

Mitigation Program Overview & Best Practices

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Session Overview

- Background
 - Mitigation Overview, Importance of Mitigation, What's Happening in the Mitigation Branch
- Overview of the HMA Programs
- Discuss the Application Process
- Provide Best Practice Strategies
- Highlight Mitigation Success Stories

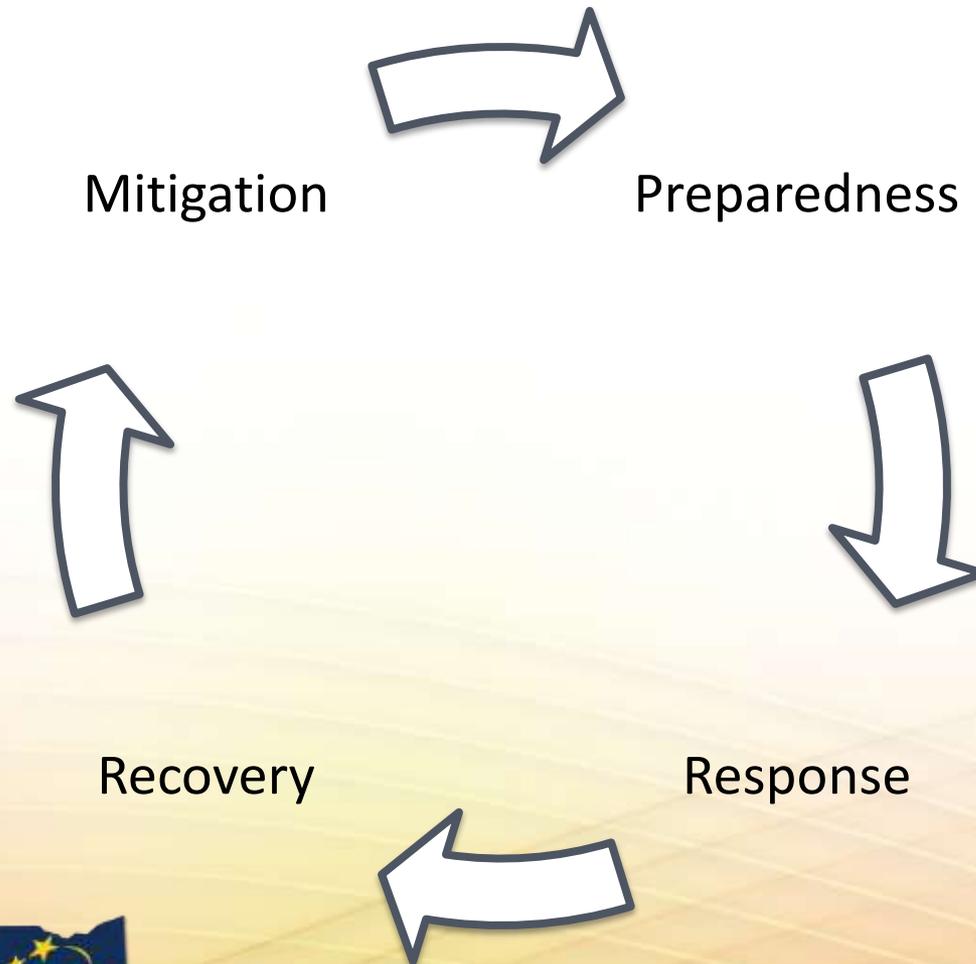
Ohio is Disaster Prone!

- There have been 45 Federal disaster declarations
 - Three (3) counties have had 16 Federal declarations
 - (Franklin, Jefferson, Monroe)
- Ohio Ranks #10 in the nation in most recorded disasters
 - Countless local disasters
- Flooding is Ohio's greatest hazard
 - 34 of 45 Federal declarations due to flooding
- Other natural hazards:
 - Windstorms (tornado and other wind events)
 - Thunderstorms
 - Landslides
 - Severe winter/ice storms
- Moderately susceptible to coastal erosion, storm surge (Lake Erie), wildfire, urban fires, dam/levee failures

What is Mitigation?

- Sustained action taken to reduce or eliminate long-term risk to people and their property from hazards
 - Example: upsizing a culvert, acquire/demolish repetitively flooded structures, structural elevation etc.

Four Phases of Emergency Management



Hazard Mitigation

Break-the-Cycle



Importance of Mitigation

- Save lives
- Decrease property damage
- Losses reduced
 - Protect critical infrastructure
 - Societal disruptions minimized
 - Legal liability reduced
 - Economic sustainability

2006 National Institute of Building Science (NIBS) Study showed \$4 in benefits for every \$1 invested in mitigation actions!

Ohio EMA Mitigation Branch

- Mission: Integrate hazard mitigation principles in a variety of ways to make Ohio communities more sustainable and citizens more resilient in the face of future disaster events.
 - Currently working more than 88 projects totaling over \$44M
 - Projects funded under all five of the HMA programs
 - Ohio ranks 8th in terms of the total number of properties mitigated against flooding using the FEMA HMA programs.
 - Currently in the process of updating the State Hazard Mitigation Plan
 - Assisting communities develop and update local hazard mitigation plans
 - State Hazard Analysis Resource & Planning Portal (SHARPP)

Hazard Mitigation Assistance (HMA)

- Pre-disaster mitigation grant programs
 - Pre-Disaster Mitigation (PDM)
 - Flood Mitigation Assistance (FMA)
 - Repetitive Flood Claims (RFC)
 - Severe Repetitive Loss (SRL)
- Post-disaster mitigation grant
 - Hazard Mitigation Grant Program (HMGP)



Hazard Mitigation Assistance Unified Guidance

Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, Flood Mitigation Assistance Program, Repetitive Flood Claims Program, Severe Repetitive Loss Program



Federal Emergency Management Agency
Department of Homeland Security
500 C Street, S.W.
Washington, DC 20472



<http://www.fema.gov/government/grant/hma/index.shtm>

HMA General Requirements

- Eligible Applicant/Activity
- Technically Feasible
- Cost Effective

*Participation in all grant programs is voluntary

HMA General Requirements

ELIGIBLE SUBAPPLICANTS

Subapplicants	HMGP	PDM	FMA	RFC	SRL
State agencies	✓	✓	✓	✓	✓
Indian Tribal governments	✓	✓	✓	✓	✓
Local governments/communities	✓	✓	✓	✓	✓
Private non-profit organizations (PNPs)	✓				

✓ = Subapplicant is eligible for program funding

HMA General Requirements

ELIGIBLE ACTIVITIES

Mitigation Activities	HMGP	PDM	FMA	RFC	SRL
1. Mitigation Projects	✓	✓	✓	✓	✓
Property Acquisition and Structure Demolition or Relocation	✓	✓	✓	✓	✓
Structure Elevation	✓	✓	✓	✓	✓
Mitigation Reconstruction					✓
Dry Floodproofing of Historic Residential Structures	✓	✓	✓	✓	✓
Dry Floodproofing of Non-Residential Structures	✓	✓	✓	✓	
Minor Localized Flood Reduction Projects	✓	✓	✓	✓	✓
Structural Retrofitting of Existing Buildings	✓	✓			
Non-Structural Retrofitting of Existing Buildings and Facilities	✓	✓			
Safe Room Construction	✓	✓			
Infrastructure Retrofit	✓	✓			
Soil Stabilization	✓	✓			
Wildfire Mitigation	✓	✓			
Post-Disaster Code Enforcement	✓				
5% Initiative Projects	✓				
2. Hazard Mitigation Planning	✓	✓	✓		
3. Management Costs	✓	✓	✓	✓	✓

✓ = Mitigation activity is eligible for program funding

Eligible Activities

Acquisition/Demolition

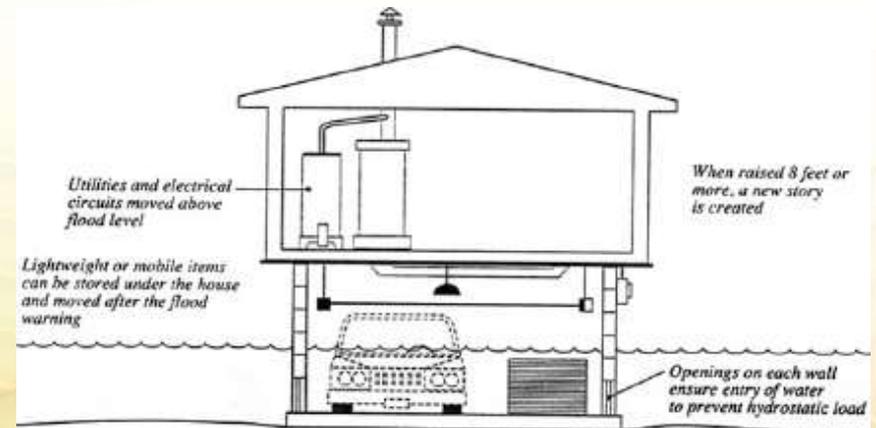
- Acquisition of hazard prone property and conversion to open space
- Only permanent flood mitigation strategy
- Cannot be used to acquire vacant property
 - Unless they are part of a larger project where flood prone structures are involved



Eligible Activities

Structural Elevation

- Still risk of flooding from bigger events
- Must comply with local floodplain regulations



Eligible Activities

Stormwater Management

- Must reduce flood damage to existing built environment (buildings, roads)
- Cannot transfer the flood problem upstream or downstream
- Primary purpose flood loss reduction not water quality management



HMA General Requirements

- Project must be technically feasible
 - Project design should be reviewed by an engineer or architect



HMA General Requirements

Cost Effective

- Calculation of risk is based on frequency and severity of hazard(s)
- Higher the frequency and severity, the higher the risk
- Projects that effectively mitigate high risk situations like tornadoes are usually cost-effective

HMA General Requirements

Cost Effective

- Cost Effective
 - Benefit Cost Analysis
 - Requires Benefit Cost Ratio (BCR) ≥ 1 using FEMA's tool
 - Every \$1 expended must yield at least \$1 in avoided damages
 - BCA Training Course
 - August 9-10 @ Ohio EMA
 - Course announcement will be sent via email

Pre-Disaster Mitigation Program (PDM)



- Authorized under Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act
- Provides project and/or planning grants to States and local governments
- Projects can be for any hazard affecting a community
- Must be consistent with adopted local mitigation plan
- Cost share 75% Federal / 25% Non-Federal

Pre-Disaster Mitigation Program (PDM)

- Ohio recipients:
 - 2003: City of Fairfield (Butler Co.)
 - 2006: City of Fairfield, Licking County
 - 2007: Village of Fairfax (Hamilton Co.), Village of North Lewisburg (Champaign Co.), Ohio EMA – Mitigation Branch
 - 2008: Coshocton County, Holmes County, City of Whitehall
 - 2009: Delhi Township (Hamilton Co.)
 - 2010: Metropolitan Sewer District of Greater Cincinnati (Hamilton Co)

Flood Mitigation Assistance Program (FMA)



- Authorized under Section 1366 of the National Flood Insurance Act of 1968
- Provides project and planning grants for flood mitigation only.
 - Structures must have flood insurance at time of application.
- Available annually based on Congressional appropriations
- Must be consistent with adopted flood mitigation plan
- Community must participate in and be in good standing with the NFIP
- Cost share 75% Federal / 25% Non-Federal (only one half of non-Federal share can be in-kind)

Flood Mitigation Assistance Program (FMA)

- Ohio recipients:
 - 2005: Village of New Richmond (Clermont Co.)
 - 2006: City of Defiance, Defiance County, Licking County
 - 2007: City of Findlay (Hancock Co.), Lorain County, City of Painesville (Lake Co.) - supplemental
 - 2008: City of Findlay (Hancock Co.), Colerain Township (Hamilton Co.)

Repetitive Flood Claims Program (RFC)



- Authorized under Section 1323 of the National Flood Insurance Act of 1968
- Available annually based on Congressional appropriations
- Projects focus solely on reducing or eliminating flood damage to structures with more than one flood insurance claim under the NFIP
 - Structures must have flood insurance at time of application.
- Planning grants not available
- Cost share 100% Federal
- 2007 - Morgan Twp. (Morgan Co.), Carlisle Twp. (Lorain Co.)
- 2008 – Village of Valley View (Cuyahoga Co.), City of Shelby (Richland Co.)
- 2010 – Bethel Township (Clark County)

Severe Repetitive Loss Program (SRL)



- Authorized under Section 1361A of the National Flood Insurance Act of 1968
- Cost share 90% Federal / 10% Non-Federal
- Planning grants not available
- Focus on reducing or eliminating flood damage to residential structures that are a drain on the National Flood Insurance Fund
- Available annually based on Congressional appropriations
-Reconstruction projects (demolish-rebuild) flood mitigation option available
- 2008 – Canal Fulton (Stark Co.)
- 2009 – Five Rivers MetroPark (Montgomery)

Severe Repetitive Loss Program (SRL)

SRL Program Eligibility Requirements

Residential property;

NFIP Participation;

Four NFIP claim payments of \$5,000 or more; or

Two separate claims with cumulative amount of the building portion exceeding the market value; and

At least two claims must have occurred within any 10-year period, and must be greater than 10 days apart

Hazard Mitigation Grant Program (HMGP)



- Activated after a Presidential disaster declaration
- Funds allocated during the recovery period
- Intended for investment in long-term mitigation measures to reduce vulnerability to natural hazards
- Available funds equal at least 15% of the total Federal assistance for a disaster
- States manage the program and set the funding priorities

Hazard Mitigation Grant Program (HMGP)

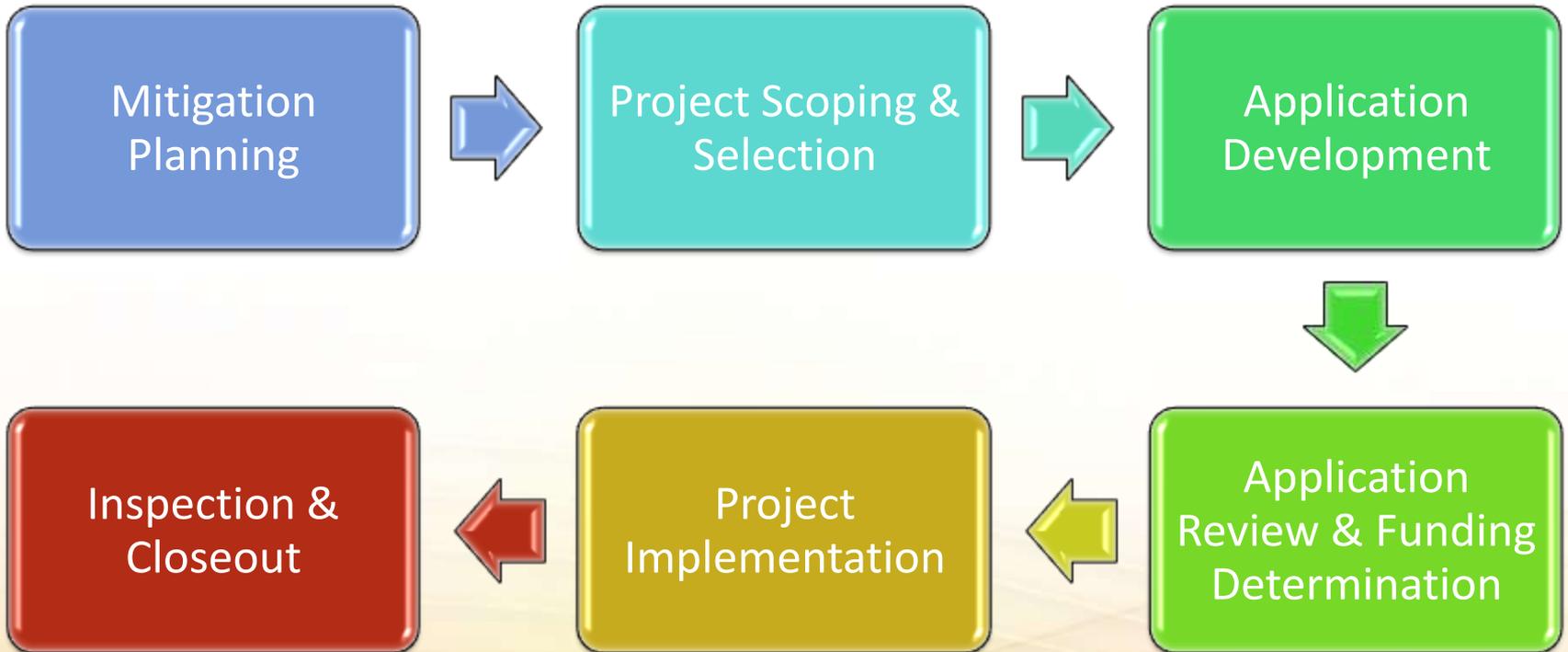


- \$6 Million in HMGP as a result of FEMA DR-1805
 - Focused on unfunded PDM and HMGP projects
 - Funded three (3) projects
 - \$455,000 available for local mitigation plan updates
 - Targeted to communities whose plans expire earliest
 - 29 Planning Grants

Local Match Sources

- Cash, in-kind or donated services
- Increased Cost of Compliance funds
- CDBG
- Clean Ohio Funds
- Storm water utility funds
- Muskingum Watershed Conservancy District Project Assistance Program

Project Development Process



HMA Application Process

Identify a Project Area

- Identify vulnerable areas (high risk)
 - Local Hazard Mitigation Plan (LHMP)
 - Special studies/reports (USACE, event specific)
 - Reach out to the community



HMA Application Process

Define the Problem

- Identify the hazard to be mitigated
 - Flooding, Wind, etc.
- Identify the population and structures at risk
 - Who will be affected?
- Utilize historic data
 - Has the area been affected previously?
 - How bad was it?
 - Newspaper articles, insurance claims, etc.
- Brainstorm mitigation strategies
 - Elevation, Acquisition/Demolition, Structural Relocation

HMA Application Process

Utilize Available Resources

- Contact Ohio EMA
 - Project managers will provide technical assistance
 - Identify an appropriate grant program
 - Brainstorm match fund ideas
 - Refer you to local resources
 - Assist with the preliminary Benefit Cost Analysis (BCA)

HMA Application Process

Letter of Intent

- General statement indicating a community's intent to pursue grant funds
 - Project overview
 - Define the hazard to be mitigated
 - Brief scope of work
 - Estimated budget
 - Matched with an Ohio EMA project manager
- Submitted early in the application process
 - Generally due in August

Essential Components of Application

- Hazard Description
 - Damage History
 - Describe the problem in detail
 - Impact to the community (fiscal, social – business or road closures)
 - Include relevant supporting documentation
 - Damage figures, dates of impact, photos

Essential Components of Application

- Scope Of Work (SOW)
 - Detailed description of the intended mitigation activity
 - The mitigation activity should be linked to the problem and the BCA
 - Cannot claim benefits that are beyond the protection level
 - FEMA is requiring more detailed SOW

Essential Components of Application

- Cost Estimate
 - Total funds needed to implement the project not just to mitigate the hazard
 - Management costs, Asbestos inspection/abatement, Closing Costs, Letter of Map Revision (LOMR) etc.
 - Consult a contractor to obtain an estimate
 - Costs must be reasonable
- Work Schedule
 - Develop a realistic project timeline
 - Identify project milestones
 - Identify ALL phases of the task including appraisals, purchase offers, demolition etc.
 - May need to consult with a contractor or other industry professional

Essential Components of Application

- Benefit-Cost Analysis (BCA)
 - Ensure that the data is accurate and credible
 - Changes in the SOW or cost estimate must be reflected in the BCA
- Engineering Review (if necessary)
 - If applicable, include proposed schematic or detailed engineering drawings, or engineering design
- Environmental Review
 - Identify project impacts on the natural and manmade environment, particularly the adverse impacts
 - National Environmental Policy Act, National Historic Preservation Act, Endangered Species Act, Executive Orders, Coastal Zone Management Act

Application Tips

- Start early
 - Don't wait until the application period opens
- Remember that your project is competing nationally
 - Your reviewer will not be familiar with your community
 - Provide enough detail that your reviewers can create a visual picture
 - Avoid local jargon, use plain English

Application Tips

- Answer the questions
 - KISS (Keep it Short & Simple) Method
- Document, Document, Document
 - Cite your information sources and when appropriate attach the document to the application
- Proofread your work
 - Allow others to proofread

Village of Ottawa, Putnam County Arrowhead Mobile Home Park DR-1720-OH

- Acquired 17 substantially damaged mobile homes and 10.33 acres located in the floodway
- Total Project Cost \$317,154
 - Federal Amount Contributed: \$236,192.10
 - State Amount Contributed: \$23,436.00
 - Local Amount Contributed: \$57,525.48

Success Stories - Ottawa

Photo of the June 1981 Flood.
Arrowhead mobile homes are
in the background



Success Stories - Ottawa



Aerial Views During August 2007 Flood

Success Stories – Ottawa



Aerial Views February 2008 Flood

Success Stories – Ottawa



Aerial Views March 2009 Flood. All homes removed.

Valley View, Cuyahoga County DR-1651 Elevation Project

- Project elevated 9 structures and will acquire/demolish 1 structure
- Benefit Cost Ratio (BCR): 1.19
- Project Cost: \$1,437,500
 - Federal: \$1,078,125 (75%)
 - State: \$159,375 (11.1%)
 - Local: \$200,000 (13.9%)
- (Local Cost Breakdown – 120K Increased Cost of Compliance Funds, 50K In-kind project management, 30K Cash)
- 6 of the 10 properties are on the NFIP repetitive loss list
- Structures account for 25 flood insurance claims with a combined payout of \$462, 207.96

Success Stories – Valley View



Murray Road Property – Before Elevation



Murray Road Property – Photo taken following February 28, 2011 flood event. Notice the high water mark.

Success Stories – Valley View



Murray Road - Elevated structure during the February 28, 2011 flood event.

Success Stories – Valley View



Fosdick Road Property – Photos taken April 6, 2010

Success Stories – Valley View

Fosdick Road Property – Photos taken during
February 28, 2011 flood event



Village of Clinton, Summit County Acquisition/ Demolition Project DR-1519

- **FEMA-DR-1519.5R**
 - Acquisition/demolition of 2 residential structures
 - Project Cost: \$252,035.40
 - Federal Share: 74.86%
 - State Share: 25.14%
 - One (1) structure on the repetitive loss list
- **FEMA-DR-1519.15R**
 - Demolition of 4 residential structures.
 - Project Cost (Demolition): \$33,750.00
 - Federal Share: 74.81%
 - State Share: 25.19%
 - Two (2) structures on the repetitive loss list

Success Stories – Village of Clinton



Before,
during and
after
demolition

Success Stories – Village of Clinton

- Two garages were converted to pavilions by Summit County Metro Parks



Success Stories – Village of Clinton



Interpretive marker installed at the Wayside Exhibit on Main Street, Village of Clinton

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