Pre-Disaster Mitigation Planning and Grants Funding Overview

FEMA

7/12/2020

FEMA Organizational Structure

Contact Information
Regional Planning Leads

Melissa Surette, Region I melissa.surette@fema.dhs.gov (617) 794-0292

Jack Heide, Region II john.heide@fema.dhs.gov (202) 709-0671

Mari Radford, Region III mari.radford@fema.dhs.gov (267) 319-6310

Carl Mickalonis, Region IV carl.mickalonis@fema.dhs.gov (404) 983-5098

Bart Moore, Region VI bart.moore@fema.dhs.gov (940) 232-4010

Joe Chandler, Region VII joe.chandler@fema.dhs.gov (816) 808-9016

Nicole Aimone, Region VIII nicole.aimone@fema.dhs.gov (303) 235-4814

Xing Liu, Region IX xing.liu@fema.dhs.gov (510) 612-5601

John Schelling, Region X john.schelling@fema.dhs.gov (425) 877-8758

Hazard Mitigation: Examples

Mitigation: Elevating a home by the river

Mitigation: Acquiring a property

Mitigation: Adopting a Building code

Preparedness and Response: Purchasing a Police Command Vehicle

Benefits of Mitigation Planning

Aligns risk reduction priorities and focuses resources on greatest risks

Promotes building partnerships

Increases awareness of hazards and risk

Identifies cost-effective actions for risk reduction

The Planning Process

Coordinating Plans and Processes

- Comprehensive or General Plan
- Housing Plan
- Climate Adaptation Plan
- Economic Development Initiative
- National Flood Insurance Program
- Risk Mapping, Assessment, and Planning

Plan Development Overview

Remember! Even after your Tribal plan is approved, the planning process continues through implementation of your mitigation strategy. In addition, your plan must be updated every five years to maintain eligibility for certain FEMA grants.

1 Describe your community.

Describe the planning area, Tribal assets, and any unique characteristics of your Tribe.

2 Identify your hazards.

Figure out what natural hazards could occur in your planning area.

3 Explain impacts that hazards can have on the community.

Describe what the natural hazards could do to your people, property, and land and determine the Tribe's biggest hazard concerns.

4 Review your current capability to mitigate the impacts.

Inventory your Tribe's plans, policies, and programs that could be used to protect your community.

5 Develop the strategy.

Keeping in mind your risks and your capabilities, identify your Tribe's mitigation goals and actions.

6 Develop an action plan.

Prioritize your actions and develop the details to assist with implementation.

7 Keep track of progress.

Observe and record progress in implementing your mitigation program using a defined method and schedule.

Types of Hazards

- Generate a complete list of the types of natural events that threaten the planning area

Who and What do You Want to Protect?

People

Buildings

Economy

Critical Facilities and Infrastructure

Historical, Cultural, and Sacred Sites

Natural Environment

Types of Mitigation Actions

Plans and Regulations

Government authorities, policies, or codes that influence the way land and buildings are developed and maintained

Natural Systems Protection

Actions that minimize damage and losses and also preserve or restore the functions of natural systems

Structure and Infrastructure Projects

Modifying existing structures or infrastructure to remove them from a hazard area or construction of new structures to reduce impacts of hazards

Education and Awareness Programs

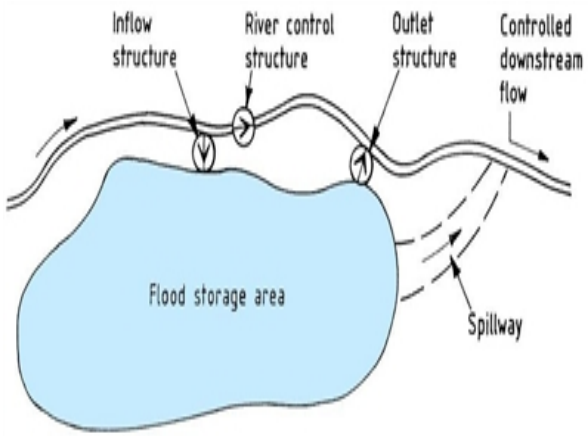
Sustained programs to educate the public and decision makers about hazard risks and community mitigation programs

Mitigation Project Types

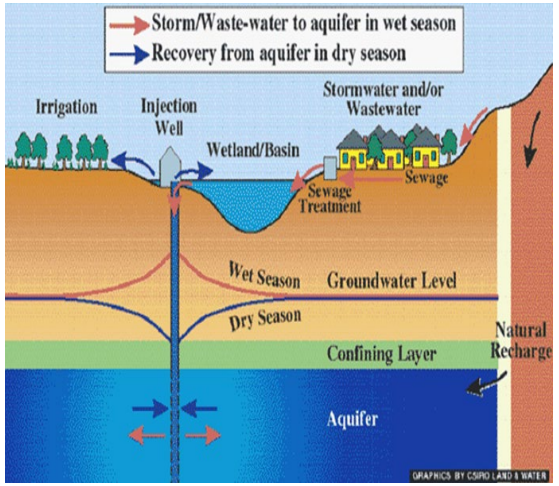
Green infrastructure

Floodplain and stream restoration

Flood diversion and storage



Aquifer storage and recovery

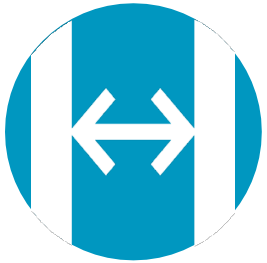


GI STORMWATER FUNCTIONS

CAPTURE
stormwater for specific use

DETAIN
stormwater and slowly release it at a controlled rate

INFILTRATE
stormwater into the ground



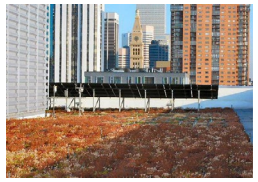
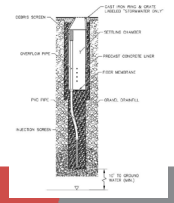
DISCONNECT
impervious areas to divert stormwater

SLOW
the movement of stormwater

GI/LID Technologies

Technology	Description
	**Conservation area** Conservation areas protect undeveloped drainage areas to tap into their natural infiltration and storage capacity. Conserved areas can potentially offer more co-benefits than constructed GI/LID features and are most readily implemented in larger sites such as lower density residential developments and open space.
	**Vegetated bioswale** Vegetated swales are long, shallow channels covered by vegetation and pervious rock or gravel. They provide an alternative to storm drain systems and are best implemented together with other GI/LID technologies, such as sediment traps, infiltration trenches, rock check dams, and curb cuts.
	**Bioretention/stormwater harvesting** Bioretention or stormwater harvesting basins are shallow depressions that collect runoff and use it to support planted vegetation, often adjacent to impervious areas such as parking lots.
	**Rainwater harvesting** Rainwater harvesting uses containers such as cisterns to collect rain for non-potable use at residential and commercial properties.

GI/LID Technologies

Technology	Description
	**Curb extension** Curb extensions are landscaped areas built out from a low-speed vehicle travel or parking lane.
	**Permeable pavement** Permeable pavement is pavement with small voids to allow water to infiltrate or drain into a reservoir below. It is appropriate for parking lots with vehicle travel speeds of less than 30 miles per hour.
	**Roof storage** Green roofs use vegetation and soils on relatively flat building rooftops to retain stormwater. They require irrigation in arid and semi-arid climates.
	**Infiltration trench** Infiltration trenches are narrow gravel-filled channels that retain stormwater or transfer it to another location. They are appropriate for commercial, industrial or high-density residential sites. Vegetation cannot be grown on the trenches.
	**Dry well** Dry wells are gravel-filled excavations that are only a few feet in diameter and are applicable for multi-family residential and commercial sites.

Integrating with Water Planning

- Incorporating Green Infrastructure and Low Impact Development into the 2017 City of Ashland Oregon Hazard Mitigation Plan (EPA/FEMA Project)
- 2018 National NonPoint Source Training Workshop in Colorado Springs, CO “Watershed Planning and Green Stormwater Infrastructure are Hazard Mitigation” (EPA/FEMA/State of Colorado Office of Emergency Management)
- 2020 Maricopa County Arizona Multijurisdictional Hazard Mitigation Plan (EPA/FEMA Project)
- Region 3 Green Infrastructure and Hazard Mitigation Workshop Webinar for Local Communities in Pennsylvania – occurring this July
- Region 7 Iowa Workshop Healthy Watershed Resilience workshop

References and Helpful Links

Plan Development Resources:

- Hazard Mitigation Planning Resources: https://www.fema.gov/hazard-mitigation-planning-resources

Plan Integration Resources:

- Plan Integration: Linking Local Efforts (2015)
- Integrating Hazard Mitigation Planning into Local Planning: Case Studies and Tools (2013)
- Planning for Drought Resilience Fact Sheet (2016)
- **Building Resilient Communities with Green Infrastructure and Hazard Mitigation Planning** https://www.epa.gov/green-infrastructure/building-resilient-communities-green-infrastructure-and-hazard-mitigation

Plan Implementation Resources:

- Mitigation Ideas: https://www.fema.gov/media-library/assets/documents/30627
- Mitigation Best Practices Portfolio: http://www.fema.gov/mitigation-best-practices-portfolio

Hazard Mitigation Assistance

Building Resilient Infrastructure and Communities (BRIC) Grant Program

Natural Hazard Mitigation *Saves*

National Institute of Building Sciences (2017 Study)

National Benefit-Cost Ratio (BCR) Per Peril *BCR numbers in this study have been rounded	Beyond Code Requirements	Federally Funded
Overall Hazard Benefit-Cost Ratio	$4:1	$6:1
Riverine Flood	$5:1	$7:1
Hurricane Surge	$7:1	Too few grants
Wind	$5:1	$5:1
Earthquake	$4:1	$3:1
Wildland-Urban Interface Fire	$4:1	$3:1

Hazard Mitigation Assistance (HMA)

- **Hazard Mitigation Grant Program (HMGP)**

  Available Post-Disaster – All-Hazard

- **Flood Mitigation Assistance (FMA)**

  Available Annually – Flood Only

- **Pre-Disaster Mitigation (PDM) →**

  Building Resilient Infrastructure and Communities (BRIC)

  Available Annually – All-Hazard

BRIC Legislation

- Disaster Recovery Reform Act (DRRA) Section 1234, which amends Section 203 of the Stafford Act
- Funded by a 6% set-aside from federal post-disaster grant funding
- Eligible applicants – states and territories with major disaster declarations in past seven years
- Will replace FEMA's existing pre-disaster mitigation (PDM) program

BRIC's Guiding Principles

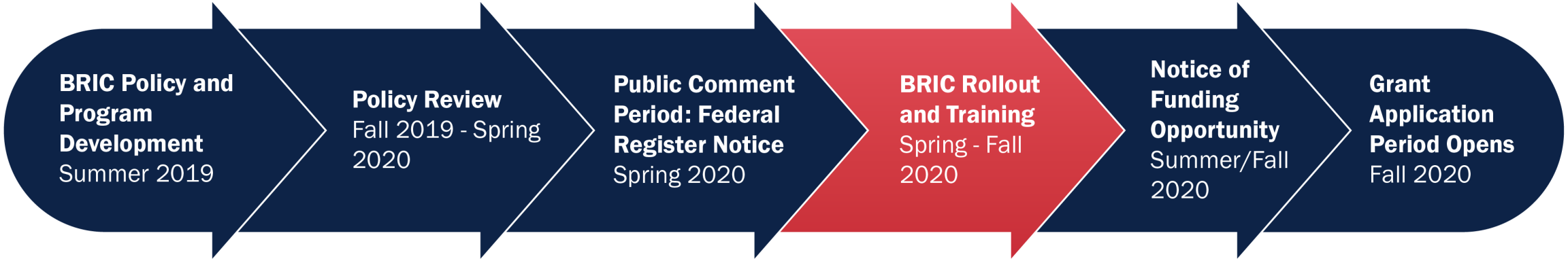
Guiding Principles

- Support Community Capability & Capacity Building
- Encourage and Enable Innovation
- Promote Partnerships
- Enable Large Infrastructure Projects
- Maintain Flexibility
- Provide Consistency

Supports FEMA's Strategic Plan

1. Build a Culture of Preparedness
2. Ready the Nation for Catastrophic Disasters
3. Reduce the Complexity of FEMA

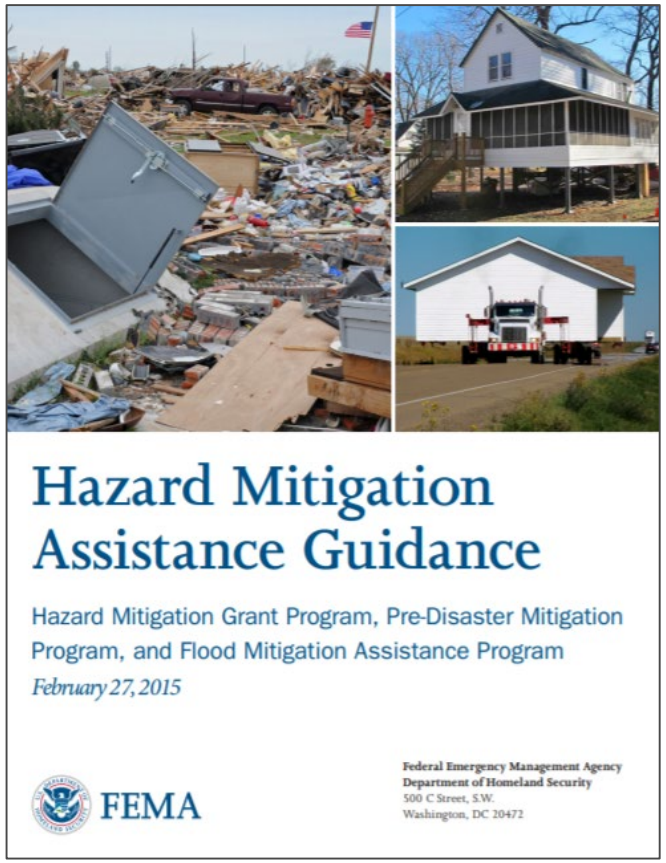
Timeline



* Timing is estimated as of May 2020 and subject to change.

What Makes a Project Eligible?

Existing Activities are Still Eligible



Expanded Eligibility includes:

- Project scoping
- Building code projects
- Additional activities for wildfire and wind implementation (DRRA Section 1205)
- Earthquake early warning (DRRA Section 1233)

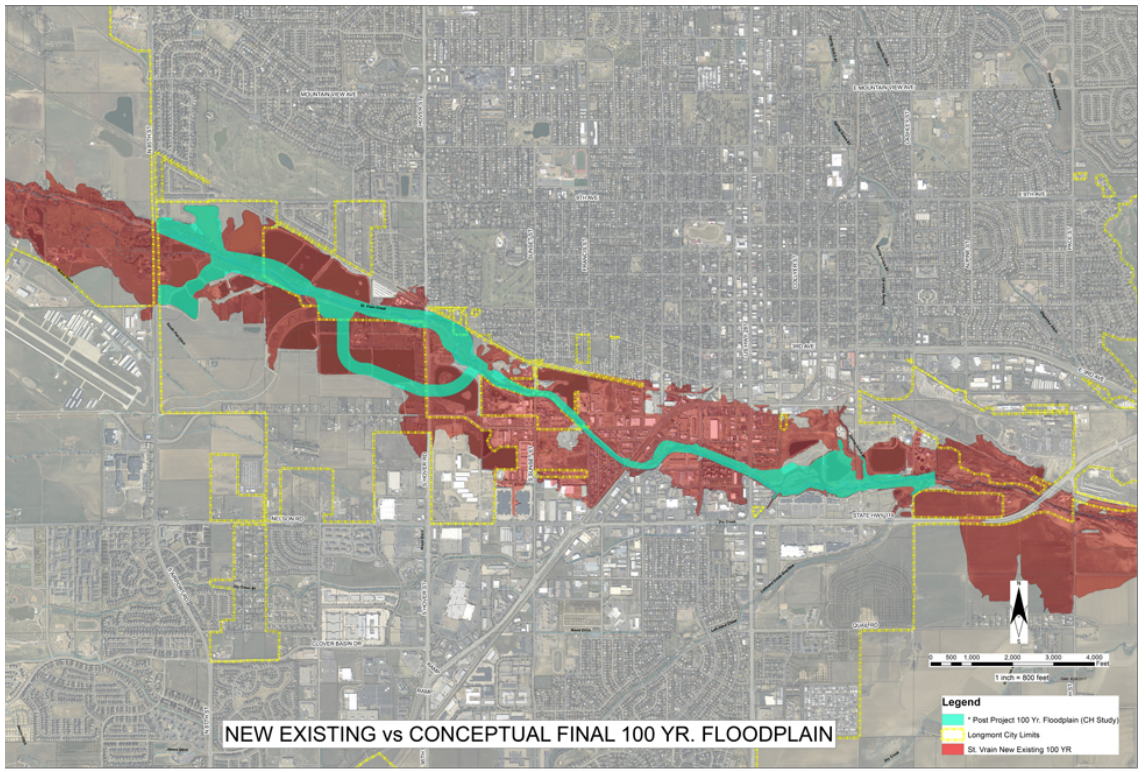
NOTE: FEMA P-2055, *Post-disaster Building Safety Evaluation Guidance*

Projects Must:

- Be cost-effective
- Reduce/eliminate risk and damage from future natural hazards
- Meet latest two consensus codes (i.e. 2015 or 2018 international building code)
- Align with Hazard Mitigation Plan
- Meet all environmental and historic preservation requirements

Example Infrastructure Projects

Nature-Based Flood Protection: Resilient St. Vrain, Longmont, CO



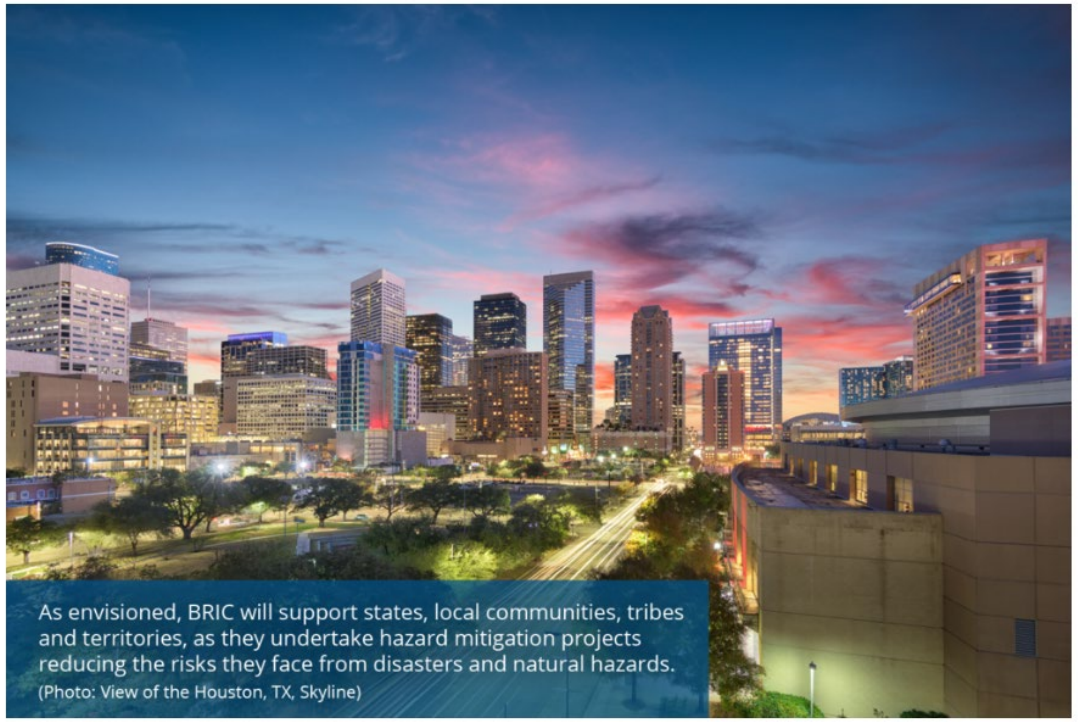
Example Stream Restoration Projects

Nature-Based Flood Storage and Drought Mitigation

Ninemile Creek, Missoula County, MT

FEMA Resources

Building Resilient Infrastructure and Communities



This page provides general information about a new pre-disaster hazard mitigation program.

Sign up for BRIC and HMA Updates:
https://www.fema.gov/hazard-mitigation-assistance

Other Resources:

- Community Lifelines Implementation Toolkit: https://www.fema.gov/media-library/assets/documents/177222
- Benefit Cost Analysis (BCA): www.fema.gov/benefit-cost-analysis
- Hazard Mitigation Planning: https://www.fema.gov/hazard-mitigation-planning
- ISO Mitigation – Building Codes https://www.isomitigation.com/bcegs/

BRIC Summer Webinar Series
To register: https://www.fema.gov/bric

- Week 1: Introduction to Building Resilient Infrastructure and Communities (BRIC) Grant Program
  (Wednesday, July 1, 2020 from 2:00 PM EDT- 3:00 PM EDT)
- Week 2: Meaning of the BRIC Name
  (Wednesday, July 8, 2020 from 2:00 PM EDT- 3:00 PM EDT)
- Week 3: BRIC and Building Codes
  (Wednesday, July 15, 2020 from 2:00 PM EDT - 3:00 PM EDT)
- Week 4: BRIC and Community Lifelines
  (Wednesday, July 22, 2020 from 2:00 PM EDT - 3:00 PM EDT)
- Week 5: BRIC and Nature-Based Solutions
  (Wednesday, July 29, 2020 from 2:00 PM EDT - 3:00 PM EDT)

Contact Information

Rich Hansen, Senior HMA Specialist, Region VIII

richard.hansen@fema.dhs.gov (303) 235-4807