

## **INTRODUCTION**

In October 1998, the Leon County Local Mitigation Strategy Working Group was formed and charged with developing the *Leon County Local Mitigation Strategy*. The main goal of the local mitigation strategy is to identify and assess the various natural and technological disasters the County and City of Tallahassee face, and develop local strategies to reduce the impact of future disasters. This volume covers the procedures the working group used to develop the local mitigation strategy and presents the mitigation initiatives they identified.

## **HAZARD MITIGATION DESCRIPTION**

The most obvious questions when developing a local mitigation strategy are “What is hazard mitigation, what is the local mitigation strategy, and why should a local government develop a local mitigation strategy?”

Hazard mitigation is any action taken to permanently reduce or eliminate long-term risk to people and their property from the effects of hazards. Some examples of hazard mitigation include land use planning techniques that limit infrastructure in high hazard areas, programs for retrofitting existing structures to meet new building codes and standards and the acquisition of structures that are in a high hazard area. Ideally, a community can minimize the effects of future hazards through a mix of planning, code enforcement and responsible development.

The local mitigation strategy is a community-based plan to make cities and counties safer and more resistant to natural and technological hazards. Every community is exposed to some level of risk from hazards; hurricanes, tornadoes, floods, hazardous material spills, fires, and sinkholes are some of the hazards experienced by Florida communities. Hazards cannot be eliminated, but their impacts can be reduced through proper planning. The local mitigation strategy does this by accomplishing the following:

1. Identifying hazards to which the county is vulnerable, such as hurricanes, tornadoes, floods, fires, and hazardous materials releases;
2. Determining where the community is most vulnerable to these hazards;
3. Assessing the facilities and structures that are most vulnerable to hazards;
4. Preparing a prioritized list of mitigation projects to take advantage of available funding;
5. Identifying funding sources for the mitigation projects;
6. Making hazard awareness and education a community goal.

The local mitigation strategy benefits the community by not only reducing risks, but also by saving community members and the local government valuable resources. Businesses in high hazard areas lose valuable revenue when damaged or isolated by storms. The American Red Cross estimates that less than 50 percent of businesses heavily damaged by a disaster will still be in business three to five years after the disaster. Residents who build in high hazard areas are subject to evacuation, damage to their homes and personal property, lower home values, and higher insurance premiums.

Disasters also cost the local government money. Community infrastructure such as roads, drainage systems, water systems, and wastewater treatment plants built in high hazard areas are subject to frequent damage and costly repairs. Federal post-disaster assistance does not cover all

the costs of recovery. A local government is responsible for up to 12.5 percent of local public recovery costs in a federally declared disaster. In smaller events that are not federally declared, the local government is responsible for 100 percent of the local recovery costs. These costs can put a significant strain on the budget of a small local government without significant revenue sources. Disruption of the community's infrastructure can also hamper the local economy, impacting the tax base and making recovery more difficult. But the public costs of a disaster are not related to infrastructure alone. Critical facilities such as hospitals, schools, airports, and major government buildings located in high hazard areas are often subject to damaging conditions just when they are needed the most. And of course, the cost to community health, safety and welfare can never be accurately calculated.

The *Leon County Local Mitigation Strategy* will enable county and municipal officials, the business community and local citizens to reduce risks and costs by including hazard mitigation as part of every day planning, rather than limiting it to the measures taken immediately before or after a disaster strikes.

## WORKING GROUP MEMBERS

The *Leon County Local Mitigation Strategy* was developed by a working group comprised of city and county personnel, and representatives from various private sector interests. Beginning in October 1998, the group met 13 times to identify and evaluate the hazards facing Leon County and the City of Tallahassee. For a complete list of meeting dates please refer to Volume III, Appendix A.

The working group was made up of two elements: the Steering Committee, whose function was to direct the course of the local mitigation strategy development; and the Support Committee, who provided much of the data that went into the Hazard Identification and Vulnerability Assessment, as well as identifying many of the proposed mitigation initiatives. The name of each working group member is listed below, along with the agency and/or organization they represented.

### a. Steering Committee

<u>Name</u>	<u>Agency</u>
1. Mike Willet	Leon County Public Works
2. Gary Johnson	Leon County Community Development
3. Wendy Grey	Tallahassee/Leon County Planning Department
4. John Davis	Tallahassee Public Works
5. Chief Tom Quillin	Tallahassee Fire Department
6. Sue Dick	Tallahassee Area Chamber of Commerce
7. Dot Spence	Council of Neighborhood Associations
8. Jennifer Zadwick	Florida Department of Community Affairs ( <i>Ex Officio member</i> )

### b. Support Committee

#### 1. County Staff

<u>Name</u>	<u>Agency</u>
a. Lee Hartsfield	Leon County Community Development
b. Ray Burroughs	Leon County Community Development
c. Michael Clark	Leon County Community Development
d. Kevin Pope	Leon County Community Development
e. Jesse Sasser	Leon County Public Works
f. Tony Parks	Leon County Public Works
g. Theresa Heiker	Leon County Public Works
h. Lt Phil Rivers	Leon County Sheriff's Office

County Staff (continued)



## **LOCAL MITIGATION STRATEGY REVIEW PROCEDURES**

The steering committee recognized that in order to be effective, the *Leon County Local Mitigation Strategy* needed to be reviewed and updated on a regular basis. To assist in this process, the committee developed the following procedures.

1. The steering committee will meet annually, normally on the date of adoption of the *Leon County Local Mitigation Strategy*, to review the local mitigation strategy and ensure it is current and reflects changing conditions within the community. This should provide adequate time to incorporate any needed revisions prior to the next grant cycle. The steering committee will meet earlier or on a more frequent basis if needed, such as in a post-disaster environment.
2. The review of the local mitigation strategy will include:
  - a. the deletion of completed projects and/or programs;
  - b. the identification of new mitigation initiatives;
  - c. an evaluation of the impact of recommended changes to city and/or county plans and ordinances identified during the local mitigation process; and
  - d. an evaluation of any changes in the hazard identification and vulnerability assessment.
3. As needed, additional public and private sector interests will also be invited to participate in the review. Changes recommended by the steering committee will be forwarded to Leon County Emergency Management for consideration. Leon County Emergency Management will forward recommended revisions to the City and County Commissions for review and determination of action.

## **HAZARD MITIGATION GOALS AND OBJECTIVES**

To assist them in analyzing regional, county and municipal policies, ordinances and programs that affect mitigation the steering committee developed the six hazard mitigation goals, with supporting objectives, listed below. The list was developed from a review of County and City comprehensive plans, land development regulations, and the comprehensive emergency management plan to determine those elements of the plans and regulations with mitigation implications. Please refer to Volume III, Appendices D and E, for the results of the policy review.

These hazard mitigation goals and objectives were also critical in evaluating the proposed mitigation initiatives that are described later in this volume. Whether or not a proposed mitigation initiative met one or more of the hazard mitigation goals was considered when prioritizing the individual mitigation initiatives. Each goal was assigned a value of five points; an initiative that supported all six goals would receive 30 points. The steering committee then reviewed each mitigation initiative and assigned a number of points to that initiative based on the number of mitigation goals the initiative supported. Table 6.2 lists the amount of points each initiative received for meeting hazard mitigation goals.

1. Goal: Protect human health, safety and welfare

Objectives:

- 1.1. Limit public expenditures in areas identified as subject to repetitive damage from disasters.
- 1.2. Ensure the protection of critical facilities such as prohibitions on constructing critical facilities in high-hazard areas.
- 1.3. Reduce or eliminate development in hazard prone areas such as floodplains.
- 1.4. Regulate non-conforming land uses particularly in areas subject to damage from disasters.
- 1.5. Encourage the removal of septic tanks and technically hazardous sites such as chemical storage facilities from high hazard areas.
- 1.6. Consider the impact of hazard mitigation when conducting development review and approval.
- 1.7. Implement additional development restrictions on high-hazard areas.
- 1.8. Consider the use of land acquisition programs for properties subject to development that are located in high-hazard areas.

2. Goal: Protect economic activities within the community.  
  
Objectives:
  - 2.1. Encourage economic diversification to protect the community from hazards that may affect a single economic source.
  - 2.2. Encourage programs to address repetitively damaged and vulnerable commercial structures.
  - 2.3. Coordinate with the local business community in the development of existing and proposed mitigation initiatives.
3. Goal: Enhance regional mitigation efforts.  
  
Objectives:
  - 3.1. Coordinate with other government agencies to develop regional mitigation efforts.
  - 3.2. Encourage hazard response training with agencies throughout the region.
4. Goal: Promote adequate and safe housing.  
  
Objectives:
  - 4.1. Encourage programs to address repetitively damaged and vulnerable residential structures.
  - 4.2. Encourage the development of hazard mitigation-related building codes and inspection procedures.
5. Goal: Protect community resources, including, but not limited to, infrastructure, and environmental, recreational and historic resources.  
  
Objectives:
  - 5.1. Provide for the removal and/or relocation of damaged and vulnerable infrastructure.
  - 5.2. Regulate land use, floodplains, non-point source stormwater run-off, and the design and location of sanitary sewer and septic tanks in hazard-prone areas, pursuant to rule 9J5.012(3)(c)3, F.A.C.
  - 5.3. Encourage the removal of septic tanks from high-hazard areas.
6. Goal: Promote the community's ability to respond to a disaster in a timely manner.

Objectives:

- 6.1. Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS).
- 6.2. Develop procedures to request limited revision of Flood Insurance Rate Map studies from the NFIP.
- 6.3. Develop procedures to address activities that can earn credit toward reduction of NFIP insurance premiums through CRS.
- 6.4. Encourage public awareness of hazards and hazard prone areas in the community.
- 6.5. Preserve the ability to evacuate hazard areas.
- 6.6. Develop policies and procedures for pre- and post-storm development.

**PRIORITIZATION OF MITIGATION INITIATIVES**

While developing the list of hazard mitigation initiatives, the working group recognized the need to prioritize the initiatives so that those initiatives with the greatest mitigation benefits were ranked over initiatives with less mitigation benefits. The procedures listed in Table 6.0 were developed to assist the working group in this process.

The main emphasis of the prioritization procedures is to promote initiatives that support public health and safety, protect people and protect real property in the most vulnerable areas. Points are also provided for initiatives that supported essential or critical public and private services, and previously identified mitigation goals. Implementation time was also considered. Finally, bonus points were awarded to those initiatives which provide additional benefits. The working group did not address the issue of cost since an appropriate cost-benefit analysis was deemed outside the scope of this process.

The intent of these procedures is not to direct a rigid order for the accomplishment of initiatives. The purpose of the ranking is to indicate the overall importance of the project to local mitigation efforts. The implementation of an initiative will usually depend more on the availability of funds, than on how high or low it ranked compared to other initiatives.

**Table 6.0: Mitigation Initiatives Prioritization Procedures**

<b>Criteria</b>	<b>Measure</b>	<b>Points</b>
Supports public health and safety	<ol style="list-style-type: none"> <li>1. Immediate - Alleviates an existing health or safety hazard</li> <li>2. Intermediate - Alleviates potential health or safety hazards</li> <li>3. Long-term - Promotes or maintains health or safety</li> </ol>	<ol style="list-style-type: none"> <li>1. Immediate - 100 points</li> <li>2. Intermediate - 75 points</li> <li>3. Long-term - 50 points</li> </ol> <p>Maximum number of points is 100</p>
Protects people	Percentage of at risk population to benefit.	<ol style="list-style-type: none"> <li>1. &gt; 75% - 80 points</li> <li>2. 50-75% - 60 points</li> <li>3. 25-50% - 40 points</li> <li>4. 10-25% - 20 points</li> <li>5. &lt;10% - 0 points</li> </ol> <p>Maximum number of points is 80</p>

**Table 6.0: Prioritization Procedures (continued)**

<b>Criteria</b>	<b>Measure</b>	<b>Points</b>
Protects property	Percentage of at-risk buildings, property or infrastructure protected and/or ability to address a repetitive loss problem.	<ol style="list-style-type: none"> <li>1. Protects &gt;50% or resolves rep. loss problem - 80 points</li> <li>2. Protects 25-50% or improves rep. loss problem - 60 points</li> <li>3. Protects 10-25% - 40 points</li> <li>4. Protects &lt;10% - 20 points</li> <li>5. No property protection - 0 points</li> </ol> <p>Maximum number of points is 80</p>
Reduces risk of future damage	<p>Reduces or eliminates future risk of damage to a facility and/or infrastructure based on hazard events that are:</p> <ol style="list-style-type: none"> <li>1. Immediate - event occur yearly (on average)</li> <li>2. Significant - event occurs every 2 - 4 years (on average)</li> <li>3. Moderate - event occurs every 5 - 10 years (on average)</li> <li>4. Minimal - event occurs once every 11 years or more (on average).</li> </ol>	<ol style="list-style-type: none"> <li>1. Immediate - 80 points</li> <li>2. Significant - 60 points</li> <li>3. Moderate - 40 points</li> <li>4. Minimal - 20 points</li> </ol> <p>Maximum number of points is 80</p>
Supports essential or critical services	<ol style="list-style-type: none"> <li>1. Essential public services protected, such as gas, electric, garbage, sewer, roads, water, fire and police/sheriff, shelters, EOC, etc.</li> <li>2. Essential business services protected, such as building supply, gas, ice, banks, etc.</li> </ol>	<ol style="list-style-type: none"> <li>1. Essential public service - 20 points</li> <li>2. Essential business service - 10 points</li> <li>3. No essential service - 0 points</li> </ol> <p>Maximum number of points is 30</p>

**Table 6.0: Prioritization Procedures (continued)**

<b>Criteria</b>	<b>Measure</b>	<b>Points</b>
Supports goals established in the Community Guiding Principles	Number of mitigation goals the initiative supports.	5 points for each mitigation goal supported  Maximum number of points is 30
Ease of Implementation	Length of time to implement initiative	1. < 1 year - 60 points  2. 1 - 2 years - 40 points  3. 2 - 5 years - 30 points  4. 5 - 10 years - 10 points  5. > 10 years - 0 points
Provides benefits that are a bonus beyond those previously identified.	1. Benefits extend beyond the county boundaries.  2. Promotes public/private cooperation.  3. Promotes individual responsibility.  4. Provides multi-hazard risk reduction.	10 points per bonus item.    Maximum number of points is 40
<b>Maximum Number of Points For Any Initiative - 500</b>		

## **HAZARD MITIGATION INITIATIVES**

The working group began hazard mitigation identification process by identifying existing and planned mitigation initiatives. This process included a review of the Capital Improvements Plan, applicable City and County ordinances, and hazard-related program activities. The results of this review are summarized on pages 14-17. Next, based on the Hazard Identification and Vulnerability Assessment (contained in Volume II), the working group proposed a mix of additional mitigation programs, policies and projects to help further reduce the county's disaster profile. Table 7.0 provides a description of each initiative, the agency responsible for leading efforts towards implementation and potential funding sources.

The mitigation programs and policies identified by the steering committee are generally non-capital efforts, such as policy changes and updates to existing codes and plans. These are initiatives the local governments can usually start and complete without outside assistance and/or funding. In many instances, the County and City already have the information they need to begin the programs, and simply need direction from local elected authorities to begin.

The hazard mitigation projects, on the other hand, are almost exclusively capital efforts, such as, stormwater ponds, culverts, flood warning devices, storm retrofits and emergency response equipment purchases. For most of these efforts, the local governments will require outside funding assistance. Many of the identified projects will involve both studies and implementation of the study results. All stormwater related projects are included under initiative 11 in Table 7.0. For a complete, prioritized listing of stormwater projects see Tables 7.1 and 7.2.

As noted earlier, simply because a project has a high ranking does not mean that project will be funded first. The ranking indicates the overall importance of the project to local mitigation efforts. However, the grant specific funding guidelines (such as income levels, community matches, type of project, etc.) and the availability of funding will often be more important in determining which projects will be funded and when, than will the project's overall ranking.

Members of the working group representing the lead agency for each initiative were given responsibility for prioritizing individual initiatives. While the potential range of scores for each initiative was a minimum of 80 to a maximum of 500 points, actual scores fell between 120 and 390 points. Due to the variation in types of initiatives, the working group decided it would be more useful to group them into high, medium or low categories as opposed to emphasizing individual scores. The score results for individual initiatives are available for review in Table 7.3. The range of scores for each grouping was established by dividing the point spread into thirds. This produced high (300-390 points), medium (210-299 points) and low (120-209 points) priority categories. This division resulted in 15 high, 12 medium and 18 low priority initiatives. Completion dates were not provided as part of the prioritization process. The working group felt that since many of the projects will depend on outside funding sources, each with their own eligibility criteria, it would be difficult to establish completion dates.

*City of Tallahassee/Leon County Local Mitigation Strategy, Volume I:  
Hazard Mitigation Procedures and Initiatives  
15 December 1999*

Existing or Planned Mit. Initiatives

Insert Table 7.0

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Insert Table 7.1 and 7.2

Table 7.2 continued

Insert Table 7.3