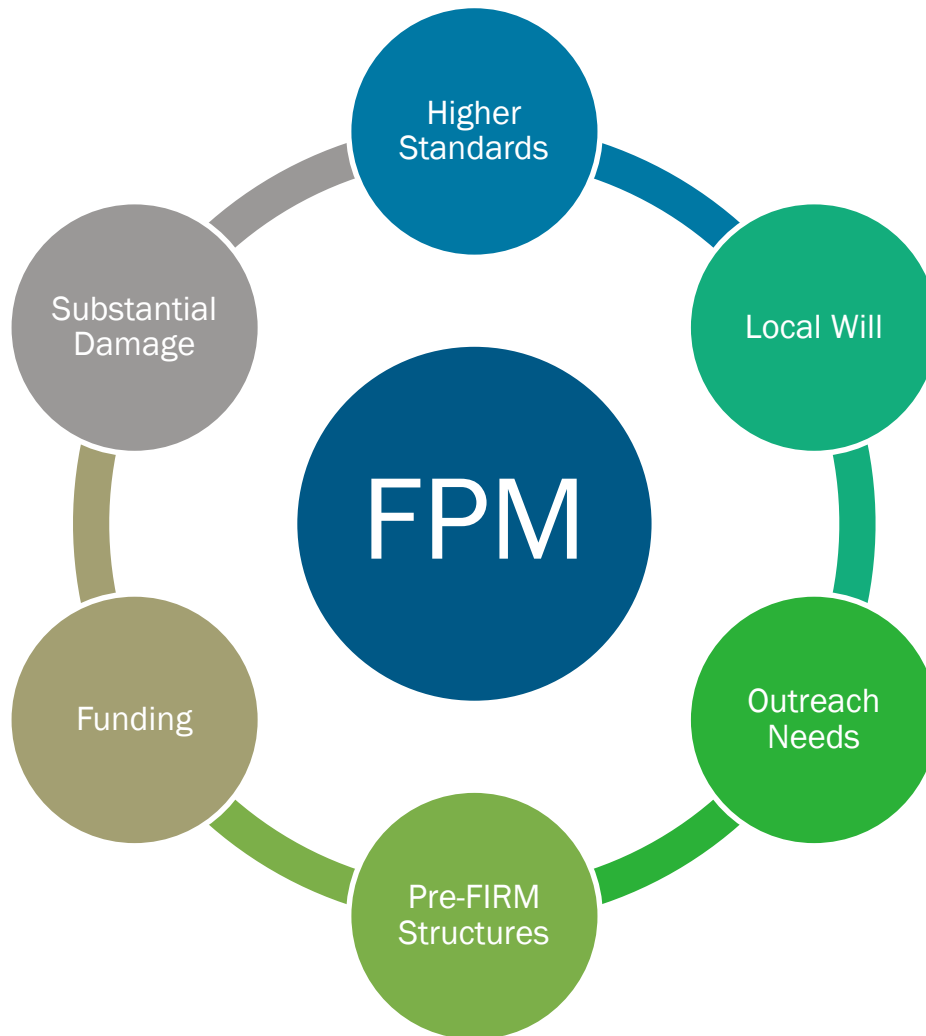


# Floodplain Managers and the Mitigation Strategy

- Responsible development and meaningful flood mitigation are crucial for a safe, resilient community
- Floodplain Managers are key stakeholders in this effort
- Floodplain Manager outreach and inclusion are extremely important and beneficial



# Floodplain Managers and the Mitigation Strategy



- Floodplain Managers can bring a wealth of knowledge to mitigation strategy development during the hazard mitigation planning process
- Ultimately leading to a targeted and effective flood mitigation plan



# Floodplain Managers and the Mitigation Strategy

Hazard Mitigation Plans in which Floodplain Managers have participated in the planning process tend to:



Include more specific and targeted flood mitigation projects



Consider long-term flood risk reduction strategies such as changes to local policies and ordinances



Document realistic and attainable mitigation funding sources making projects more feasible and implementable



# NFIP “Get To Yes” Tool

NATIONAL FLOOD INSURANCE PROGRAM SURVEY

## NATIONAL FLOOD INSURANCE PROGRAM (NFIP) SURVEY

MUNICIPALITY: \_\_\_\_\_



1. FLOODPLAIN IDENTIFICATION AND MAPPING			
Requirement	Recommended Action	Yes/No	Comments
a. Does the municipality maintain accessible copies of an effective Flood Insurance Rate Map (FIRM)/Digital Flood Insurance Rate Map (DFIRM)? Does the municipality maintain accessible copies of the most recent Flood Insurance Study (FIS)?	Place these documents in the local libraries or make available publicly.		
b. Has the municipality adopted the most current DFIRM/FIRM and FIS?	State the date of adoption, if approved.		
c. Does the municipality support request for map updates?	If yes, state how.		
d. Does the municipality share with Federal Emergency Management Agency (FEMA) any new technical or scientific data that could result in map revisions within 6 months of creation or identification of new data?	If yes, specify how.		
e. Does the municipality provide assistance with local floodplain determinations?	If yes, specify how.		
f. Does the municipality maintain a record of approved Letters of Map Change?	If yes, specify the responsible office.		





# Examples of Useful Data



# Exposure Analysis

<i>Critical and Public Facilities in the Coastal Flood Risk Area</i>					
<i>Facility Category</i>	<i>Facility Type</i>	<i>Facility Detail</i>	<i>Address</i>	<i>City</i>	<i>Flood Depth</i>
County	County Government	Department of Tourism	2 Rose Hill Drive	Cambridge	1.8
County	County Government	County Facility	Lakesville Crapo Road	Crapo	1.6
Emergency	Fire Department	Lakes and Straits Fire Company	2103 Farm Creek Road	Wingate	2.6
Emergency	Fire Department	Hoopers Island Volunteer Fire Company	2754 Hoopers Island Road	Church Creek	1.9
Emergency	Fire Department	Lloyds Volunteer Fire Department	Cambridge Hudson Road	Cambridge	1.2
Emergency	Fire Department	Taylor's Island Volunteer Fire Company	510 Taylor's Island Road	Taylor's Island	1.2
Emergency	Fire Department	Madison Volunteer Fire Company	1154 Taylor's Island Road	Madison	0.8
Miscellaneous	Boat Ramp	Crocheron Ramp	Crocheron Road	Toddsville	6.4
Miscellaneous	Boat Ramp	Elliott Island Ramp	Warf Road	Vienna	4.2
Miscellaneous	Boat Ramp	Toddsville-Farm Creek Ramp	Farm Creek Road	Toddsville	4.0
Miscellaneous	Boat Ramp	Muddy Hook Cove Ramp	Doeller Road	Fishing Creek	3.8
Miscellaneous	Boat Ramp	Great Marsh Ramp	Somerset Avenue	Cambridge	3.5
Miscellaneous	Boat Ramp	Wingate Ramp	Wingate Bishops Head	Wingate	3.5
Miscellaneous	Boat Ramp	Shorter's Wharf Ramp	Maple Dam Road	Cambridge	3.2

Source: Dorchester County, Maryland Hazard Mitigation Plan, 2017





# Flood Related Mitigation Actions



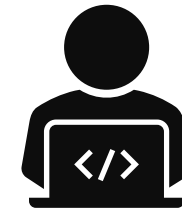
# Polling Question 3

- **Would training on floodplain management help your team better understand risk and solutions?**
  - **Yes**
  - **No**
  - **Maybe**
  - **Other (please write in chat box)**



# Additional Stakeholders to Consider

- GIS Specialists
- Building Department/Code Enforcement
- State and Federal Partners
- Conservation District/Extension Services
- Housing Authorities
- Environmental Protection/Public Health
- Parks/Recreation
- Business Leaders
- Colleges and Universities
- Nonprofit Organizations



# Region 3 2019 Coffee Break Webinar Schedule

**March**

Utilizing Universities as Partners in Hazard Mitigation Plan Drafting and Implementation

**May**

Floodplain Management and Hazard Mitigation Planning

**July**

Engaging the Arts in Mitigation & Planning

**September**

Revisiting Loss Avoidance and the Benefit Cost Analysis Process

**November**

Tracking Risk Reduction through Your Capabilities Assessment

**January**

Incorporating Historic and Cultural Resources in Your Hazard Mitigation Plan



# Upcoming FEMA Region III Coffee Break

**July 10, 2019**

## Engaging the Arts in Mitigation & Planning

- To register, please follow the link\* to:  
<https://femaregion3coffeebreaks.eventbrite.com>
- To sign up for additional FEMA Region III updates, please follow the link\* to:  
<http://bit.ly/FEMA-Region-III-coffee-breaks>

*\*Please note, the links will be sent out after this presentation.*





# You May be Eligible for Professional Credits

**Participation certificates and agendas will be sent to all participants who attend the whole session and participate in the polls.**

American Institute of Certified Planners (AICP) Self-Reported Certification Maintenance Credit



Association of State Floodplain Managers (ASFPM) Certified Floodplain Manager (CFM) Continuing Education Credit



# Resources

- Association of Floodplain Managers  
<https://www.floods.org/>
- Flood Smart  
[www.Floodsmart.gov](http://www.Floodsmart.gov)
- Hazus  
<https://www.fema.gov/hazus>
- Local Mitigation Planning Handbook  
<http://www.fema.gov/library/viewRecord.do?id=7209>
- FEMA Flood Map Service Center  
<https://msc.fema.gov/portal>
- FEMA Region III Plan Integration: Linking Local Planning Efforts  
<https://www.fema.gov/media-library/assets/documents/108893>



# Thank you!



**Thank you to:**

**Sarah Wolfe**

**Floodplain Management & Insurance, FEMA Region III**

**Taryn Murray, CFM**

**Pennsylvania Association of Floodplain Managers**

**And all of you for participating today!**



# Questions?





# FEMA

