



2022

# JOINT LOCAL MITIGATION STRATEGY

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UNINCORPORATED LEE COUNTY, BONITA SPRINGS, CAPE CORAL,  
ESTERO, FORT MYERS, FORT MYERS BEACH, SANIBEL,  
AND FLORIDA GULF COAST UNIVERSITY



## Promulgation Document

Lee County and its political subdivisions are responsible for the preservation of life, property, and the environment during times of disaster. The *Joint Local Mitigation Strategy* forms the foundation for minimizing the risks posed to life and the built and natural environments through the implementation of short- and long-term mitigation strategies. In conjunction with prevention, protection, preparedness, response, and recovery efforts, the strategy builds resiliency into the communities that make up Lee County and its political subdivisions.

The *Joint Local Mitigation Strategy* is an extension of the *Hazard Identification and Risk Assessment* and a companion document to the *Lee County Comprehensive Emergency Management Plan*, as well as the comprehensive emergency management plans of the County's political subdivisions and Florida Gulf Coast University (FGCU). This strategy sets forth the mitigation framework for Lee County, its political subdivisions, and FGCU and establishes a vision, mission, and set of priorities for mitigation activities in the area. Moreover, the strategy identifies core mitigation capabilities and describes short- and long-term mitigation strategies and activities. In addition to setting mitigation goals and objectives, the strategy delineates community actions that will reduce hazard risks.

The *Joint Local Mitigation Strategy* aligns with state and federal requirements and guidelines for local mitigation. The strategy undergoes regular, annual maintenance through the Local Mitigation Strategy Working Group and quinquennial review and adoption by the elected governing bodies of each participating jurisdiction. As part of this every-five-year practice, the strategy is reviewed by the State of Florida and by the Federal Emergency Management Agency.

## Approval and Implementation

The *Joint Local Mitigation Strategy* was developed through a collaborative whole-community process that incorporated input from diverse stakeholders and mitigation principles from federal and state guidelines. The formal planning process for this strategy is laid out in the *Joint Local Mitigation Strategy Project Management Plan (2021)*. The *Project Management Plan* also documents public input during the planning process. Upon concurrence from the elected governing bodies of Lee County, its political subdivisions, and Florida Gulf Coast University (FGCU), this strategy will be considered officially adopted and promulgated. The strategy is disseminated to County and municipal departments, local community interests, neighboring jurisdictions, and other stakeholders vital to preserving life, property, and the environment in the area.

The Lee County Department of Public Safety – Emergency Management will be the primary entity responsible for maintaining this document. The Local Mitigation Strategy Working Group, as part of the Disaster Advisory Council, will assist Emergency Management in that responsibility and with coordinating mitigation activities across the County, its political subdivisions, and FGCU.

This version of the *Joint Local Mitigation Strategy* supersedes previous versions, including the *Joint Unified Local Mitigation Strategy (2017)*. In consultation with the Working Group and government leadership (County and municipal), Emergency Management is authorized to update and revise this strategy without additional approval from the aforementioned elected governing bodies. This exception does not apply to the five-year review and approval cycle required by the state and federal government.

## Record of Changes

Version	Change	Reference	Date
<b>2022.01</b>	Vision and mission statement added	Chapter 1, p. 2	01/03/2022
	Plan integration updated	Chapter 1, p. 4	01/03/2022
	Community changes since last local mitigation strategy	Chapter 1, p. 8	01/03/2022
	Mitigation core capabilities added	Chapter 2, p. 11	01/03/2022
	Short-term and long-term strategies updated	Chapter 2, p. 16 & p. 17	01/03/2022
	Goals and objectives updated	Chapter 2, p. 17	01/03/2022
	Mitigation Action Plan added	Chapter 3, p. 21	01/03/2022
	Mitigation Project List updated	Chapter 3, p. 22	01/03/2022
	Review and maintenance updated	0, p. 25	01/03/2022
	Community involvement updated	0, p. 26	01/03/2022
<b>2022.02</b>	Corrected formatting errors and typos	NA	06/10/2022
<b>2022.03</b>	Included references for Florida Gulf Coast University that reflect its adoption of the LMS.	NA	10/23/2022
	Added Scope reference to Mitigation Framework discussion.	Chapter 2, p. 9	11/02/2022
	Clarified some language in the Core Capabilities discussion.	Chapter 2, p. 13	11/02/2022
	Incorporated the <i>Disaster Recovery Plan</i> in the strategy's resiliency capabilities discussion.	Chapter 2, p. 14	11/03/2022
	Updated the Mitigation Project section to reflect changes to the LMS Project Ranking Worksheet and to clarify the project submission process.	Chapter 3, pp. 21-23	11/03/2022

## Record of Distribution

This document is distributed formally to selected stakeholders every five years as part of the review and approval cycle (see Chapter 4 Review and Maintenance). The document is made available generally via the website for the Lee County Department of Public Safety – Emergency Management, which allows anyone to download and view the document at any time. Regular updates to this document that reflect changes in the mitigation strategy and associated programs and actions will be distributed via that website. The table below lists the recipients of the most recent formal distribution for review and approval.

Agency/Organization	Medium	Date
City of Bonita Springs	Digital	2022-11-03
City of Cape Coral	Digital	2022-11-03
City of Fort Myers	Digital	2022-11-03
City of Sanibel	Digital	2022-11-03
Florida Gulf Coast University	Digital	2022-11-03
Town of Fort Myers Beach	Digital	2022-11-03
Unincorporated Lee County	Digital	2022-11-03
Village of Estero	Digital	2022-11-03

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## Chapter 1 Introduction

This chapter describes the purpose and scope of the *Joint Local Mitigation Strategy*. It links this document with the *Hazard Identification and Risk Assessment* and the comprehensive emergency management plans for Lee County, its political subdivisions, and Florida Gulf Coast University (FGCU). The chapter establishes a unifying vision for the multijurisdictional mitigation framework, as well as a mission statement. The chapter concludes by identifying participating jurisdictions and the stakeholders that will make up the mitigation framework over the next five years.

### Purpose

The purpose of this local mitigation strategy is to establish a multi-jurisdictional mitigation framework to reduce the probability and minimize the consequences of hazardous incidents.

### Scope

This strategy addresses the natural hazards identified and assessed in the *Hazard Identification and Risk Assessment* (see Table 1 below) for Lee County, its political subdivisions, and FGCU (see the Stakeholders section below). The strategy encompasses mitigation activities that are either structural, regulatory, or social in nature. Human-caused hazards are not addressed in this document. The local mitigation strategy considers the planning area's economy, housing, health and social services, infrastructure, and natural and cultural resources<sup>1</sup>. By doing so, the strategy encompasses systems that support and sustain communities and aligns mitigation efforts with the National Disaster Mitigation Framework<sup>2</sup>.

Table 1 Natural Hazards in the Planning Area

Natural Hazards			
Animal/Plant Disease Outbreak	Coastal Erosion	Drought	Epidemic/ Pandemic Disease
Excessive Heat	Extreme Cold	Flood	Freeze
Severe Weather	Tornado	Tropical Cyclone	Wildfire

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<sup>1</sup> Federal Emergency Management Agency (June 2016). *National Mitigation Framework* (2<sup>nd</sup> ed), p. 3

<sup>2</sup> *ibid.* p. 16

## Vision

A resilient network of communities and jurisdictions experiencing significantly reduced consequences from natural hazards.

## Mission Statement

To save lives, protect property, and preserve the environment through collaborative mitigation actions.

## Stakeholders

The *Joint Local Mitigation Strategy* is a collaborative, multijurisdictional effort to address natural hazards in the planning area (see Figure 1 and Figure 2 below). Within each jurisdiction are multiple private, public, and nonprofit interests with regards to the area's hazards. Attachment 3 of the *Joint Local Mitigation Strategy Project Management Plan* identifies these interests and their general role in the mitigation framework.

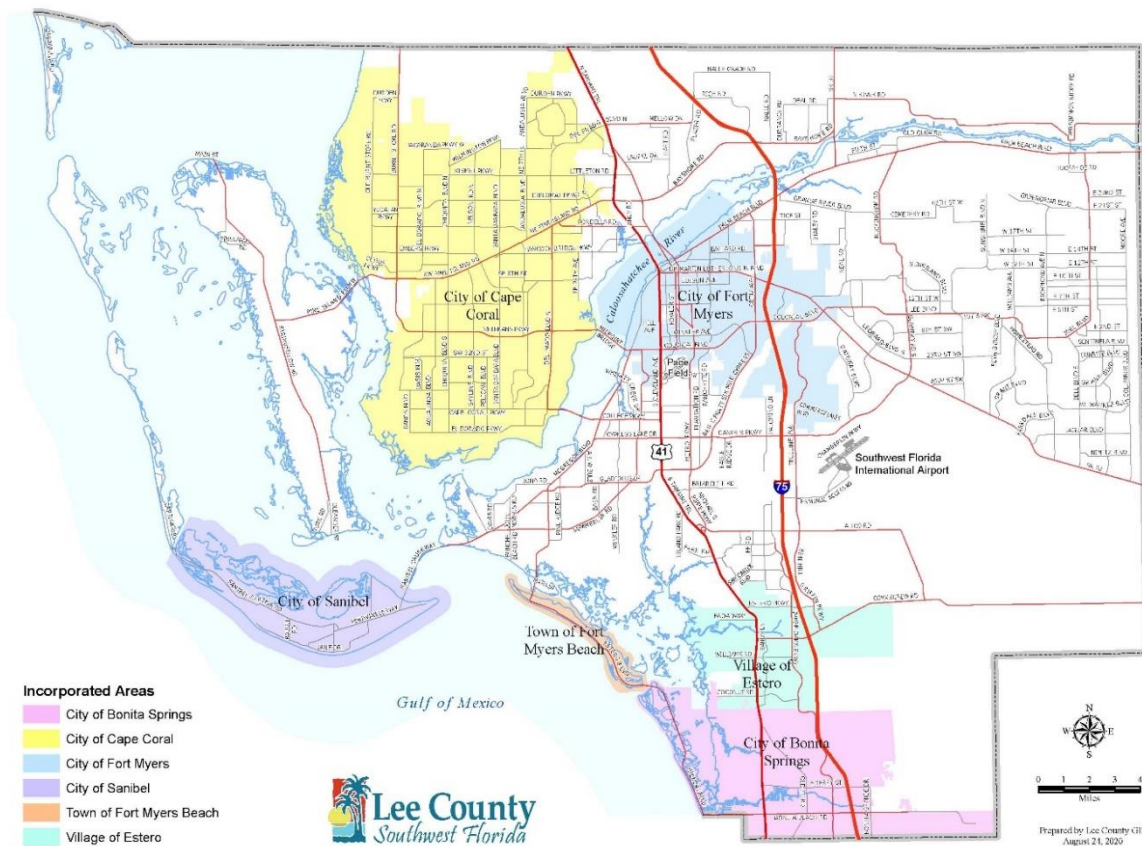


Figure 1 Joint Local Mitigation Strategy Planning Area

Joint Local Mitigation Strategy  
Chapter 1 Introduction

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*Figure 2 Joint Local Mitigation Strategy Jurisdictions*

Mitigation is a constant, iterative process involving myriad stakeholders with similarly myriad interests. One purpose of the framework is to enable decision-makers to better identify and engage with entities to best match and allocate available resources with community needs. In addition to the governmental entities delineated in Figure 2 above, the mitigation framework relies on stakeholder involvement from the following<sup>3</sup>:

- Individuals, families, and households
- Communities
- Nongovernmental organizations
- Private sector entities
- Local governments
- State government entities
- Federal government entities

**Local Mitigation Strategy Working Group**

Stakeholder engagement and coordination for the framework is achieved through the Local Mitigation Strategy Working Group. In Lee County and its political subdivisions, this body consists of the membership for the Disaster Advisory Council (DAC). The

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<sup>3</sup> Federal Emergency Management Agency (2016). *National Mitigation Framework* (2<sup>nd</sup> ed), pp. 8-14

Coordinating Structures section provides more detailed information about the Working Group and its structure and role.

## **Plan Integration**

The *Joint Local Mitigation Strategy* is designed to work in conjunction with existing plans, policies, and procedures in Lee County and its political subdivisions. Stakeholders coordinate the implementation of mitigation goals and objectives through County and municipal programs and systems, such as the documents listed below. Participating jurisdictions also incorporate the capabilities, priorities, goals, and objectives of the strategic framework with response and recovery operations through comprehensive emergency management plans and recovery plans.

The documents mentioned here are given brief descriptions. The section also notates the responsible parties. Members of the Local Mitigation Strategy Working Group provide technical assistance and coordinate with their agencies to integrate concepts in this framework into respective governance apparatuses.

### **County and Municipal Comprehensive Plans**

These plans contain goals, objectives, and policies that help guide pre-disaster mitigation programs and activities. For example, Lee Plan contains a goal that specifically addresses hazard mitigation (Goal 72). Within that goal is a policy to adopt and maintain a flood plain management plan that analyzes flooding problems in unincorporated areas of Lee County, inventory the flood hazard area, review possible activities to remedy identified flooding problems, select appropriate alternatives, and formulate a schedule for implementation (for example, see Policy 72.1.5).

Florida Statutes allow local governments to amend comprehensive plans in several ways. The regular amendment cycle is the option most likely to be used to incorporate or implement mitigation strategies and activities. Responsible parties include the following: Lee County Community Development, Division of Planning; City of Bonita Springs; Town of Fort Myers Beach; City of Cape Coral; City of Fort Myers; and the City of Sanibel.

### **County and Municipal Capital Improvement Programs (CIP)**

These programs are planning and budgetary tools that rank project funding to reflect a community's infrastructure needs for a given period (usually five years). In Florida, these programs consist of projects that comply with the government's comprehensive plan. They are used to fund projects and programs that avert or reduce both current and future

damage potential to existing and new buildings to certain hazard types.

These programs are updated annually. Amendments to CIPs are usually made before the next annual review period and approved by a community's elected governing body. Responsible parties include the following: Lee County departments including Public Safety, Transportation, Construction and Design, Utilities, Solid Waste, and Natural Resources; City of Bonita Springs; Town of Fort Myers Beach; City of Cape Coral; City of Fort Myers; and the City of Sanibel.

### **County and Municipal Land Development Regulations, Zoning Ordinances, and Building Codes**

Land development regulations or codes usually contain a codification of the land development ordinances of a community. They can be used to carry out actions that mitigate damage to new buildings and structures through design considerations. They also can be used to define type, density, and intensity of land uses in identified areas that account for natural and human-caused hazards. Examples of codes that can be used to mitigate hazards contained in this strategy include the Florida Building Code, the Fire Prevention Code, and each community's Flood Plain Management Ordinance. Low density zoning categories can also be used to reduce the amount and type of land uses exposed to certain types of hazards.

Lee County uses advisory committees to review changes to land development regulations. These committees meet on a regular basis to review and recommend changes to proposed County ordinances and regulations. Once finalized, these changes are sent to the governing body for public hearings. Responsible parties include the following: Lee County Community Development, Planning Section and Development Services; City of Bonita Springs; Town of Fort Myers Beach; City of Cape Coral; City of Fort Myers; City of Sanibel; and the Village of Estero.

### **Strategic Plans**

Strategic plans identify the long-term direction to be taken in carrying out an agency's defined mission. These plans identify strategies, tasks, projects, and timeframes used to accomplish mitigation priorities, goals, and objectives. These plans usually focus on projects, but also can be used to define an agency's or elected body's policy toward mitigating hazard risks.

### **Surface Water Management Plans**

Lee County maintains plans that identify existing flow ways, streams, and runoff rates for watershed basin. These plans also provide recommendations for protection and improvement of each flow way and stream. Such efforts protect lands from additional flooding that might be caused from downstream developments. Each plan is approved by the Board of County Commissioners. Responsible parties include the following: Lee County Surface Water Program, Division of Natural Resources Management.

### **Beach Management Plan**

This plan addresses the restoration and maintenance needs of the County's beaches that are in a critical state of erosion, which is one of the planning area's identified natural hazards. Responsible parties include the following: The Coastal Advisory Council is a Board of County Commissioners appointed body overseeing the maintenance of the plan. The council holds monthly public meetings to discuss and review projects and to establish the budget to expend tourist tax funds for beach-related activities.

### **The Lee County Post Disaster Ordinance (07-20)**

Lee County Ordinance 07-20 establishes the organizational framework for addressing hazard mitigation issues and policy development. It describes and assigns duties and responsibilities to the Disaster Advisory Council, which among other things, coordinates the planning area's mitigation framework. Responsible parties include Lee County and its political subdivisions, as well as representation from nonprofit, academic, commercial, and private citizen interests.

### **Lee County Community Wildfire Protection Plan(s)**

Wildfire protections plans address specific wildfire problems for a given community. They can take a variety of forms and usually address local forest and range conditions, values-at-risk, and priorities for action. At a minimum, they identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that, if completed, reduces wildfire risk to the community. Other wildfire mitigation efforts include Firewise and the Ready, Set, Go program, as well as wildfire mitigation efforts in Lehigh Acres. The Florida Forest Service is responsible for these plans.

### **Comprehensive Emergency Management Plans**

The *Hazard Identification and Risk Assessment* forms the foundation for mitigation, preparedness, response, and recovery efforts in the planning area. Mitigation priorities and strategies are linked with the *Lee County Comprehensive Emergency Management*

*Plan*, as well as the comprehensive emergency management plans of the County's political subdivisions.

### **City of Fort Myers Waterfront Visioning Plan**

The Waterfront Visioning Plan outlines a vision for development along the Fort Myers downtown water front. The critical facility list updated during the planning process was used to identify the critical facilities in this smaller geography within the County and a critical facilities map was produced of the waterfront. The document is currently being updated to address sea-level rise and additional resiliency considerations. The Florida Department of Economic Opportunity is responsible for the plan.

### **Town of Fort Myers Beach Stormwater Master Plan**

The Town of Fort Myers Beach experiences severe stormwater flooding, including in along Estero Boulevard, which is part of the area's evacuation routes. Stormwater flooding also poses water quality issues, which can result in beach closures and impacts on wildlife and aquatic species. The stormwater master plan includes projects for the Town to reduce the likelihood and consequences of stormwater flooding. The basis for the plan comes from the *Town of Fort Myers Beach Comprehensive Plan* developed in 1999. The comprehensive plan includes Goal Number 9, which states "to provide optimal flood protection and improved stormwater quality within the constraints imposed by location and existing land-use patterns."

## **Public Involvement**

The development and implementation of the *Joint Local Mitigation Strategy* included involvement from the public. Public engagement consisted of a County-wide survey made available on the Lee County Department of Public Safety webpage (along with the then-current version of the *Joint Unified Local Mitigation Strategy*). The survey was also distributed by the County's political subdivisions through newsletters, press releases, and so forth. Community outreach events, such as hurricane awareness seminars conducted by Lee County Emergency Management, educated public attendees on the County's identified hazards. Participants were encouraged to provide input and feedback through the survey link on the Lee County Department of Public Safety's webpage. The *Joint Local Mitigation Strategy Project Management Plan* (version 2021.03) addresses stakeholder engagement and public involvement in more specific detail.

## Development Changes and Previous Mitigation Efforts

The *Hazard Identification and Risk Assessment* (HIRA) address changes in the community over the last 5 – 10 years. Chapter 2 Community Profile of the HIRA discusses trends in population changes in Lee County and its political subdivisions, changes in the built environment over the last decade or so, and fluctuations in the economy due to the recent pandemic. Notable increases in population over the last decade and related expansions in the built environment have increased the area’s risk and vulnerability to hazardous incidents. More people live along the coastline and other areas prone to coastal flooding. Additional development in these areas also contributes to coastal erosion and increases in the Wildland-Urban Interface. Shifts in the economic well-being of the area’s residents—particularly amongst communities also experiencing vulnerabilities (such as elderly populations and low-income households)—because of COVID have further increased risk and vulnerability.

Since the adoption of the *Joint Unified Local Mitigation Strategy* in 2017, the County has also added several public shelters, developed and improved stakeholder coordination, implemented ordinance and code enforcement for development in coastal areas, and engaged the public in hazard awareness campaigns. The County and its political subdivisions have developed and improved alert and warning capabilities, renewed its community and hazard assessments, and incorporated short-term mitigation activities as part of response operations to tropical cyclone and pandemic events.

In response to two major storm events in 2017, Lee County embarked on a 3-phase initiative to mitigate flooding impacts. The initial phase cleared major blockages in waterways to provide immediate relief to areas of inundation, focusing on those with structural impacts. The second phase did a detailed “on-the-ground” assessment of flood conditions and status of County stormwater infrastructure. Early action projects were procured to alleviate pending flooding threats. The third phase completed a detailed flood mitigation study to identify major capital improvements and operational needs to meet flood levels of service. Projects are now going through a selection and prioritization process for Board consideration and budget approval.

During the same period, while the mitigation priorities of Lee County and its political subdivisions have not changed, additional focus has been given to mitigating pandemic events. Testing and vaccination efforts during the pandemic lead the way for those efforts, as did developments in continuity of operations and continuity of business during staffing disruptions.



## Chapter 2 Hazard Mitigation

This chapter outlines the planning area’s hazard mitigation framework. It sets forth the core capabilities that will enable the community to mitigate against hazard risk. Additionally, it establishes mitigation principles that will guide community efforts. The chapter delineates short- and long-term mitigation strategies, and then enumerates goals and objectives for mitigation.

### Mitigation Framework

The *Joint Local Mitigation Strategy* establishes a hazard mitigation framework for the planning area (see Scope discussion on p. 1). The framework consists of networks of individuals and organizations that work collaboratively to minimize hazard risk in Lee County, its political subdivisions, and Florida Gulf Coast University (FGCU). Coordination within the framework is done through stakeholders who are joined together by agreed upon goals and objectives, informed by industry guidelines and principles, and unified by joint initiatives and projects. The framework acts as an overarching mechanism to bring together otherwise disparate actions taking place across diverse interest groups. In this way, the *Joint Local Mitigation Strategy* brings participating jurisdictions together for cohesive action to address the area’s hazards, risks, and vulnerabilities.

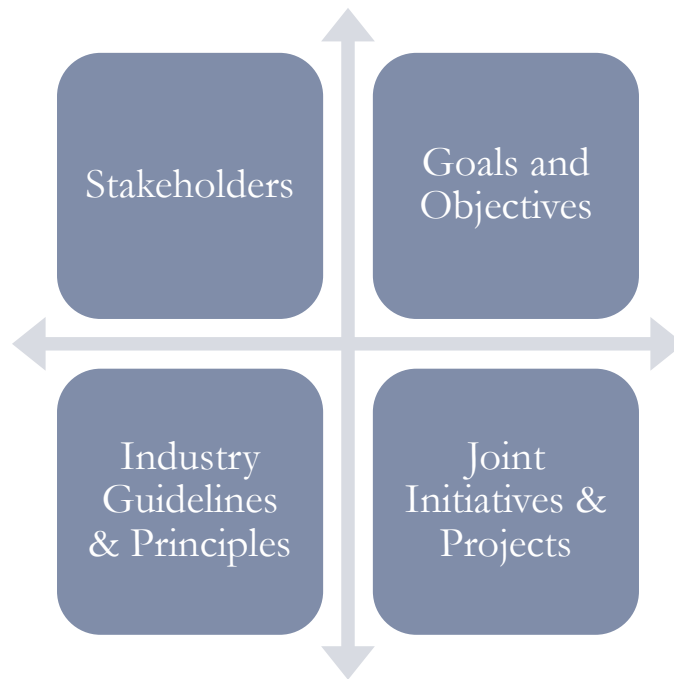


Figure 3 Hazard Mitigation Coordination

The hazard mitigation framework is made up of coordinating structures, core capabilities, priorities, and strategies for short- and long-term mitigation. The framework also contains goals, objectives, and milestones for achieving reduced risks and vulnerabilities. Finally, the framework encompasses an action plan for achieving mitigation goals and objectives and a project list for prioritizing allocation of available mitigation funds. These elements of the framework are addressed in more detail below.

## Coordinating Structures

Implementation of the mitigation framework will require collaboration between diverse local, regional, state, and federal interests. To achieve effective collaboration, the framework seeks to network together coordinating structures<sup>4</sup> that represent communities and interests across a broad spectrum. Coordinating structures develop and employ mitigation capabilities to reduce hazard risks. They facilitate communication between stakeholders and assist in creating consensus and action.

Local coordinating structures in Lee County and its political subdivisions include the following areas:

- Local and regional economic development organizations
- Public works agencies
- Private development enterprises
- Planning commissions
- Community emergency response teams
- Faith-based organizations
- Service groups and voluntary organizations
- Public and private schools
- Resources and referral/advocacy agencies for children, families, and those with disabilities and others with access and functional needs
- Local mitigation committees and long-term recovery groups
- Water conservation boards and coastal commissions
- Regional/Metropolitan planning organizations
- Region healthcare coalitions
- Mutual aid compacts

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<sup>4</sup> Federal Emergency Management Agency (2016). *National Mitigation Framework* (2<sup>nd</sup> ed.), p. 30

Through the collaborative and iterative planning process undertaken to develop, implement, and maintain the *Hazard Identification and Risk Assessment* and the *Joint Local Mitigation Strategy*, representatives from the area's coordinating structures can coordinate and cooperate on mitigation activities. Linking this extensive network of networks is achieved primarily through the Local Mitigation Strategy Working Group.

### **Local Mitigation Strategy Working Group**

The primary coordinating structure for the mitigation framework is the Local Mitigation Strategy Working Group. The Working Group oversees the development, implementation, and maintenance of the *Joint Local Mitigation Strategy*. It is the responsibility of the Working Group to identify community mitigation needs and to facilitate the development of projects to meet those needs. As part of the Disaster Advisory Council (DAC), the Working Group as a body has representation from Lee County, each municipality, the school district, institutions of higher education, utilities, special districts, regional districts, the public, and so forth. In addition to regular members, the DAC also engages with other relevant coordinating structures to ensure a broad-based approach to emergency management is achieved.

The DAC—and by extension, the Working Group—meets on a quarterly basis to discuss and update the *Joint Local Mitigation Strategy* and to address mitigation needs and projects in the community. The Working Group develops, implements, and monitors mitigation actions that address identified hazards. These actions are tied to the framework's goals and objectives and are guided by the strategy's mitigation priorities, which are outlined in Chapter 2 of this document. The DAC also develops, monitors, implements, and revises programs related to emergency preparedness, response, and recovery; in this way, the Working Group helps to ensure integration of mitigation principles and activities across all areas of emergency management in Lee County and its political subdivisions.

Lee County Department of Public Safety – Emergency Management is responsible for organizing and facilitating DAC meetings. The Director of Emergency Management appoints the chair for the Local Mitigation Strategy Working Group.

### **Mitigation Core Capabilities**

The mitigation framework is built on a foundation of core capabilities. These capabilities enable the community to identify and address risks before, during, and after hazardous incidents occur. Mitigation core capabilities are similar to those found in other areas of

emergency management. While there are numerous capabilities the planning area can leverage to reduce risks from hazards, core capabilities form the necessary foundation to which those capabilities are affixed and used.

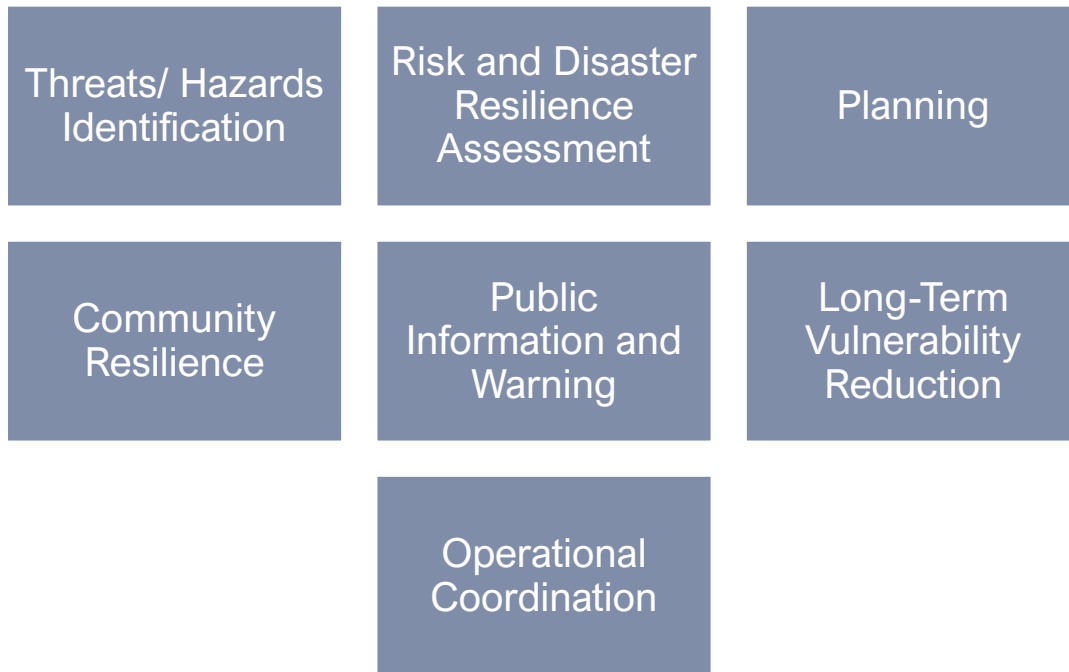


Figure 4 Mitigation Core Capabilities

The *National Mitigation Framework* by the Federal Emergency Management Agency (FEMA) provides extensive definitions for each core capability<sup>5</sup>. Application of the core capabilities in the community is achieved through a multitude of coordinating structures. Lee County and its political subdivisions develop and maintain these capabilities through consistent training, regular review of current mitigation principles, participation in industry workshops, and maintenance of plans, policies, and procedures related to mitigation activities. Continual maintenance of the *Hazard Identification and Risk Assessment*, the *Joint Local Mitigation Strategy*, and respective comprehensive emergency management plans and recovery plans ensure that these capabilities are integrated fully with the planning area community.

Lee County and its political subdivisions use mitigation capabilities to address risks across all elements of the community. This includes economic systems, health and social services, housing inventory and markets, cultural resources, and the built and natural

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<sup>5</sup> Federal Emergency Management Agency (June 2016). *National Mitigation Framework* (2<sup>nd</sup> ed.), pp. 2, 17-30

environments. In this way, the framework is applied consistently and across all facets of the planning area, including areas of comparatively high social vulnerability and areas traditionally underrepresented.<sup>6</sup>

### **Core Capability: Threats/Hazard Identification**

This capability entails the continual identification and assessment of threats and hazards to people, property, and the environment in Lee County, its political subdivisions, and FGCU. As part of this capability, mitigation planners and participants identify data requirements, develop and analyze relevant data, deploy long-term monitoring schemes, share appropriate data, build cooperation between different community systems, and translate data into meaningful and actionable information.

The framework incorporates this capability through the development and maintenance of *Hazard Identification and Risk Assessment*.

### **Core Capability: Risk and Disaster Resilience Assessment**

This capability involves gaining an understanding of the planning environment, particularly with regards to community risks and resilience against the onset of hazardous events. Using this capability means evaluating threats, hazards, vulnerabilities, consequences, needs, and resources to define and prioritize mitigation actions.

The framework incorporates this capability through the *Hazard Identification and Risk Assessment*, which includes an extensive community profile examining the geography, economy, and demography of Lee County and its political subdivisions.

### **Core Capability: Planning**

This capability combines the outcomes of the previous two capabilities with planning principles to address community needs. This capability involves embedding risk-based decisions into planning processes across all areas of emergency management and working through means that invite whole-community engagement. To develop and use this capability, the framework relies upon the expertise, knowledge, and systems in place in the planning area that support planning best practices.

The framework incorporates this capability through the *Hazard Identification and Risk Assessment*, the *Joint Local Mitigation Strategy*, and other efforts, such as those

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<sup>6</sup> Federal Emergency Management Agency (2016). *National Mitigation Framework* (2<sup>nd</sup> ed.), p. 16

discussed in the Plan Integration section of this document.

### **Core Capability: Community Resilience**

This capability centers on strengthening areas of the community, such as the economy, health and social services, housing, cultural resources, and the built and natural environments, to better withstand and/or recover from hazardous events. Employing this capability involves understanding the community, knowing what the risks are from hazards, communicating risk and risk reduction information, fostering a cultural of cooperation, and promoting mitigation and resilience thinking.

The framework incorporates this capability through leadership commitment to resilience, collaboration between stakeholders, mitigation partnerships, training and education, and public outreach. It also includes and supports resiliency capabilities developed and maintained through the *Disaster Recovery Plan*.

### **Core Capability: Public Information and Warning**

This capability facilitates risk-informed decision-making by individuals, households, organizations, and jurisdictions. The capability entails internal and external communication between stakeholders, exchanges of analytical findings, outreach initiatives, education, and consensus building. Communities empowered with this capability are marked by a continuous flow of risk and hazard information among all stakeholders.

The framework incorporates this capability through stakeholder engagement throughout the development, implementation, maintenance, and revision processes for the *Hazard Identification and Risk Assessment* and the *Joint Local Mitigation Strategy*. The capability is also developed and used through public information initiatives, such as hazard-specific seminars and outreach events. Lee County and its political subdivisions also make extensive use of alert and warning tools, such as AlertLee, LeePrepares, and traditional and social media.

### **Core Capability: Long-Term Vulnerability Reduction**

This capability encapsulates the principles and activities of other core capabilities to produce risk-reduction outcomes in the community. Building long-term vulnerability reduction involves broadening the acquisition and use of insurance, developing emergency preparedness at the individual and household level, advancing projects and activities that result in risk reduction and not just shifted risk, planning, integrating

mitigation into buildings codes and ordinances, and so forth.

The framework incorporates this capability through mitigation strategies, projects, activities, and initiatives. The capability is also included in the framework through building code and ordinance implementation and enforcement. For example, the Lee County Department of Public Safety – Emergency Management has a role in reviewing proposed developments in unincorporated portions of the County to ensure compliance with building requirements related to construction in coastal high hazard areas, as well as relate to emergency preparedness plans for residential construction.

### **Core Capability: Operational Coordination**

This capability is the ability to integrate mitigation strategies, principles, and activities into the daily operations of the community and its constituent parts. In this way, mitigation leaders and practitioners can connect with communities of interest, practice, and expertise. This capability drives the implementation of other core capabilities and aligns efforts in a way that institutes whole-community mitigation in Lee County and its political subdivisions.

The framework incorporates this capability through the Local Mitigation Strategy Working Group and the Disaster Advisory Council.

### **Mitigation Priorities**

While developing and using mitigation capabilities and in pursuit of mitigation goals and objectives, Lee County and its political subdivisions focus on:

- Preventative activities that focus on reducing the risk to people, property, and the environment from identified hazards.
- Property protection activities to reduce or avert property damage on a building-by-building or parcel basis.
- Natural resource protection activities to preserve or maintain natural areas.
- Emergency services measures or activities, taken during any disaster incident caused by a hazard, which reduces the hazard's impact.
- Structural projects that minimize or wholly reduce a hazard's impact.
- Public information activities that advise property owners, potential property owners, and visitors about hazards and ways to protect people and property.
- Pre- and post-disaster redevelopment and mitigation policies and procedures designed to reduce or avert the jurisdictions' potential for risks from future hazards.

## Short-Term Mitigation

Short-term mitigation activities are achieved through emergency preparedness and response plans, policies, procedures, and operations. Lee County works with various partners to identify, retrofit, and maintain facilities that can be used as emergency shelters to move affected or potentially-affected people out of harm's way. The County, its municipalities, special districts, and state and federal entities consistently develop, train, and exercise coordination so that in times of hazardous incidents, life safety measures can be taken as soon as possible to save lives. This same coordination enables relevant stakeholders to expeditiously allocate and apply resources to protect the environment.

Other examples of short-term mitigation through response operations include initial and comprehensive damage assessments, needs assessments, utility restoration, search and rescue, and supply distribution. Public information immediately before, during, and after the onset of one or more hazards helps to reduce risk exposure to the community. Ultimately, effective preparation for and execution of response operations limits the risks and consequences of hazards when they occur.

Similarly, Lee County, its political subdivisions, and FGCU develop and (when needed) execute a recovery framework that renders aid to those affected by hazardous incidents. Rapid and effective recovery minimizes the long-term consequences of hazards in numerous ways. Recovery includes efforts such as post-disaster recovery, financial and economic relief, reconstruction, goods and services provisions, physical and mental health services, and so forth. The recovery framework also addresses the application of volunteered goods and services to areas of the community in need. Through a collaborative, well-executed recovery, members of the community affected by disaster, be they private, commercial, or otherwise are more resilient than they would be otherwise.

Important vehicles for short-term mitigation in Lee County and its political subdivisions include the following:

- *Hazard Risk and Identification Assessment*
- *Lee County Comprehensive Emergency Management Plan*
  - Supporting plans, policies, standard operating guides, standard operating procedures, and checklists
- *Lee County Disaster Recovery Plan*
- *Lee County Training and Exercise Plan*
- County and municipal public education and outreach programs



## Long-Term Mitigation

Long-term mitigation incorporates short-term mitigation activities with those that occur in the community continuously, regardless of whether a specific hazard has happened or not. Whereas response operations are tailored to a specific real-world instance of a hazard, long-term mitigation activities include drafting ordinances, constructing resilient buildings, retrofitting the built environment, and so forth. Moreover, it includes long-term projects following hazardous incidents, such as applying for and implementing hazard mitigation funds to install generators and reinforce buildings following a hurricane.

Lee County and its political subdivisions make use of building codes and land use ordinances to build mitigation in to the built and natural environments. These entities also participate in local and regional planning and engineering projects to study natural phenomena (such as water flow) and its interaction with people, economics, and the built environment. Recommendations for additional or revised codes and ordinances come from these efforts, as do proposals and designs for mitigation projects.

Other elements of the framework's long-term mitigation include participation in the National Flood Insurance Program's Community Rating System and public outreach programs. Each jurisdiction maintains and addresses floodplain areas and coordinates NFIP initiatives, strategies, and information with policyholders. Jurisdictions identify repetitive-loss properties and develop and implement strategies and actions to buyout those locations or assist with retrofitting. Outreach programs, such as annual hurricane seminars, educate residents on the area's identified hazards. These outreach programs provide residents with personal and family preparedness guidelines, which in turn build community resiliency, and resources for use during and after disasters.

Reducing long-term vulnerabilities, combined with continuity of operations and recovery planning before a disaster, increase resiliency and the likelihood that communities and organizations can perform essential functions and deliver core capabilities after an event. In addition to other avenues, the mitigation framework institutes short- and long-term mitigation initiatives through the Mitigation Action Plan, which is provided in Chapter 3 of this strategy.

## Goals and Objectives

The *Joint Local Mitigation Strategy* establishes six goals for Lee County, its political subdivisions, and FGCU to achieve over the next five years. Each goal has several objectives associated with them. Adoptees of this strategy and their respective

stakeholders work in coordinated fashion with another to accomplish these strategies goals and objectives and thus reduce the negative outcomes of future hazardous incidents.

**Goal 1**

1. Reduce community risk and vulnerability to hazards.
  - 1.1. Evaluate and recommend changes to County and municipal codes and ordinances related to structural mitigation.
  - 1.2. Identify and develop mitigation actions and/or projects for each participating jurisdiction.
  - 1.3. Update and revise the Mitigation Projects List on a quarterly basis.
  - 1.4. Update the community and hazard profiles in the *Hazard Identification and Risk Assessment* annually.
  - 1.5. Conduct a survey of community vulnerability through established working groups and incorporate results into the *Hazard Identification and Risk Assessment* and the *Joint Local Mitigation Strategy*.
  - 1.6. Hazard-proof existing and proposed critical facilities and registered historic structures, with regards to location and construction.

**Goal 2**

2. Coordinate and support efforts to reduce or eliminate repetitive loss.
  - 2.1. Develop projects and/or actions to acquire/relocate or retrofit repetitive loss properties.
  - 2.2. Conduct an examination of enacting development standards for the Wildland Urban Interface.
  - 2.3. Develop and implement a program to reduce homeowner insurance policy rates on new construction.
  - 2.4. Maintain or improve the Community Rating System score for Lee County and its political subdivisions over the next five years.

**Goal 3**

3. Support natural resource protection activities that preserve or maintain natural areas.
  - 3.1. Conduct wetland coordinating/evaluation programs with state and water management agencies.
  - 3.2. Enforce erosion sedimentation and control regulations that reduce how much sediment enters natural areas when development takes place.
  - 3.3. Protect and restore the ecological functions of wetland systems to ensure their long-term environmental, economic, and recreational values include hazard mitigation practices.
  - 3.4. Promote the use of agricultural practices that are compatible with the protection of natural systems.

**Goal 4**

4. Improve mitigation through response operations during and after the onset of a hazard.
  - 4.1. Incorporate revisions in the *Hazard Identification and Risk Assessment* with preparedness and response activities across all jurisdictions.
  - 4.2. Reduce the community's hurricane shelter-space deficit.
  - 4.3. Identify and fund critical facilities in need of improved mitigation.
  - 4.4. Increase flood-resistance among critical facilities located in Coastal High Hazard Areas.
  - 4.5. Integrate short-term mitigation priorities with comprehensive emergency management plans and recovery plans.

**Goal 5**

5. Improve community coordination for mitigation.
  - 5.1. Catalogue mitigation-related ordinances, codes, policies, and plans to ensure up-to-date integration of all documents.
  - 5.2. Integrate mitigation priorities, goals, and objectives across jurisdictional programs, policies, plans, and procedures.
  - 5.3. Incorporate project management guidance and tools into mitigation initiatives and

activities.

- 5.4. Engage with additional mitigation partners to develop better relationships, understanding, and communication.

**Goal 6**

6. Coordinate and implement public information programs and activities regarding hazards and mitigation.
  - 6.1. Develop and carry out public information programs for hazard mitigation that emphasize its direct benefits to citizens, including the public and private sector.
  - 6.2. Send annual information to repetitive loss owners on mitigation principles and improvements.

## Chapter 3 Mitigation Action Plan and Projects

This chapter sets forth activities that will be undertaken by Lee County, its political subdivisions, and Florida Gulf Coast University (FGCU) to mitigate the probability and consequences of hazardous events. The chapter describes the coordinating structures that will develop, implement, and monitor the mitigation activities. It lays out the role and responsibilities of the Local Mitigation Working Group and the Lee County Department of Public Safety – Emergency Management in executing and monitoring the mitigation action plan. The chapter concludes with enumerating what mitigation activities will be initiated and completed by the framework and its participating coordinating structures.

### Mitigation Actions

The *Local Mitigation Strategy* assigns actions to each of its objectives. The actions are specific efforts that are currently being done or will be undertaken by Lee County and its political subdivisions to reduce risks and vulnerabilities to hazards. To direct the implementation of the strategy, these listed actions entail specific items that are measurable, time-delineate (by year and quarter), and assigned to an organization or position for accountability purposes. Each item is also associated with one or more hazards identified and assessed in the *Hazard Identification and Risk Assessment*.

As the Working Group and other stakeholders implement the *Joint Local Mitigation Strategy*, the actions listed in the plan will be updated to reflect completed, deferred, or ceased actions. New action items will be added as the community works toward completing its mitigation goals and objectives. When all needed actions for a given objective are completed (including any future items added after dissemination of this document), the objective will be considered achieved and one or more new objectives will be added to the strategy.

The Local Mitigation Strategy Working Group Chairperson maintains a current list of mitigation actions, which are shared with mitigation stakeholders. The Mitigation Action Plan is made available to the public on the Lee County Department of Public Safety – Emergency Management mitigation webpage<sup>7</sup>.

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<sup>7</sup> <https://www.leegov.com/publicsafety/emergencymanagement/plan/mitigation>

## Mitigation Projects

Whereas mitigation actions are specific, time-delineated activities that various community systems at once, mitigation projects are specific structural mitigation endeavors that reduce risk and vulnerability in the built environment. Mitigation projects in this sense allow the framework a means to give particular focus to new and existing buildings and infrastructure. Mitigation actions may not require dedicated funds for implementation; conversely, mitigation projects invariably require funding sources to procure goods and services for completion. In this manner, projects are often identified, developed, and held in waiting until funds are made available, such as through the Hazard Mitigation Grant Program (HMGP). The Lee County Department of Public Safety – Emergency Management maintains the Mitigation Project List, which is the formal list of mitigation projects that have been accepted by the County, its political subdivisions, and FGCU.

### Process for Project Proposals

The Local Mitigation Strategy Working Group maintains stewardship of mitigation projects for Lee County, its political subdivisions, and FGCU, primarily as they pertain to Federal mitigation grants and programs, such as the Hazard Mitigation Grant Program (HMGP). Inclusion of projects on the list requires approval from the Local Mitigation Strategy Working Group and adherence to the process outlined here. Stakeholders engaged in iterative discussions and negotiations to develop the process to ensure impartial and justifiable inclusion of projects across jurisdictions that provide significant and measurable reduction of risk to the community. The process is reviewed and discussed on a regular basis amongst stakeholders and decision makers to keep it current and reflective of community needs. Figure 5 below illustrates the project proposal process.

Jurisdictions, special districts, and citizens seeking to add a project to the Mitigation Project List must complete the Local Mitigation Strategy Project Ranking Worksheet (see Figure 6 below)<sup>8</sup>. The worksheet addresses information required by the State of Florida and the Federal Emergency Management Agency for approval of the *Joint Local Mitigation Strategy* and for consideration of mitigation projects. The worksheet also includes criteria established by the Local Mitigation Strategy Working Group that facilitates actionable discussion and debate, justification for inclusion on the Mitigation Project List, and project prioritization. Scores are provided for each criterion tied to the

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<sup>8</sup> The form is facilitated through Smartsheet and the link for the form is made available by the Local Mitigation Strategy Working Group Chairperson.

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priorities established in this strategy and a base sum score is provided for each project submitted.

The Working Group reviews and assesses the completed forms and discusses the proposed project with the sponsoring party. Thereafter, a majority vote by the Working Group is necessary to formally accept the project. Once accepted, the Working Group assigns a score for level of community need (between 1-4), which is added to the project's base score. An accepted project is placed on the Mitigation Project List and is considered formally adopted by the Working Group.

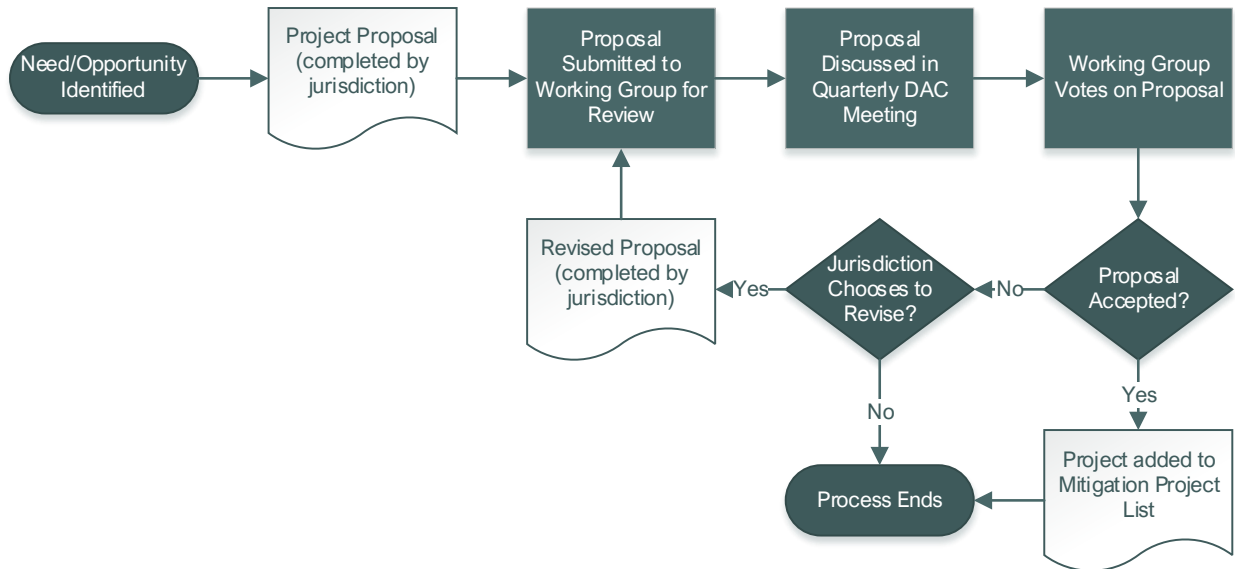


Figure 5 Process for Proposed Mitigation Action Acceptance/Denial

### Project Prioritization


Because of the need for funding, which is oftentimes limited, the Working Group prioritizes mitigation projects. Prioritization uses a standardized process of scoring proposed projects according to a schedule of criteria that, taken together, ensure projects that provide the greatest and broadest benefit to risk and vulnerability reduction are prioritized over those with comparatively less benefit. The following constitutes the criteria used by the Working Group to assess, score, and rank proposed mitigation projects:

- Addressed in Community Comprehensive Plans, Programs and Policies
- Consistent with existing regulatory framework
- Probability of funding
- Community Rating System Credit
- Community Benefit

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- Community Exposure to identified hazard
- Complexity of Implementation
- Critical Service Improvement
- Timeframe to complete project
- Human Shelter Deficit
- Level of Community Need, County-wide

Hurricane shelter projects go through an additional set of parameters that evaluates such factors as: storm surge vulnerability, building construction, increase in shelter capacity, and project cost effectiveness.



The image shows a screenshot of a web-based form titled "LMS Project Ranking Worksheet". At the top center is the Lee County Emergency Management logo, which features a circular emblem with a palm tree, a sun, and a person, surrounded by the text "LEE COUNTY EMERGENCY MANAGEMENT". Below the logo, the title "LMS Project Ranking Worksheet" is displayed in large, bold, white text on a dark blue background. The form itself is white and contains three main sections, each with a red asterisk indicating a required field:

- Jurisdiction \***: A dropdown menu with the word "Select" and a downward arrow.
- Agency Responsible \***: A text input field. Below the field is the question: "Which office/department will be responsible for managing the initiation, implementation, and completion of the project?"
- Project Name \***: A text input field.

Figure 6 LMS Project Ranking Worksheet

Any projects submitted for federal funding also include a cost benefit analysis using approved methodology and consider dollars lost to the community. (The State of Florida Division of Emergency Management typically conducts these cost-benefit-analyses internally for HMGP projects.)



## Chapter 4 Review and Maintenance

This chapter describes how the *Joint Local Mitigation Strategy* will be maintained during its implementation and reviewed and updated. The chapter addresses the manner in which the framework monitors progress of mitigation goals and objectives and disseminate such information throughout the community. It outlines the method used to evaluate progress, identify issues, address community needs, and leverage new opportunities for reducing risk and vulnerability. The chapter concludes by briefly summarizing how the strategy and this document will be maintained on an annual basis and references the *Joint Local Mitigation Strategy Project Management Plan* and its role in ensuring the strategy is kept current.

### Monitoring and Control

The Local Mitigation Strategy Working Group Chairperson coordinates and communicates with Working Group members to monitor progress of the Mitigation Action Plan and the Mitigation Project List. The Chairperson maintains a database that tracks data related to action and project implementation, progress, and conclusion. At least once a quarter, the Chairperson contacts members of the Working Group to receive progress reports. In instances where project actions involve coordination with stakeholders not participating in the Working Group, the Chairperson works with those tasked with managing such coordination to receive similar progress reports.

Lee County Department of Public Safety – Emergency Management submits an annual report to the State of Florida Division of Emergency Management (per Administrative Code 27P-22). This report is due the last working weekday of each January and addresses the strategy, the Mitigation Action Plan, the Working Group, and other elements of the framework.

### Evaluation

At least once a quarter, the Chairperson will distribute to the Working Group a Mitigation Action Plan Progress Report and a Mitigation Project List Progress Report. At each quarterly meeting of the Disaster Advisory Council (DAC), the Working Group discusses the progress reports and any needed or recommended changes to the *Joint Local Mitigation Strategy*. As Lee County and its political subdivisions maintain a continual assessment of the community and its risk and vulnerability reduction needs, the Working Group adds new mitigation actions and/or projects to the *Joint Local Mitigation Strategy*

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as needs are identified or opportunities present themselves. The Working Group also considers any recent public input on mitigation during each quarterly DAC meeting.

## Update Schedule

The *Joint Local Mitigation Strategy* is reviewed, revised, and distributed on an annual basis. The process and schedule for this is detailed in the *Joint Local Mitigation Strategy Project Management Plan*<sup>9</sup>.

## Community Involvement

The Working Group works with each participating jurisdiction to engage with the community on mitigation issues. Engagement includes soliciting community feedback during outreach activities, as well as providing mechanisms for general public input (such as community-wide surveys). Engagement also is achieved through coordination activities with the coordinating structures mentioned previously in this document. More detailed information related to continual community involvement is addressed in the *Joint Local Mitigation Strategy Project Management Plan* (version 2022).

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<sup>9</sup> The next update and revision to this document is addressed in the *Joint Local Mitigation Strategy Project Management Plan* (version 2022)