



FL - 393

Mitigation for Emergency Managers

RESOURCE PACKET

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Stakeholders

Unit 3, Stakeholders

Local/Tribal

- Administrator/Manager's Office
- Budget/Finance Office
- Building Code Enforcement Office
- City/County Attorney's Office
- Economic Development Office
- Emergency Management Office
- Fire and Rescue Department
- Hospital Management
- Local Emergency Planning Committee
- Planning and Zoning Office
- Police/Sheriff's Department
- Public Works Department
- Sanitation Department
- School Board
- Transportation Department

Non-Governmental Organizations

- American Red Cross
- Chamber of Commerce Organizations
- Environmental Organizations
- Homeowners Associations
- Neighborhood Organizations
- Private Development Agencies
- Utility Companies
- Major Employers/Businesses
- Colleges/Universities

Special Districts and Authorities

- Airport and Seaport Authorities
- Business Improvement District(s)
- Fire Control District
- Flood Control District
- Redevelopment Agencies
- Regional/Metropolitan Planning Organization(s)
- School District(s)
- Transit/Transportation Agencies

State

- Agriculture and Consumer Services
- Attorney General
- Children and Families Agency
- Department of Citrus
- Department of Commerce
- Department of Education
- Elder Affairs Agency
- Emergency Management Agency
- Environmental Protection Agency
- Office of Financial Regulation
- Fish and Wildlife Conservation Commission
- Geological Survey Agency
- Department of Health
- Agency for Health Care Administration
- Insurance Regulation Agency
- State Law Enforcement Agency
- Military Affairs
- Agency for Persons with Disabilities
- Department of Transportation
- Department of Veterans' Affairs

Other

- Architecture/Engineering/Planning Firms
- Citizen Corps
- Land Developers
- Professional Associations
- Retired Professionals

Hazards

Unit 4, Hazard Profile Example

Element	Definition (FEMA) and Explanation	Examples
Description (R1)	<i>The plan must include a description of all natural hazards that can affect the jurisdiction(s) in the planning area and their assets, such as dams, located outside of the planning area.</i> Briefly describe the hazard itself. A definition from FEMA, NOAA or another reputable source will suffice.	A hurricane is a type of tropical cyclone, which is a generic term for a low-pressure system that generally forms in the tropics. The cyclone is accompanied by thunderstorms and in the Northern Hemisphere, a counterclockwise circulation of winds near the earth's surface. Tropical cyclones are classified as follows: • Tropical Depression: an organized system of clouds and thunderstorms with a defined surface circulation and maximum sustained winds of 38 mph (33 kt) or less. Sustained winds are a 1-minute average wind measured at about 33 ft (10 meters) above the surface. While 1 knot equals 1 nautical mile per hour or 1.15 statute miles per hour and is abbreviated as "kt." • Tropical Storm: an organized system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 39-73 mph (34-63 kt). • Hurricane: an intense tropical weather system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 74 mph (64 kt) or higher. Hurricanes are categorized according to the strength of their winds using the Saffir-Simpson Hurricane Scale. A Category 1 storm has the lowest wind speeds, while a Category 5 hurricane has the strongest. These are relative terms, because lower category storms can sometimes inflict greater damage than higher category storms, depending on where they strike and hazards they bring. In fact, tropical storms can also produce significant damage and loss of life, mainly due to flooding.
Location (R3)	<i>The plan must include information on location for each identified hazard.</i> Describe, using either a map or narrative description, which areas of the county are susceptible to the hazard. When risk varies, include enough details to determine which areas are vulnerable.	The areas of our county that are highly susceptible to wildfires are the areas that have a high wildland-urban interface. These areas include residential areas east of Zebra Highway. All areas of the county are equally susceptible to tornadoes. The map to the right shows flood zones in the county. 
Extent (R4)	<i>The plan must provide the extent of the hazards that can affect the planning area.</i> Extent means "the strength or magnitude of the hazard" and is usually defined using the scientific measure or scale. In addition to the scale of measure for the hazard, include a narrative of the likely extent and "worst case" scenario.	We could see up to an EF-3 in our county. We could get up to 4 ft of floodwaters west of Zebra Hwy and up to 2 ft of floodwaters east of Zebra Hwy. Our area has a lightning density of 4 to 8 flashers per square kilometer per year. A sinkhole in our area could be up to 10 feet in diameter and 20 feet deep. A worst-case scenario wildfire would burn up to 1200 acres. A winter freeze in our area could consist of temperatures as low as 12 degrees for up to 3 days.

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Element	Definition (FEMA) and Explanation	Examples
Previous Occurrences (R5)	<i>The plan must include information on previous occurrences for each hazard that affects the planning area. At a minimum, this includes any state and federal major disaster declarations for the planning area since the last update.</i> This includes dates of events since the last update, and any significant events prior to that. If the most recent event was more than a few years ago, state when the last occurrence was, particularly if it was prior to the last update.	Our last period of drought was May – August 2005. We had 4 wildfires in 2014; April 1, April 16, May 7, and June 14. Below is a list of previous tropical storms: • June 15, 2014 Hurricane Frank • May 14, 2012 Tropical Storm Alycia • August 28, 2010 Tropical Storm Tiffany • August 12, 2001 Hurricane Deloris • June 19, 1992 Hurricane Hades
Probability (R6)	<i>The plan must include the probability of future events for the identified hazards that can affect the planning area.</i> Probability means the "likelihood of the hazard occurring" and may be defined in terms of general descriptors, historical frequencies, statistical probabilities, or hazard probability maps. If general descriptors are used, then they must be defined in the plan. Per the 2023 Policy Guide, probability must address the impact of future conditions; consider changes in climate, population, and land use over time.	In the last 50 years we have been affected by 10 hurricanes; therefore, there is a 20% chance of a hurricane affecting our county in any given year. We could see a flood once every 1-5 years. We could have 20 severe thunderstorms per year. The probability of a sinkhole is low. • Very low = greater than 0% but less than 15% annually • Low = greater than 15% but less than 35% annually • Medium = greater than 35% but less than 66% annually • High = greater than 66% but less than 85% annually • Very high = greater than 86% annually
Impacts (R8)	<i>The plan must describe the potential impacts on each participating jurisdiction and its identified assets.</i> Impacts are defined as the consequences or effects of each hazard on the assets identified. To help meet this requirement, you may discuss impacts that occurred during significant previous occurrences. The discussion of impacts should be specific to the planning area.	June 15, 2014 Hurricane Frank was a category 3 storm that arrived onshore 12 miles north of our county. There was over 40 tons of debris generated, 4 shelters were opened which housed more than 2,000 citizens for up to seven days. Zebra Highway was blocked for two days by the downed trees. Over 50,000 citizens were out of power for the first three days. The county courthouse suffered broken windows and a partial roof collapse resulting in more than \$200,000 in damages. Storm surge was estimated at 4 feet along the coast. Four injuries were reported, mostly from debris removal, and no deaths occurred. April 1, 2014 a 273-acre wildfire was caused by lightning. One non-residential structure was destroyed resulting in \$2,000 in damage. No injuries were reported. While our county has never been affected by a tsunami, the possible impacts include up to 5 feet of flood waters as far as 2 miles inward.
Vulnerability Summary (R9)	<i>The plan must describe the overall vulnerability of each participant to the identified hazards.</i> The discussion of vulnerable assets and potential losses should be more than a list of the total exposure of population, structures, and critical facilities in the planning area. These summaries should answer the question "why is the jurisdiction, specifically, vulnerable to this hazard?" and lead to problem statements that identify gaps where projects can be implemented.	While temperatures do not generally have an impact on structures, our county is particularly vulnerable to extreme temperatures due to our population consisting of 42% elderly citizens, as well as a relatively high homeless population estimates at around 1,100 people. Similarly, our more than 5,500 acres of citrus and vegetable crops could be adversely affected by extremely high or low temperatures having an impact on our economy. 47% of our residential building stock consists of untied down manufactured homes or structures that were built before the most recent building code and unable to withstand tropical storm force winds. That in combination with our numerous canopy roads and above ground power lines makes our county particularly vulnerable to high winds. While there is a dam within our county, the dam only holds enough water to cover 100 acres of land with 1 foot of water. If the dam were to fail, the area the water would inundate is part of a state park and would therefore have no impacts of people or structures. For this reason, we are not vulnerable to dam failure in our county. (*this could also be an omission justification)

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Element	Definition (FEMA) and Explanation	Examples
Changes in Development (R10)	"For plan updates, the risk assessment must meet Element E1-a (Changes in Development). A discussion of changes in development should be included throughout the risk assessment where applicable. Further, discuss whether the changes have affected vulnerability to hazards or not."	"The entire built environment (Critical Infrastructure, Key Resources, Building Stock) may be vulnerable to flooding especially in low lying, storm surge planning zones, areas close to canals and structures that were built prior to flood plain regulations. New residential development in the coastal jurisdiction has increase vulnerability of flooding to those residents, as well as the surrounding areas."
Repetitive/Severe Repetitive Loss Information (R11)	"The plan must address repetitively flooded NFIP-insured structures by including the estimated numbers and types (residential, commercial, institutional, etc.) of repetitive/severe repetitive loss properties."	"There are 133 repetitive loss structures within the planning area. This is comprised of 108 in the county and 25 structures within one jurisdiction. These repetitive loss structures make up for 0.13% of the total number of structures in the county. There are 10 commercial repetitive loss properties and 123 residential repetitive loss properties, bringing the total to 133. There are currently no severe repetitive loss properties in the planning area."

Projects

Unit 5, Project Types

Mitigation Project Types



Local Plans & Regulations

- Water Quality/Supply Plan
- Public Safety
- Capital Improvement Plan
- Building Codes
- Open Space & Recreation
- Historic Preservation
- Transportation
- Housing Plans/Zoning
- Economic Development
- Special District Plans
- Enforcement



Property Protection

- Secondary Power Source
- Flood Risk Reduction
- Elevation
- Mitigation Reconstruction
- Acquisition
- Wind Retrofit
- Code Plus
- Safe Room
- Infrastructure Retrofit



Natural Systems Protection

- Sediment & Erosion Control
- Stream Corridor Restoration
- Forest Management
- Conservation Easements
- Wetland Restoration & Preservation



Education & Awareness Programs

- National Preventative Programs
- Mail Campaigns
- Websites
- Public Maps
- Community Presentations/Townhalls
- Radio/TV public service announcements

Prioritization

Unit 6, Project Prioritization Method - STAPLEE

STAPLEE CRITERIA
SOCIAL
➤ Will the action be socially acceptable to the community? ➤ Will it cause any one segment of the population to be treated unfairly? ➤ Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of low- or reduced-income people? ➤ Is the action compatible with present and future community values?
TECHNICAL
➤ What consequences are created by this approach? ➤ Most importantly, will it solve the problem? ➤ Considering other community goals, is it the most useful?
ADMINISTRATIVE
➤ Does the community have the capability to implement the action? ➤ Can the community provide any maintenance necessary? ➤ Are staff, technical experts, and funding (match) sufficient? ➤ Can it be accomplished in a timely manner?
POLITICAL
➤ Have all the stakeholders been offered an opportunity to participate in the planning process? ➤ How can the mitigation goals be accomplished at the lowest cost to the stakeholders? ➤ Is there public support both to implement and maintain this measure? ➤ Is the political leadership willing to propose and support the measure?
LEGAL
➤ Does the community have the authority to implement the proposed measure? ➤ Is there a clear legal basis for the mitigation action? ➤ Is enabling legislation necessary? ➤ What are the legal ramifications? ➤ Will the community be liable for the actions or support of actions, or lack of action? ➤ Is it likely to be challenged?
ECONOMIC
➤ What are the costs and benefits of the measure (BCA)? ➤ How will the implementation of this measure affect the fiscal capability of the community? ➤ What burden will be placed on the tax base or the local economy? ➤ Does the action contribute to other community economic goals, such as capital improvements or economic development?
ENVIRONMENTAL
➤ How will this action affect the environment? ➤ Will this measure comply with local, state, and federal environmental regulations? ➤ Is the action consistent with community environmental goals?

Funding

Unit 6, State Administered Grants

Hazard Mitigation Grant Program

Federal, post-disaster grant authorized by Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

Period of performance
4 years

Type & cost share
Cost reimbursement grant
75% federal / 25% non-federal

GOAL: Assist in implementing long-term hazard mitigation measures following a major disaster declaration.

Allocation
20% of federal disaster assistance for a disaster

FL allocates using a 3-tier system (established by F.A.C. 27P-22), providing to impacted counties first

Eligible applicants
States, territories, and tribal governments

*Non-profit organizations, individuals, & businesses can apply through local govt.

Flood Mitigation Assistance

Federal, non-disaster grant authorized by the National Flood Insurance Act (42 USC 4104c) and 2 CFR Part 200.

Period of performance
4 years

Type & cost share
Cost reimbursement grant
Community flood projects:
75% federal / 25% non-federal
Repetitive Loss (RL) projects:
90% federal / 10% non-federal
Severe RL projects:
100% federal

GOAL: Reduce or eliminate claims under the NFIP by reducing or eliminating risk of repetitive flood damage to insured buildings and structures.

Allocation
Annual appropriation by Congress. Nationally competitive.

Eligible applicants
States, territories, and tribal governments

*Non-profit organizations, individuals, & businesses can apply through local govt.

Hurricane Loss Mitigation Program

State, non-disaster grant authorized by Florida Statute 215.559.

Period of performance
Typically, 1 year

Type & cost share
Cost reimbursement grant
100% State funded; no local match required

GOAL: Improve flood and wind resilience of residences and community buildings.

Allocation
HLMP: \$3.5 million annually
Other Annual Allocations:
Hurricane Public Shelter Retrofit Program: \$3 million
Mobile Home Tie Down Program: \$2.8 million
FIU International Hurricane Research Center: \$700,000

Eligible applicants
Counties, cities, and non-profit organizations

*Individuals can apply through eligible applicant

Funding

Unit 6, Other Funding Sources

Federal

- FEMA's Hazard Mitigation Assistance Grants (6)
- FEMA's Rehabilitation of High Hazard Potential Dam
- FEMA's Resilient Grants (3)
- National Science Foundation (700+)
- NOAA's Office for Coastal Resource Management (7)
- USACE Flood Risk Management Program
- USACE Florida Silver Jackets
- US Department of Energy, Energy Efficiency and Conservation Block Grant Program
- US Department of Housing and Urban Development Community Development Grant Programs (9)
- US Department of Housing Community Planning and Development Programs (17)
- USDA Rural Development Loans and Grants (38)
- US Economic Development Administration (5)
- US Environmental Protection Agency (16)
- US Green Building Council Habitat Protection Grants (4)

State

- Coastal Partnership Initiative Grant Program
- Florida Communities Trust Fund
- Florida Hurricane Catastrophe Fund
- Hurricane Loss Mitigation Program (HLMP)
- Hurricane Restoration Reimbursement Grant Program
- Resilient Florida Grant Program

Non-Governmental Organizations

- American Institute of Architects
- American Society of Landscape Architects
- American Planning Association
- Association of State Floodplain Managers
- Firewise USA
- Rockefeller Foundation

Funding

Funding Sources Expanded

While the landscape of mitigation and resilience funding opportunities is constantly changing, the list below outlines programs included in – and outside of – course material. To learn more about local funding opportunities, contact your Local Mitigation Strategy Working Group.

Florida Enhanced State Hazard Mitigation Plan [Funding Home Page](#)

Federal Funding:

- FEMA Fire Management Assistance Grants – [Grants](#)
- FEMA Hazard Mitigation Assistance [Grants](#) – FMA, HMGP, Safeguarding Tomorrow RLF Program, Swift Current, HHPD Grant, Next Generation Warning System Grant
- National Science Foundation offers hundreds of funding opportunities – including [grants](#), cooperative agreements and fellowships – that support research and education across science and engineering.
- NOAA’s Office for Coastal Resource Management – The Coastal and Natural Resource Management category provides [funding](#) links focusing on coastal hazards, habitat restoration, water quality, watershed protection, and other natural resource protection issues.
- U.S. Department of Energy - [Energy Efficiency and Conservation Block Grant Program](#) – Provides funding for weatherization of structures and development of building codes/ ordinances to ensure energy efficiency and restoration of older homes.
- U.S. Department of Housing and Urban Development
 - [Community Development Grant Programs](#)
 - Community Development Block Grant Program (CDBG) – Provides funding for communities to obtain resources for a wide range of unique community development needs.
 - CDBG Disaster Recovery Assistance – Provides funding for flexible grants to help cities, counties, and States recover from Presidentially declared disasters, especially in low-income areas, subject to availability of supplemental appropriations.
 - [Community Planning and Development Programs](#)
- USDA Rural Development – All Programs in Florida and Virgin Islands [Repair Loans & Grants](#)
- U.S. Economic Development Administration – [Grants](#)
- U.S. Environmental Protection Agency – [Grants](#) – [Loans](#)
- U.S. Green Building Council – [Grants](#)

State Funding:

- Coastal Partnership Initiative (CPI) Grant Program – [About](#)
- FDEM Mitigation Bureau – [About](#)
- Florida Communities Trust Fund (FCT) – [About](#)
- Florida Hurricane Catastrophe Fund – [About](#)
- Hurricane Loss Mitigation Program (HLMP) – [Grants](#)
- Hurricane Restoration Reimbursement Grant Program – [About](#)
- Rebuild Florida Program – [About](#)
- Resilient Florida Grant Program – [Grants](#)

Nongovernmental Funding:

- American Institute of Architects (AIA)
 - [Disaster Assistance Program](#) – Provides technical expertise to make sound development decisions and inform local and regional planning and policy efforts; participate in building code development, enforcement, and permitting; train for and share lessons learned from post-disaster building safety assessments; and coordinate with local agencies such as offices of emergency management and planning as well as building departments.
- American Society of Landscape Architects (ASLA)
 - [Climate Change Resources](#)
- American Planning Association (APA)
 - [Grants](#) - The objective of the Association is to encourage planning that will contribute to public well-being by developing communities and environments that meet the needs of people and of society more effectively.
- Association of State Floodplain Managers (ASFPM)
 - [About](#) – The mission of ASFPM is to promote education, policies, and activities that mitigate current and future losses, costs and human suffering caused by flooding, and to protect the natural and beneficial functions of floodplains, all without causing adverse impacts.
- Firewise USA
 - [About](#) - Firewise USA program teaches people how to adapt to living with wildfire and encourages neighbors to work together and take action.
- Rockefeller Foundation
 - [Grant](#) – Use their database to explore active and past grants by commitment and grant amount within the past 5 years.

Prioritization

General Prioritization Information

Every Local Mitigation Strategy (LMS) Plan, or Hazard Mitigation Plan, is required to define a method for prioritizing mitigation actions as a part of the planning process. In Florida, the responsibility for prioritization lies with the County LMS Working Groups (LMSWG), in which the process provides a functional meaning to the ranking of projects and formalizes the process to avoid conflict. While prioritization is required, FEMA does not define a standardized method.

Four common methodologies:

1. STAPLEE or Modified Version
 - Scoring criteria addresses Social, Technical, Administrative, Political, Legal, Economic, & Environmental components of a project.
2. Personalized Point/Scoring System
 - LMS Working Groups established a custom scoring system and set of criteria based on priorities of the LMS Plan and WG.
3. Benefit-Cost Review (BCR)
 - Common criteria include cost/BCR, project readiness, match availability, probability of funding, community benefit and more.
4. Categorization & Consensus
 - Categories of projects are prioritized (e.g., lift stations, drainage, critical infrastructure, hardening/retrofit, planning, etc.), then prioritized again within each category; followed by a majority vote for approval from LMSWG.

FEMA recommends highlighting life and safety, administration/technical capacity, project cost and economic factor, support for community objectives, equity, utilizing partnerships and innovation, large-scale infrastructure projects, and climate resilience.

LMS Working Groups should utilize systems and technology to capture project information and score projects where possible, while ensuring compatibility with FEMA requirements. Below are recommendations for prioritization/scoring criteria based on FEMA priorities and best practices from Florida LMS Working Groups:

- Incorporating requirements of funding opportunities
- Equity among LMSWG jurisdictions and potential sub-applicants
- Projects that benefit underserved communities and vulnerable populations
- Nature-based solutions and innovative projects
- Utilizing partnerships/multi-jurisdictional projects
- Cross-benefits (e.g., CRS credit, NFIP requirements, etc.)

Resources

General Course Resources/Additional Information

- [Babcock Ranch](#) is a 17,000-acre community just north of Fort Myers, FL. It is recognized as the first solar town and prioritizes sustainability and renewable energy.
- FDEM's [Mitigation Home Page](#)
 - FDEM's [Subscription Topics](#) page houses the link to subscribe to our digital publications, including the Mitigation Bulletin, Mitigate FL Workgroup, Mitigation Grant Announcements, etc.
- FEMA's [Local Mitigation Planning Policy Guide](#) effective April 19, 2023
- [Florida SHMP](#) houses a large amount of information to help develop a Local Mitigation Strategy Plan, but also funding and resources information for local and state governments.
 - In Local Government Resources you will find information for planning and grant information.
- [Mitigation Action Portfolio](#) : Showcases an array of eligible hazard mitigation activities that may benefit stakeholders under one of the HMA programs.
- [NCEI Storm Events Database](#) contains records used to create the official NOAA Storm Data publication documenting the occurrence of storms, rare, unusual, weather phenomena that generates media attention, and other significant meteorological events. These all range
- USACE Institute for Water Resources [Flood Risk Management Program](#) helps reduce the threat to life and property from riverine flooding and coastal storms.
 - [USACE Florida Silver Jackets](#) is an implementation sub-committee of the State of Florida Mitigate FL Working Group dedicated to creating a collaborative environment to bring together Federal, State, and local partners to develop and implement solutions to flood risk management problems.
 - [Beaches to Bioswales](#): Nature's Toolbox for Resilience houses information on how to implement Nature-Based Solutions.