Lake County, Florida

Local Mitigation Strategy:

A Multi-Jurisdictional Plan

March, 2010

LAKE COUNTY
FLORIDA

Administered by:
Lake County Department of Public Safety
Emergency Management Division
315 West Main Street
Tavares, Florida 32778

Acknowledgements

The Lake County Department of Public Safety, Emergency Management Division, would like to thank the following agencies and individual(s):

- Florida Division of Emergency Management
- Florida State University, Department of Urban and Regional Planning
- Members of the Lake County LMS Task Force
- Mr. Adam Hall, Graduate Student, Florida State University, Department of Urban and Regional Planning, assigned to Lake County to assist with the LMS update

Without the strong collaboration that took place, this plan update would not have been as successful.

Thank You!

Executive Summary

This document serves as a comprehensive guide to mitigation efforts in Lake County, Florida. By law, each county's local mitigation strategy (or plan) must be updated every five years. This update meets the update requirements by analyzing each specific area of the current plan and identifying ways in which it could be improved upon or changed.

This local mitigation strategy begins by identifying and describing the people who were crucial in getting this very important document updated, the Local Mitigation Strategy Working Group. Through their efforts and concerns, many excellent ideas were incorporated into this document. This group has the long term safety of the residents of Lake County in mind. The document also lays out the plan's goals and objectives, as well as the process of identifying and describing the natural hazards that might affect Lake County. The plan includes maps of hazards that might be more damaging in some areas than in others (e.g. flooding). The plan also includes a probability matrix that describes how likely it is that any given natural hazard will impact the jurisdictions.

Utilizing this knowledge and data, the LMS assesses each jurisdiction by individual hazards in order to better understand how vulnerable any given jurisdiction is to those hazards. While it may be simple to say that those areas with higher probability will probably have higher risk, it is important to realize that there is more to determining risk than just probability. One must also consider other variables that, when aggregated, give a picture of how "vulnerable" a community is. These can range from the demographic makeup of a community to the number of homes that were built before a certain date.

Knowing what the vulnerabilities are within each community, however, is only a piece of the puzzle. Since the vulnerabilities are known, it is then possible to investigate and suggest projects that might help reduce the vulnerability within each community. Projects are described and a prioritization score given so that it can be determined what the most effective use of funding might be. The remaining sections of the LMS describe the ways in which the plan will be maintained and incorporated into existing planning mechanisms.

Overall, this document serves as a message to the citizens of Lake County: **"we know our vulnerabilities and are working diligently to mitigate against them."**

Table of Contents

Acknowledgements.....1

Executive Summary.....2

Chapters

I. Introduction.....5

II. The Local Mitigation Strategy Task Force.....6

III. Hazards.....15

IV. Vulnerability.....70

V. Goals, Objectives and Mitigation Actions.....115

VI. Plan Maintenance.....140

VII. Integrating the LMS With Other Planning Mechanisms.....143

APPENDIX I
Project Listing by Score.....**A-1**
Project Listing by Jurisdiction.....**A-14**
Project Listing by Hazard.....**A-23**
APPENDIX II
LMS Working Group Bylaws.....**A-35**
APPENDIX III
Meeting Documentation.....**A-39**
APPENDIX IV
Flood Vulnerability Data by Jurisdiction.....**A-46**
APPENDIX V
High Winds Vulnerability Data by Jurisdiction.....**A-65**
APPENDIX VI
Wildfire Vulnerability Data by Jurisdiction.....**A-99**
APPENDIX VII
Sinkholes Vulnerability Data by Jurisdiction.....**A-144**
APPENDIX VIII
LMS Municipal Adoptions.....**A-155**

I. Introduction

Florida is an amazing place to live; the climate, the beaches, and the people all contribute to Lake County's quality of life. However, despite the high quality of life, Lake County is threatened by a number of different hazards that many Floridians have experienced firsthand, such as hurricanes, sinkholes, forest fires, tornadoes and lightning, to name a few.

This document details the activities of staff, the LMS Working Group and input from the public to update this plan. The document covers the identified hazards within Lake County and data broken down by municipal jurisdiction related to specific hazards. The document also identifies initiatives to address the identified hazards within the plan. The LMS Working Group has determined that the plan will not address avalanches, earthquakes or volcanic activity.

Overall, the Lake County Local Mitigation Strategy attempts to reduce some of the risk associated with hazards by implementing projects within Lake County and municipalities. The Federal Emergency Management Agency claims that for every dollar spent on a mitigation project, the benefit will be that four dollars is saved by the recipient in the long term. The LMS process is also intended to be a framework for documenting the activities of the LMS Working Group and the future mitigation activities within Lake County. This plan includes the updated bylaws of the LMS Working Group – and the overall planning process is intended to make the LMS Working Group more active in the coming years and to find ways to further promote public participation.

II. The Local Mitigation Strategy Task Force

Introduction

The Lake County Mitigation Task Force is a voluntary organization made up of a number of local government agencies, business interests, community organizations, and institutions. This section describes the local jurisdictions and organizations participating in the Task Force and discusses the organizational structure used to complete the planning process. It also provides a summary of the current status of planning activities by the participants, documenting the level of participation by the jurisdictions making up the Lake County Task Force. The Task Force's by-laws and operating procedures, provided in **Appendix II** of the plan, further define how participation in the planning process is determined.

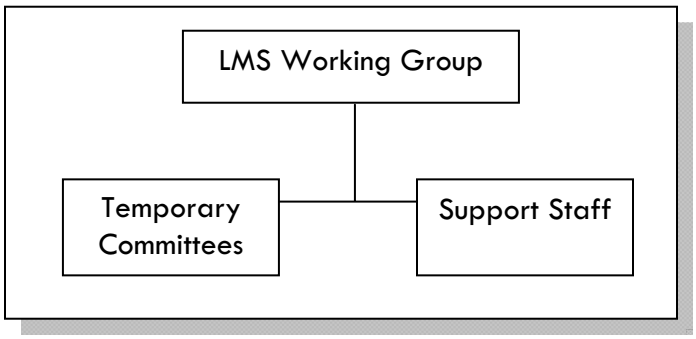
The Task Force Organizational Structure

The Lake County Mitigation Task Force encourages participation by all interested local jurisdictions, agencies, organizations and individuals. The organization is intended to represent a partnership between the public and private sectors to ensure they can work together to create a disaster resistant community. The proposed mitigation initiatives developed by the Task Force listed within this plan, when implemented, are intended to make the entire community safer from the impacts of future disasters, and benefit every individual, neighborhood, business and institution.

The responsibilities and duties of this organizational structure are detailed in the bylaws and operating procedures of the Task Force, which are provided in **Appendix II**. This section summarizes the roles of the different components of the Task Force and describes the participation that has actually occurred during the planning period covered by this document.

The Task Force is organized in the following manner:

The Lake County Task Force Organizational Structure



Municipal jurisdictions and other organizations within Lake County are critical to accomplishing the planning process. The planning process entails documenting the basic characteristics of communities and conducting vulnerability assessments of key facilities, systems and neighborhoods. This information is then used to generate vulnerability assessments to formulate and mitigation initiatives that could be implemented should funding sources become available. The process entails the LMS Working Group formally approving the integration projects into the Lake County Local Hazard Mitigation Plan. The project recommendations are expected to be implemented by the sponsoring organization as soon as the resources and/or opportunity to do so become available.

The Lake County Department of Public Safety, Emergency Management Division provides the staffing to support the activities of the LMS Working Group and assist by scheduling meetings, coordinating the activities of the participating organizations, and by maintaining the master database used to track the proposed projects and update the plan.

The Lake County Mitigation Task Force has benefited from the assistance and support of its many members and its support staff. The group intends to continue its efforts to engage more members of the community in the planning process, including more representatives of the private sector. **The public will have additional opportunities to provide input on this updated Local Mitigation Strategy plan, such as through the Lake County web**

site and municipal meetings where the plan will be formally adopted by resolution within each Lake County community.

Current Status of Participation in the Task Force

In order to support Planning Committee members in the completion of the community profiles and vulnerability assessments, the support staff set a schedule for each major technical analysis step, provided training in the evaluations needed, and distributed the necessary forms documentation of the relevant data and information.

The information developed by staff from hard copy forms was then used to create jurisdiction-specific components of this mitigation plan. This information is given, by jurisdiction, is in composite format within other sections of this plan. In addition to completing the community profile and vulnerability assessments, the participating jurisdictions and organizations were expected to use the results of these assessments to propose needed hazard mitigation initiatives for incorporation into the Lake County Local Hazard Mitigation Plan.

The participating jurisdictions, organizations, and individuals in the Lake County Mitigation Task Force have all worked diligently to complete this plan and will continue to do so in the future to create a truly disaster resistant community for the benefit of all citizens.

How each jurisdiction participated

Each jurisdiction participated by sending representatives who were able to bear any local knowledge regarding the most pressing mitigation needs in their respective communities. All jurisdictions that participated in the previous update continued to do so during this update process. This includes unincorporated Lake County, Florida and the municipal jurisdictions within the county. Each jurisdiction, however, is responsible for actual implementation of the plan within their boundaries and ensuring that their respective

projects within the strategy document meet the needs of their communities.

As a local, multi-jurisdictional mitigation plan, this planning approach enables all interested organizations, groups and agencies to be directly and actively involved in the planning process. The desire of this plan is to foster further participation from all municipalities and to meet on a more consistent basis in the future. Including unincorporated Lake County, a total of seven out of fifteen jurisdictions attended the planning meetings, however, more participated in the process due to one-on-one site visits the Emergency Management Division made to jurisdictions to gather additional information for the LMS update.

Participation is extremely important in the update process- entailing that organizations provide new and updated information. That information includes the knowledge gained from "lessons learned" since the last plan update, particularly as it pertains to hazards analysis, the development of initiatives that relate to the overall goals, and reviewing mitigation policies and plans to adequately address any gaps.

It must be emphasized that participation by a variety of organizations that represent public safety, hazard mitigation, land use planning and development, and other interests have been participants in the planning (**See page 12**). The planning process utilized, as defined in the standard operating procedures of the Task Force, mandate that adjacent jurisdictions within the Lake County mitigation planning area consult and coordinate with each other during and throughout the planning process to establish the goals and objectives for the plan, as well as to review proposed mitigation initiatives for incorporation into the plan. This is accomplished on an informal basis. Upon release of an updated plan for public review and comment, adjacent jurisdictional input is solicited as well.

<u>The LMS Update Meetings, 2009</u>

In June of 2009, an email was sent to the listed members of the Local Mitigation Strategy working group inviting them to attend the first of at least two public meetings regarding

the completion of the Local Mitigation Strategy Update which expires March 21, 2010. This meeting, held on June 24, 2009, was primarily an informational and introductory meeting that sought to familiarize the participants with mitigation planning and what would be requested of them throughout the process.

At this meeting several important changes were made to the structure of the working group; it was also decided that the types of hazards that would be addressed by the local mitigation strategy would be reduced to only those naturally occurring and to dam/levee failures.

The second meeting was held on July 27, 2009 at the Lake County Agricultural Center located in Tavares, Florida. At this meeting, the working group discussed the reprioritization of current projects and the submission of new projects for the Local Mitigation Strategy initiative list. The participating working group members also ranked the hazards that they felt they were most vulnerable to. The second meeting also had a large turnout of individuals from the unincorporated community of Astor in North Lake County, who were interested in the LMS update process. The participants at the meeting also conducted a capability assessment of the LMS process itself, as well as any mitigation projects that affected their jurisdiction. The capability assessment was done using SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats).

Documentation of these meetings, such as meeting announcements and rosters, is provided within **Appendix III** of this plan.

Partnership with Florida State University on Plan Update

In the Spring of 2009, the Florida Division of Emergency Management announced a partnership with Florida State University to provide counties with assistance from interns to update their LMS plans. With so many counties throughout the state due for renewal in 2010, the Division felt this would be an excellent way to assist counties with their plan updates. Lake County decided to take part in this internship program and an intern worked

at the Lake County Emergency Management Division from May – August, 2009. The intern was integral in the creation of a new LMS document, coordinated the required meetings with the LMS Task Force, conducted research and provided outreach to LMS partners to solicit their input on the plan update. Overall, the intern program was a success and the assistance from this program greatly assisted the Emergency Management Division with this plan update.

The intern and Emergency Management staff, in consultation with the LMS Task Force, decided that all elements of the plan needed to be updated. The LMS document that was last created in 2004/2005 was unnecessarily cumbersome and all elements needed to be updated and simplified for the document to be more user-friendly. The process essentially entailed starting from scratch by re-authoring the document and using previous materials that were generated, as necessary. A draft document was provided to the LMS Working Group to provide additional feedback. Recommendations were then incorporated into the document. A timeline in Gandt Chart format was established by the intern on the project to ensure that tasks were being handled on time. All of the notes and related files and documents that facilitated the plan update are on file at the offices of the Lake County Emergency Management Division for future reference.

Lake County LMS Task Force *Task Force Membership*	
Member Name	**Jurisdiction**
Gray, Darren	City of Clermont
Richardson, Tamara	City of Clermont
Cobb, Fred	City of Eustis
Winn, Rex	City of Eustis
Bostic, John	City of Fruitland Park
Isom, James Mark	City of Fruitland Park
Feagle, Jimmy	City of Leesburg
Wiley, Bill	City of Leesburg
Brasher, Randy	City of Mascotte
Meeks, Bea	City of Mascotte
Odell, Mark	City of Minneola
Slaughter, Sam	City of Minneola
Ritter, Paul	City of Mount Dora
Snowberger, Ronnie	City of Mount Dora
Zido, Lynn	City of Mount Dora
Barnett, Nancy	City of Tavares
Jones, Tonya	City of Tavares
Keith, Richard	City of Tavares
Luckock, Wayne (Buddy)	City of Tavares
Hatfield, Richard	City of Umatilla
White, Kenneth	City of Umatilla
Ball, Donald	Lake County (Unincorporated)
Bennett, John	Lake County (Unincorporated)
Borders, The Honorable Gary	Lake County (Unincorporated)
Bowman, Barry	Lake County (Unincorporated)
Carpenter, Thomas	Lake County (Unincorporated)
Christian, Pamela	Lake County (Unincorporated)
Gregory, Donna	Lake County (Unincorporated)

Lake County LMS Task Force

Task Force Membership

Member Name		Jurisdiction
Hart, Ron		Lake County (Unincorporated)
Hill, Linda		Lake County (Unincorporated)
Hoechst, Cathy		Lake County (Unincorporated)
Hogan, Sharon		Lake County (Unincorporated)
Homan, Steve		Lake County (Unincorporated)
Hunter, Roy		Lake County (Unincorporated)
Jackson, Dottie		Lake County (Unincorporated)
Johnson, Karla		Lake County (Unincorporated)
Jolliff, John		Lake County (Unincorporated)
Judge, Jim		Lake County (Unincorporated)
Kaiser, Gary		Lake County (Unincorporated)
King, Amye	Chair	Lake County (Unincorporated)
Loughlin, Sean		Lake County (Unincorporated)
Lovett, Ray		Lake County (Unincorporated)
McGinley, Colleen		Lake County (Unincorporated)
McKee, Bonnie		Lake County (Unincorporated)
Melling, Russ		Lake County (Unincorporated)
Miller, Jack		Lake County (Unincorporated)
Miller, Terry		Lake County (Unincorporated)
Mitchell, Pernell		Lake County (Unincorporated)
Patton, Chris		Lake County (Unincorporated)
Peebles, Peter		Lake County (Unincorporated)
Perry, Michael		Lake County (Unincorporated)
Raulerson, April		Lake County (Unincorporated)
Ruths, Don		Lake County (Unincorporated)
San Fratello, Ray		Lake County (Unincorporated)
Smith, Jerry		Lake County (Unincorporated)
Stivender, Jim		Lake County (Unincorporated)

Lake County LMS Task Force ***Task Force Membership***	
Member Name	**Jurisdiction**
Zerbe, Bob	Lake County (Unincorporated)
Cooper, Kitty	Town of Astatula
Morgan, Willie	Town of Groveland
Robbins, Curtis	Town of Howey-in-the-Hills
Brashear, Chuck	Town of Lady Lake
Nathanson, Ed	Town of Lady Lake
Sette, Steven	Town of Montverde
Lambert, Gina	Villages CDD

III. Hazards

In this section of the Local Mitigation Strategy for Lake County, the potential hazards that might affect our residents are analyzed. While each jurisdiction will be addressed individually, this section begins with a general overview at the county-wide level of each of the hazards. This section comprises one-half of the plan's risk assessment (See ***Section IV. Vulnerability)***; this section itself is comprised of two subsections: identification of hazards and a general profile of the hazards.

Identification

Although the initial mitigation strategy identified numerous potential threats to the safety and well-being of the citizens of Lake County, it was believed that many of these were neither hazards (many of them were impacts that resulted from hazards), nor lied within the scope of the project. For this reason, this update seeks to bring the mitigation strategy more in line with FEMA's guidance by devoting itself entirely to *naturally* hazards, specifically:

1. Drought: A period of dry weather, especially a long one that is injurious to crops
2. Flooding : A great flowing or overflowing of water, especially over land not usually submerged
3. Hail: Showery precipitation in the form of irregular pellets or balls of ice, falling from a cumulonimbus cloud
4. Heat: A hot condition of the atmosphere or physical environment; hot season or weather
5. Hurricanes: Violent, tropical, cyclonic storms of the western North Atlantic, having wind speeds of or in excess of 74 mph
6. Lightning: A brilliant electric spark discharge in the atmosphere, occurring within a thundercloud, between clouds, or between a cloud and the ground
7. Sinkholes/ subsidence: A natural depression in a land surface formed by the dissolution and collapse of a cavern roof. Sinkholes are roughly funnel-shaped and on the order of tens of meters in size. They generally occur in limestone regions and are connected to subterranean passages.

8. Tornadoes : A rotating column of air ranging in width from a few yards to more than a mile and whirling at destructively high speeds, usually accompanied by a funnel-shaped downward extension of a cumulonimbus cloud
9. Wildland fire: Any large fire that spreads rapidly and is hard to extinguish
10. Erosion: The process by which the surface of the earth is worn away by the action of water, glaciers, winds, waves, etc.
11. Winter storm: A disturbance of the normal condition of the atmosphere, manifesting itself by winds of unusual force or direction, accompanied by frozen precipitation such as snow or ice.
12. Dam/levee failure: The failure of a barrier that obstructs the flow of water, esp. one of earth, masonry, etc., built across a stream or river. The failure of an embankment designed to prevent the flooding of a river.

    (All definitions courtesy of Dictionary.com)

While many of these hazards are relevant to Lake County and the participating jurisdictions, some are not listed due to the geographic location and characteristics of the planning area, such as volcanoes and earthquakes. There are no volcanoes in the Southeast United States that would impact Lake County. Also, past impacts and future possible impacts from earthquakes are so negligible that it was decided not to keep earthquakes as a hazard in the plan.

Hazard Profiles

Drought

There is no way to predict when a drought will occur or how long it may last. Drought conditions existed in Florida from 1965 through 1982, from 1997 to 2002, and most recently from 2006 to the present. The conditions have been particularly severe during certain years, and various areas of the state have been affected to different degrees. During 1977, a two-month dry emergency caused an estimated $30,000,000 in damages to Florida, and the Governor declared a three-month drought during 1979, the worst since 1971.

The drought from 1997-2002 was considered to be a "very serious" drought according to the St. John's Water Management District. Lake County instituted water restrictions for itself at the same time that many other counties were doing the same. This drought also played a role in the extensive wildfires that occurred during the summers of this time period.

Generally, throughout the entire central portion of the state, water levels in rivers and lakes became lower, as did the water table. Various local governments and water management districts within the County found it necessary to impose water usage restrictions. Farmers were particularly affected by the drought conditions, as the water table fell and deeper wells had to be drilled for irrigation purposes.

The extent of drought in Florida is generally measured through one of two indices, the Keetch-Byram Drought Index (KBDI) or the U.S. Drought Monitor Index. While Lake County historically has not been immune to regional or state wide droughts, recent population growth has accelerated the depletion of water supplies. It has been suggested by certain officials that the aquifer could reach a critically low level as early as 2013.

Heavy rains in the state in May of 2009 granted Lake County a temporary reprieve from the impacts of the drought, but nevertheless, the area remains in a drought. **Table III-1** summarizes the average KBDI for Lake County over the past two years. The KBDI has a range from 0 to 800 with 0 being no drought and 800 being the most severe drought.

Table III-1 Keetch-Byram Drought Index (KBDI) for Lake County, Florida 2006 - 2009	
Date	**KBDI**
June 5, 2006	**571**
December 5, 2006	**544**
June 5, 2007	**582**
December 5, 2007	**492**
June 5, 2008	**575**
December 5, 2008	**601**
June 5, 2009	**77**
December 5, 2009	**292**

Source: Florida Division of Forestry
Index of 400 = Moderate Drought
Index of 800 = Severe Drought

As evidenced by **Table III-1**, Lake County has experienced moderate to above-moderate drought conditions up until 2009. Lake County has not received what is considered to be the "most severe" drought conditions in the past five years, but has nonetheless experienced drought conditions. Rains in the latter part of 2009 reduced the drought index substantially, however, dry spells can increase the indices again in a relatively short period of time. It is important to note that during prolonged cold spells when the conditions are often windy in Florida, it will often make conditions dry very quickly. Residents need to be vigilant about making sure that fires are not triggered from careless activities during extremely dry periods and also need to monitor their water consumption during times when water consumption outweighs the amount of rainfall received. **All areas of Lake County are subject to the effects of drought conditions.**

Flooding

For the state as a whole, flooding is a problem due to much of the state being at sea level. Lake County is very fortunate to have more elevation than other counties due to its interior location. While flooding can result from either storm surge associated with hurricanes, by riverbank overflow, or by pooling of water, it is the latter two that represent a potential hazard to Lake County. Heavy rains within a drainage area and the inability of a river to accommodate the added runoff can cause flooding resulting in overflow. Storm water runoff is also a problem that occurs because of poor urban development in areas subject to flash flooding. Hurricane-induced flooding can also present problems for low-lying areas of Lake County. These areas may experience flooding from either a "direct hit" or a storm that passes close by. Rainfall varies with each hurricane; however, on the average, the normal hurricane delivers between ten and twelve inches of rain. Non-tropical storm systems can also linger and be significant rainmakers as well.

There are three primary areas within Lake County that would normally be affected by rain events: the St. Johns River area in extreme Northeast Lake County, the Green Swamp area in Southern Lake County and the Wekiva River area that straddles Seminole County to the east. These areas could have issues if heavy rains fell simultaneously in the counties surrounding Lake County, adding to the volume of runoff. Aside from these primary areas, ponding could occur anywhere in Lake County in low areas that are characterized by either poorly drained or supersaturated soils (high water table). There are no specific drainage patterns that aggravate flood conditions in the County, according to the St. John's River Water Management District.

Lake County has more than 1,400 lakes comprising a total of 202 square miles. 45.5 per cent of the county’s acreage is in the 100-year floodplain. According to Federal Emergency Management Agency Flood Insurance Rate Maps (FIRM), most of the county lies in X or X500; or A, ANI, AO, or AH flood zones, with about 15% in the AE Zone. Certain areas of Lake County are low-lying and subject to flooding from rising water. Specific areas include those along the western shores of Lake Apopka, the complete shoreline of Lake Louisa, the

western shorelines of Lake Minnehaha and Lake Minneola, the complete shoreline of Lake Dora, Lake Yale, Lake Akron, and along the entire western shoreline of the St. John's River. Many of the lakes could be impacted as well, although drainage wells and improved drainage systems have mitigated problems in these areas.

Lake County has a vested interest in participation in the federal floodplain mapping project and the Community Rating System (CRS), where appropriate, in order to assist homeowners and businesses with decisions about property vulnerability and flood insurance. The National Flood Insurance Program (NFIP) allows property owners in the 100-year flood zone to acquire federal flood insurance policies on land subject to flood hazards. Only the county participates in the CRS, a Federal Emergency Management Agency (FEMA) program, which qualifies residents for reduced rates on flood insurance. These vary depending on the level of activities the jurisdiction performs to reduce its flood potential.

One of the aspects of living in Florida is the frequent downpours from thunderstorms in the summer months and the moisture sources that can feed storm systems, much of which can cause pooling of water along roadways and low-lying areas. Listing every heavy rain event that has taken place within Florida would be virtually impossible. However, worth noting are a few rainmakers that have happened in the past for the purpose of this plan. The following are some events that caused some flood damages within Lake County:

Tropical Storm Gabrielle Flooding

In September of 2001, Tropical Storm Gabrielle impacted Lake County causing $110,000 in damages.

Heavy Summer Rains of 2002

In August of 2002, rain led to several areas of flooding within the county including the Lake Mack area and the Deerhaven Subdivision (Northeast Lake County), causing approximately $131,000 in damages.

Tropical Storm Henri Flooding

In September of 2003, Tropical Storm Henri dumped a significant amount of rain and caused flooding in the southern portion of Lake County.

Hurricane Jeanne Flooding

When Hurricane Jeanne came through during September of 2004, several portions of Clermont experienced at least some flooding, including Emerald Lakes Mobile Home Park, which is adjacent to Lake Minnehaha and frequently experiences flooding. In this case there was at least 3-4 inches of water throughout the community. The original local mitigation strategy also lists several uncited, undated events along with monetary impacts. These include a $130,000 flooding event in Clermont, and a $350,000 flooding event in the Highland Point subdivision.

Tropical Storm Fay Flooding

In September of 2008, the unincorporated community of Astor in extreme Northeast Lake County experienced flooding from the overflowing of the St. Johns River. The St. Johns River system runs from south to north – existing in Northeast Florida in Jacksonville. Over 20 inches of rain fell in the East Central Florida region. It was not only the rain the affected the rise in water, but also the wind from Tropical Storm Fay, which prohibited the normal outflow of the St. Johns River into the Atlantic Ocean. The winds pushed the waters inland and the water levels along the St. Johns River rose farther south – well after the rain stopped falling.

Unincorporated Community of Astor, Flood Study

The unincorporated community of Astor area in the very tip of Northeast Lake County has received much attention from the Lake County Government due to its proximity to the St. Johns River and its susceptibility to flooding . A flood study has been conducted for Astor and numerous documents have been created through the efforts of the Lake County Department of Public Works. The study area is identified within **Figure III-1,** with **Figure III-2** identifying flood zones, particularly Zone AE identified in pink, subject to a one

percent or greater annual chance of flooding in any given year, with base flood elevations derived from detailed hydraulic analyses.

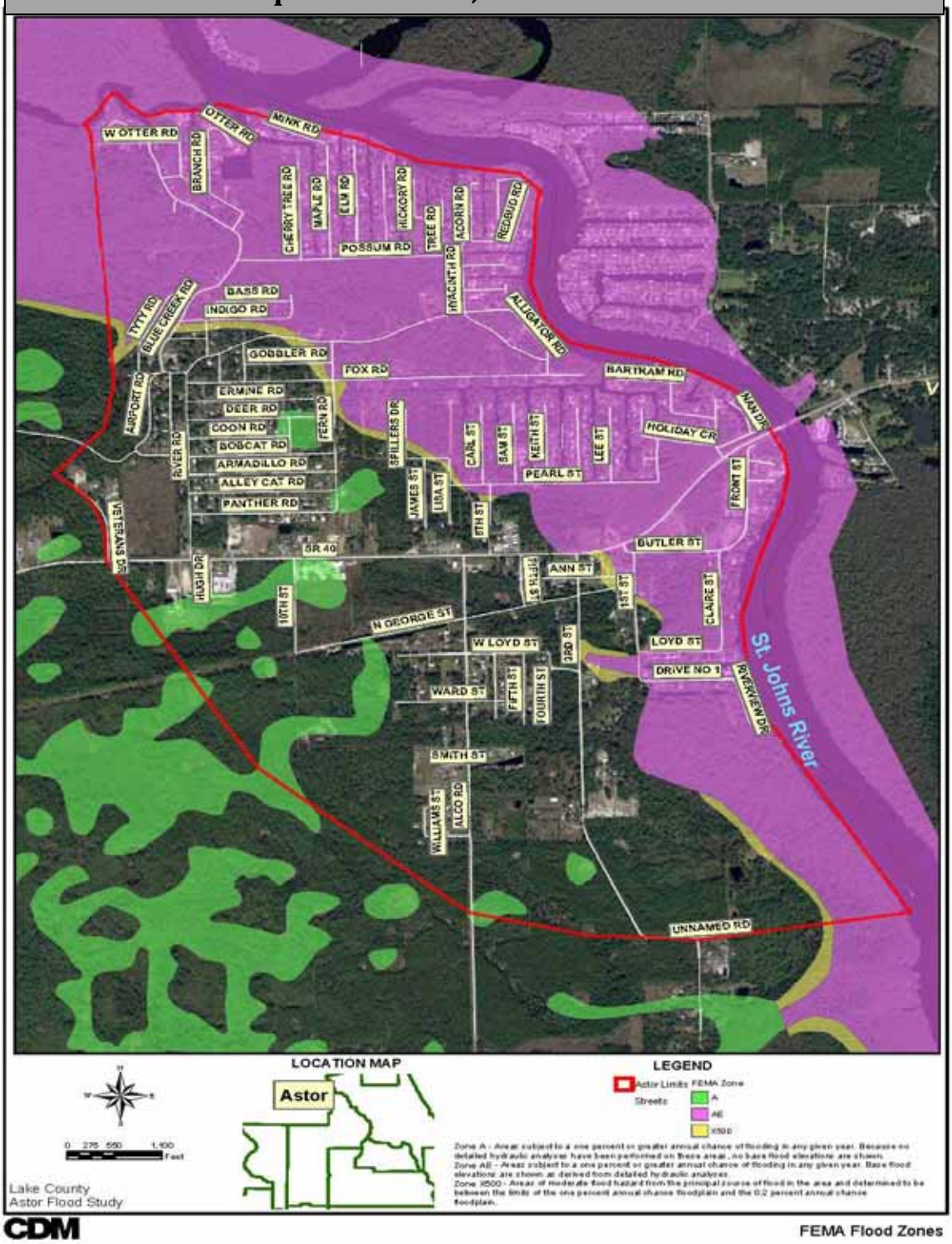
Figure III-1
Unincorporated Astor, Florida
Flood Study Area

Source: Lake County Department of Public Works

Review of Flood Zones in Incorporated Areas

In addition to unincorporated Lake County, Florida, this plan provides the flood zones for each municipal jurisdiction within the county boundaries. This brief analysis will provide some insight on areas within the municipal boundaries that have the potential for flooding problems. As seen in **Figure III-3**, most of the Town of Astatula is out of the 100-year flood plain, however, there still are several areas within the town that would be impacted by a flood event. Most of the occupied areas that would be impacted are in the northern portion on the canals that connect to Little Lake Harris.

Figure III-2
Unincorporated Astor, Florida – Flood Zones



Source: Lake County Department of Public Works

Figure III-3
Astatula Flood Zones

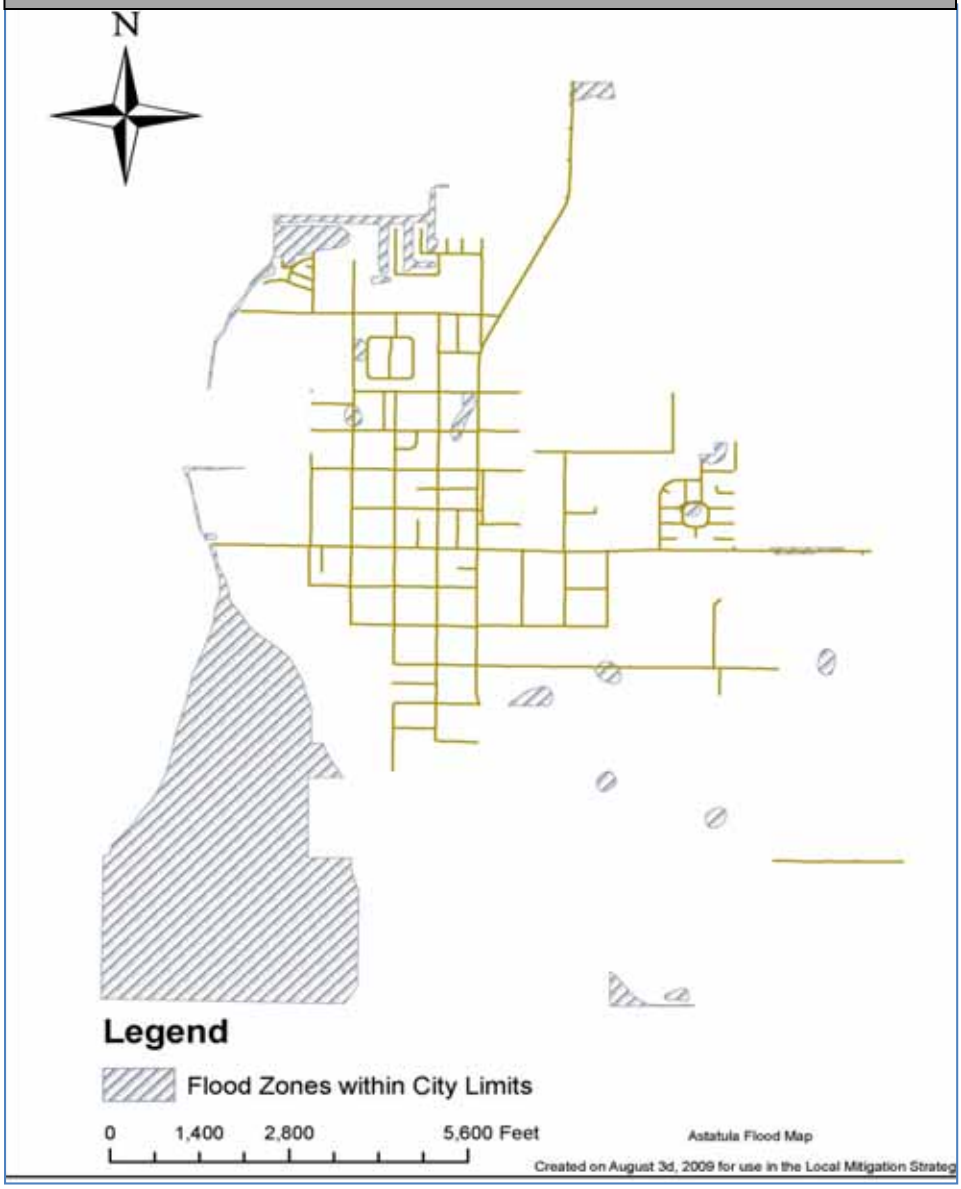
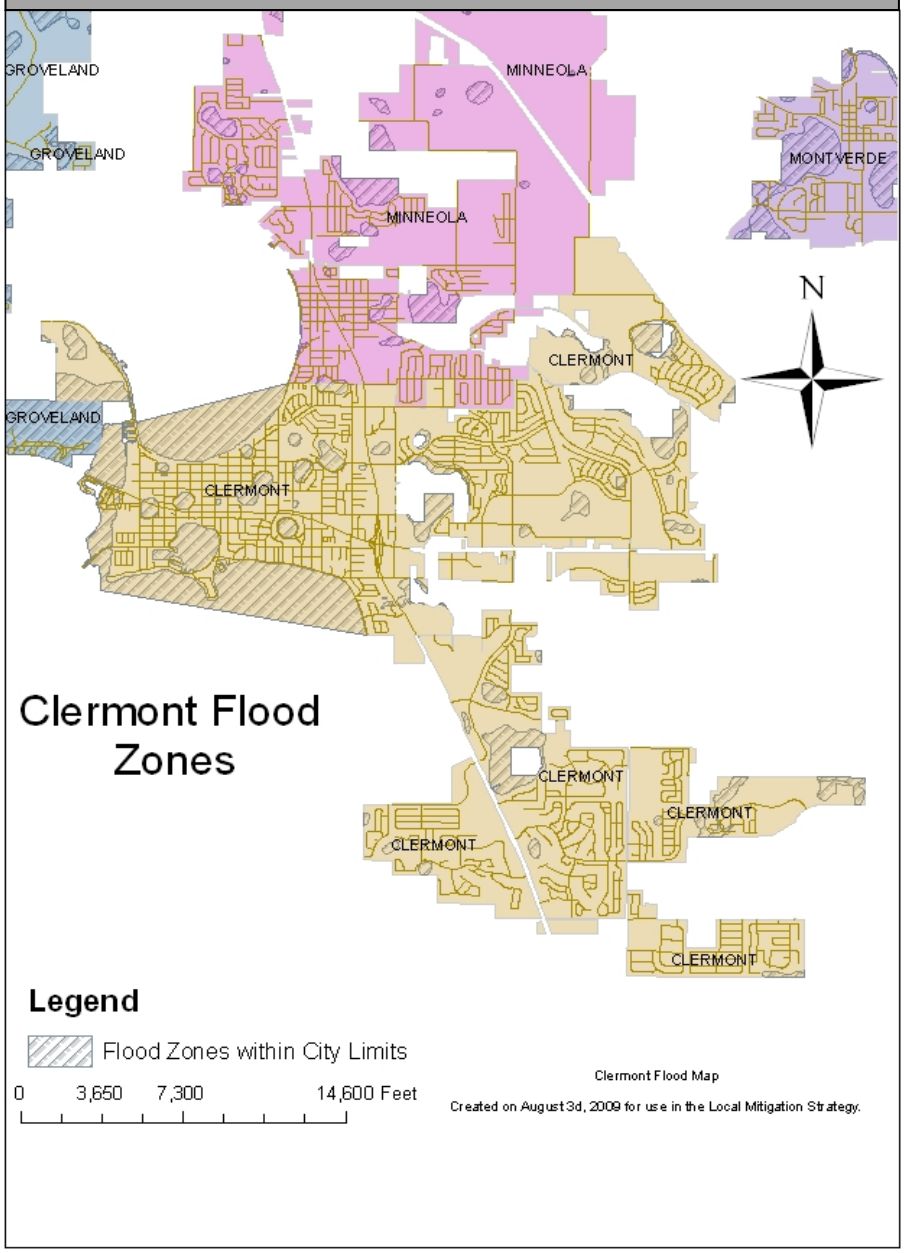


Figure III-4
Clermont Flood Zones



Most of the flood areas in the City of Clermont are located around the several small bodies of water that can be found throughout the jurisdiction. Flood areas can also be found on the banks of Lake Minnehaha and Lake Minneola. The Emerald Lakes Mobile Home Community is located in the flood area adjacent to Lake Minnehaha.

Most of the flood areas in City of Eustis are located around Lake Eustis in the western portion of the city, as well as northern areas of the jurisdiction and spotty areas throughout the city.

Figure III-5
Eustis Flood Zones

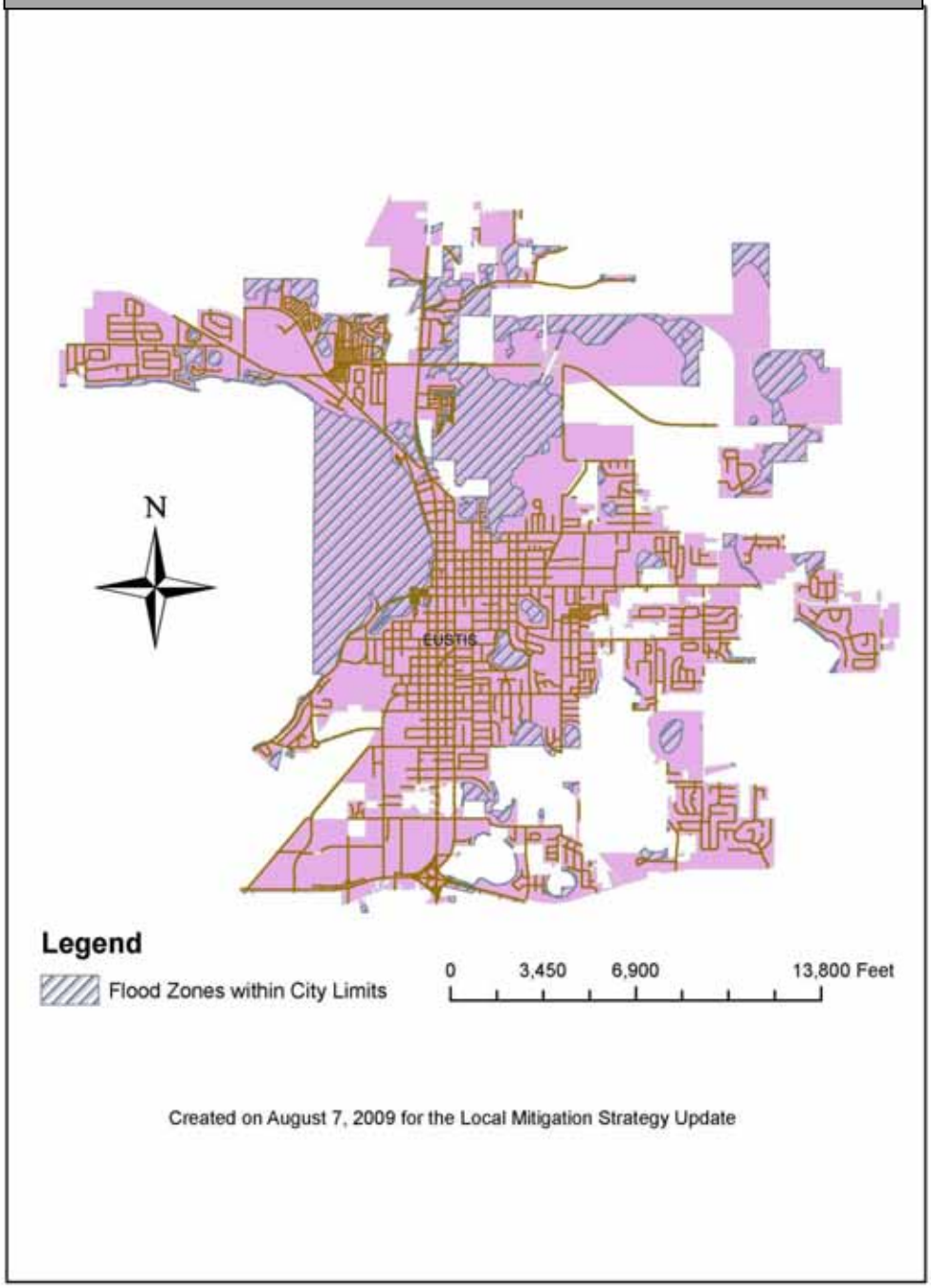
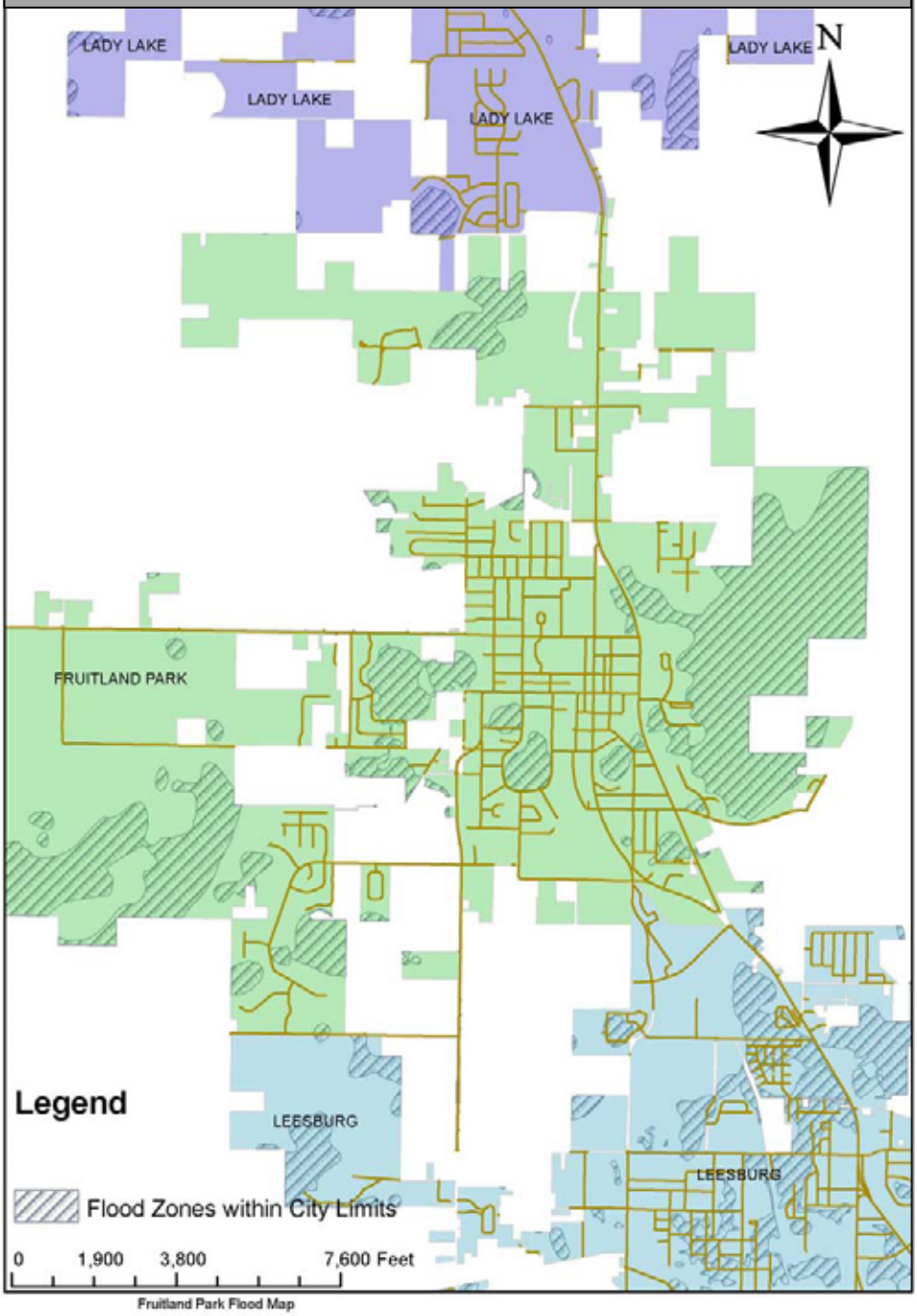


Figure III-6
Fruitland Park Flood Zones



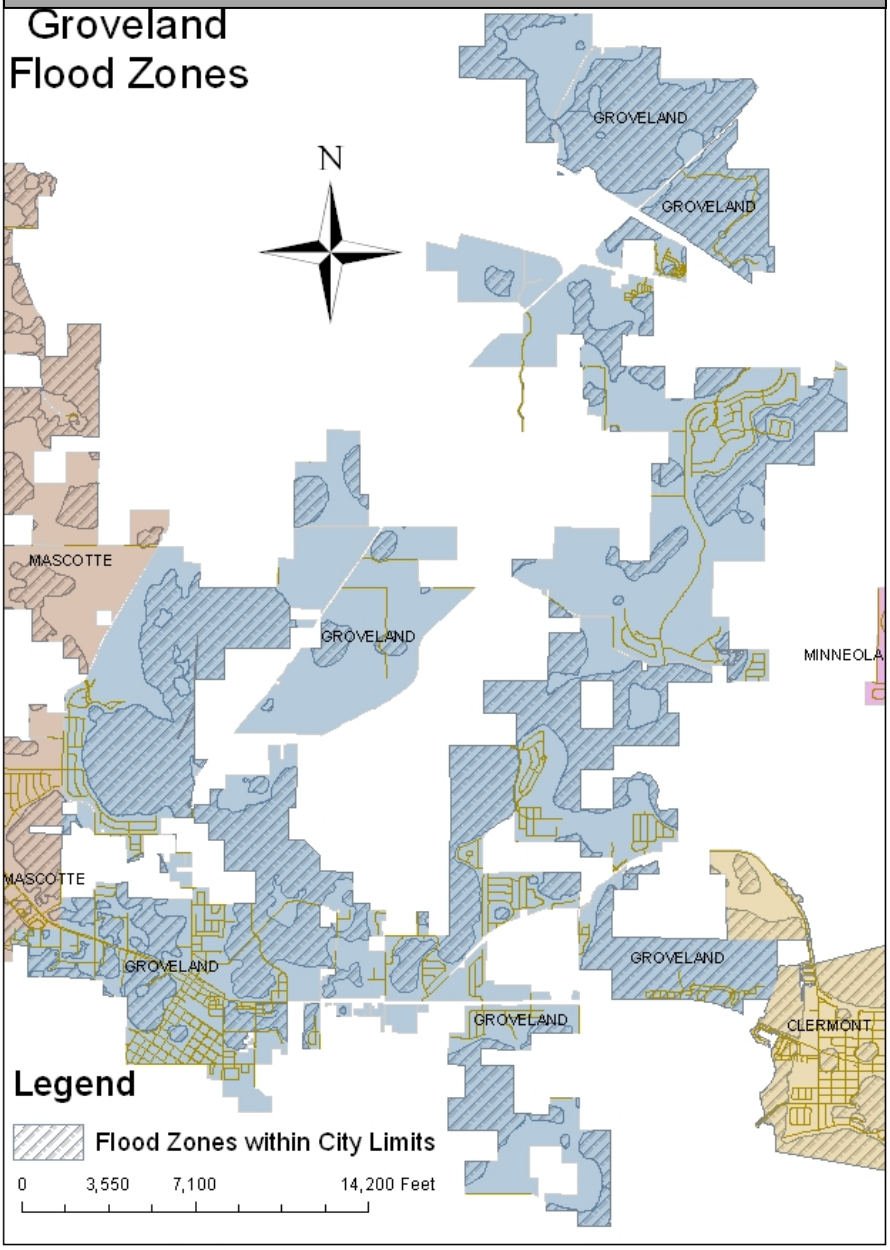
Fruitland Park Flood Map

Created on August 3d, 2009 for use in the Local Mitigation Strategy.

As seen in **Figure III-6**, the City of Fruitland Park has several large portions of its jurisdiction that are considered to be in the 100-year flood plain. The largest of these

portions are in the eastern and western sections of the community, with several other large areas occurring in the middle of the community near U.S. 441. The City of Groveland, as shown within **Figure III-7**, has a substantial portion of the city within the 100-year flood plain.

Figure III-7
Groveland Flood Zones

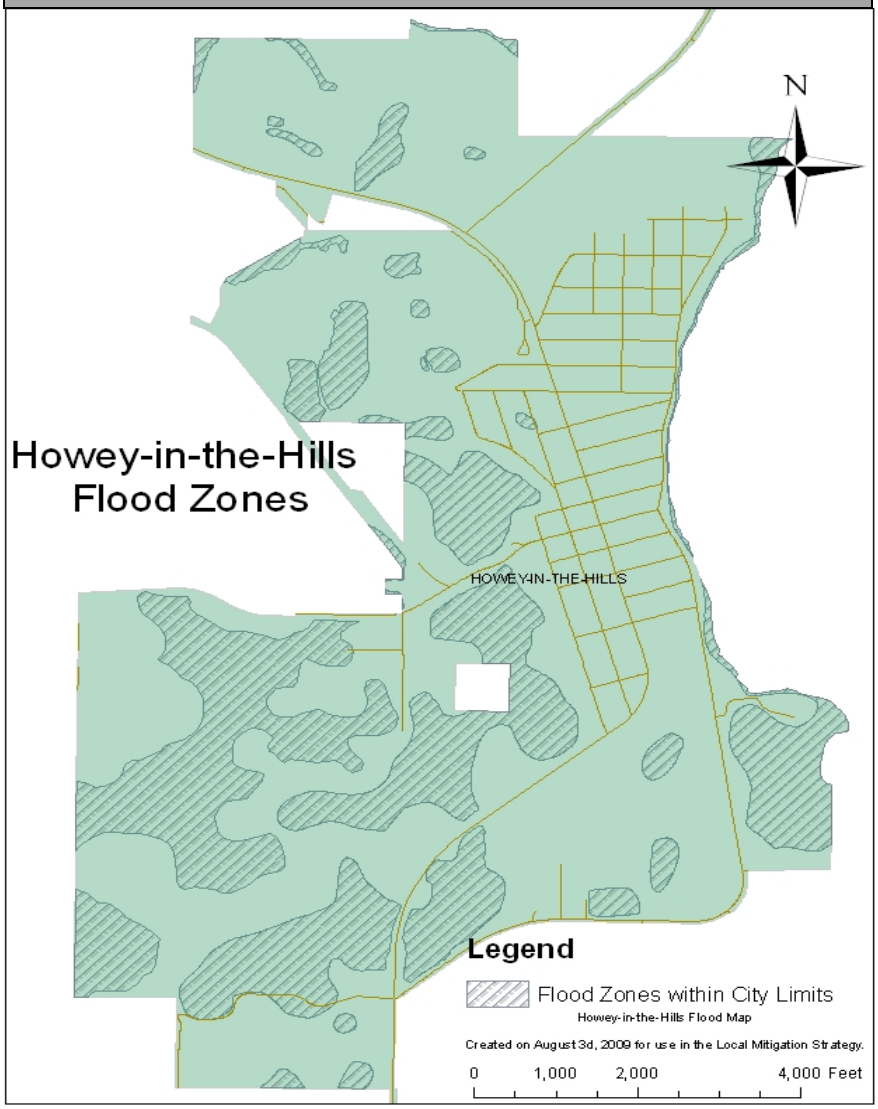


Groveland Flood Map

Created on August 3d, 2009 for use in the Local Mitigation Strategy.

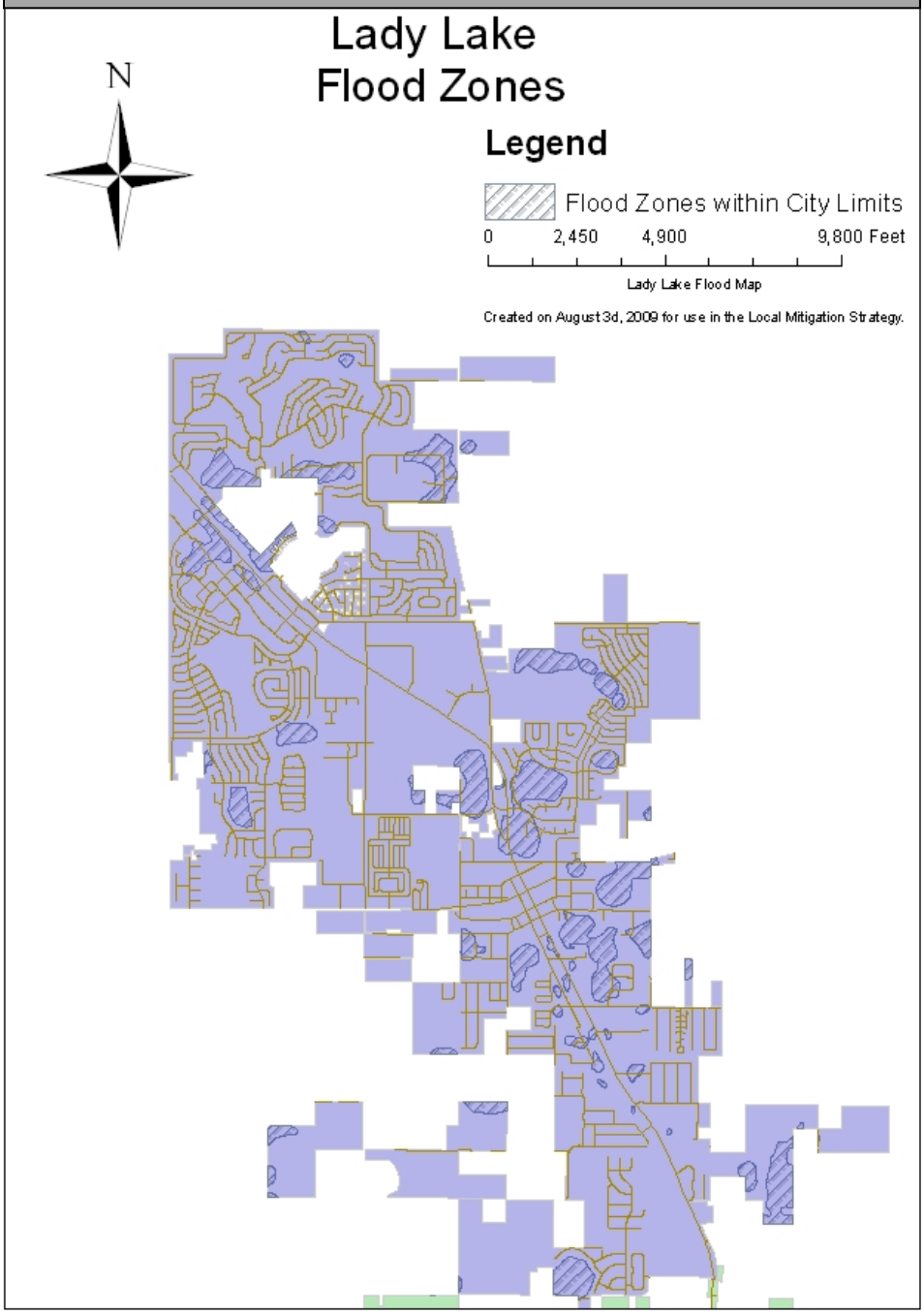
The Town of Howey-in-the-Hills map indicates that the western portion of the town, west of the downtown area, has the most areas within the 100-year flood plain.

Figure III-8
Howey-in-the-Hills Flood Zones



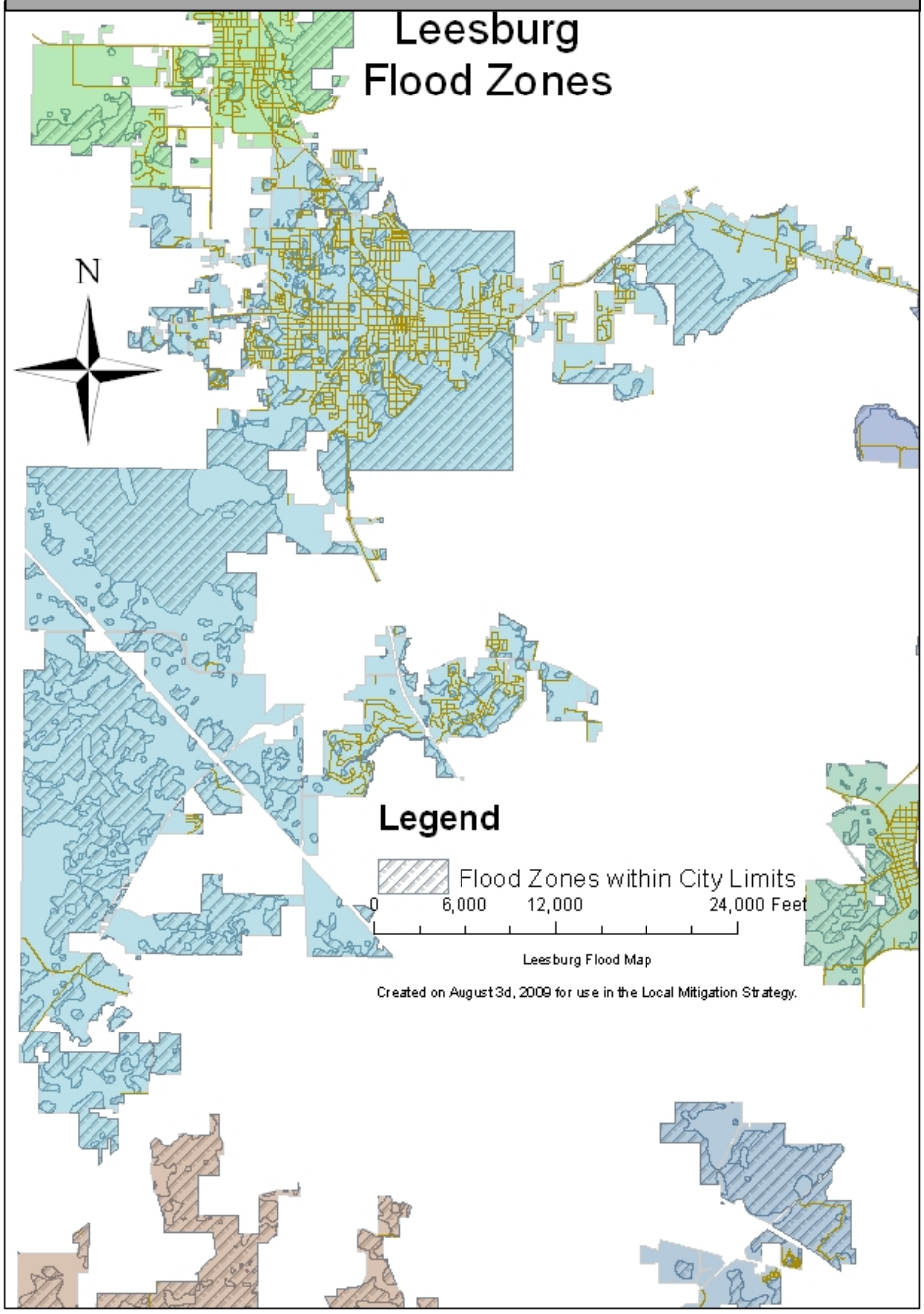
The Town of Lady Lake map indicates that there are areas scattered throughout the city within the 100-year flood plain.

Figure III-9



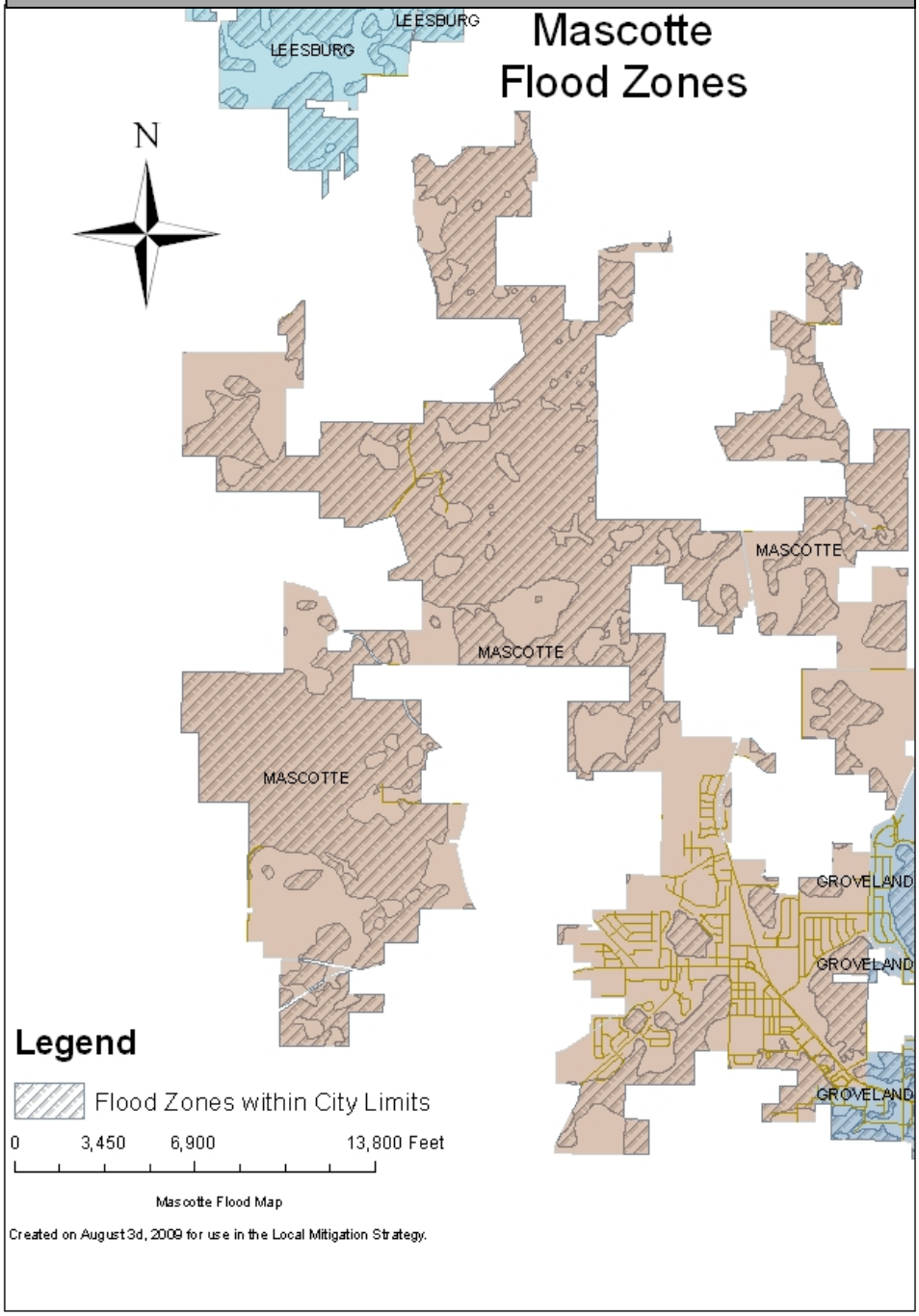
The City of Leesburg map indicates that the areas within the100-year flood plain are primarily concentrated around Lake Harris and Lake Griffin, which border the city to the east and south. **Figure III-10** more clearly identifies the lakes in proximity to Leesburg.

Figure III-10



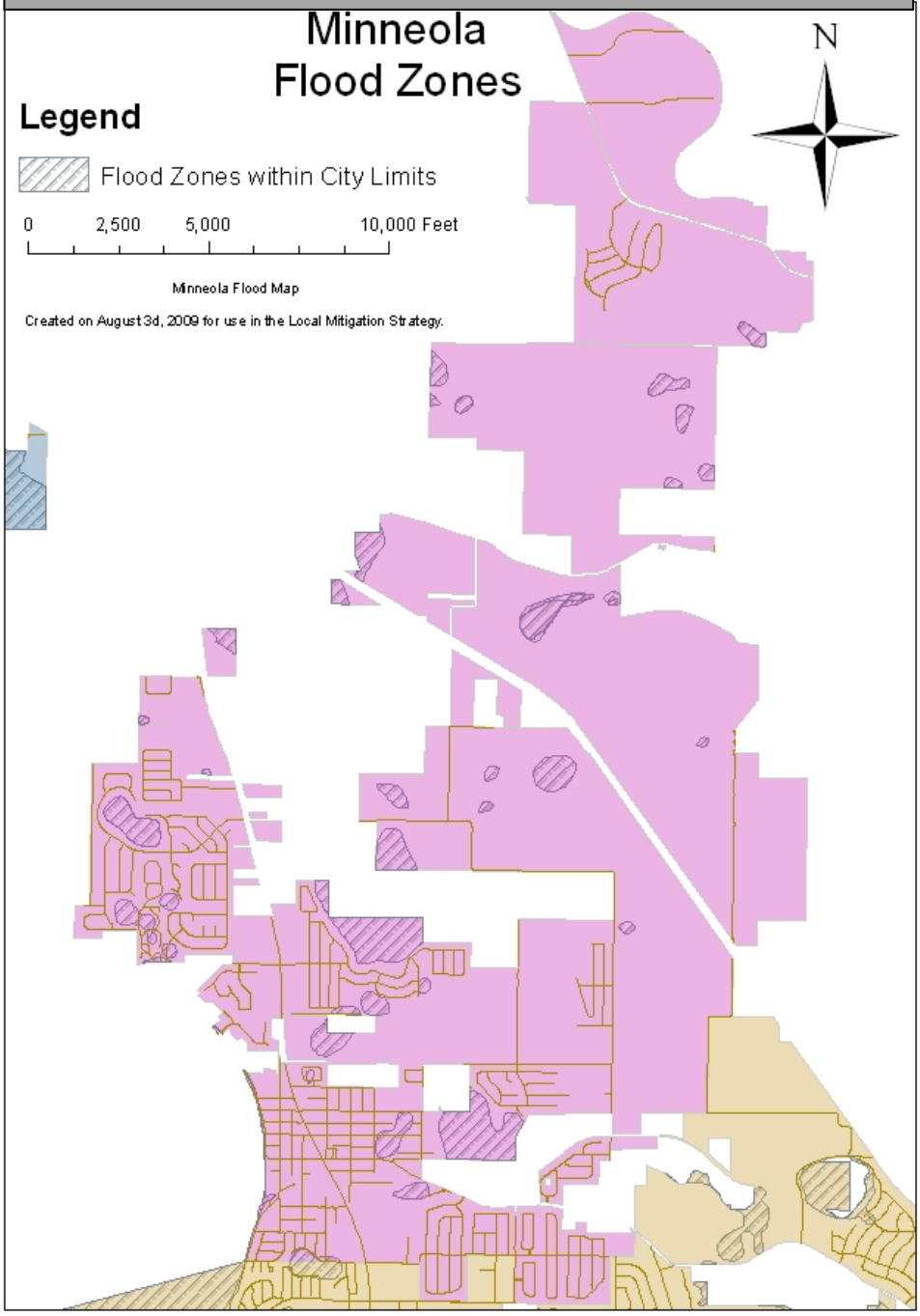
The City of Mascotte map indicates that a majority of the city is predominantly within the 100-year flood plain.

Figure III-11



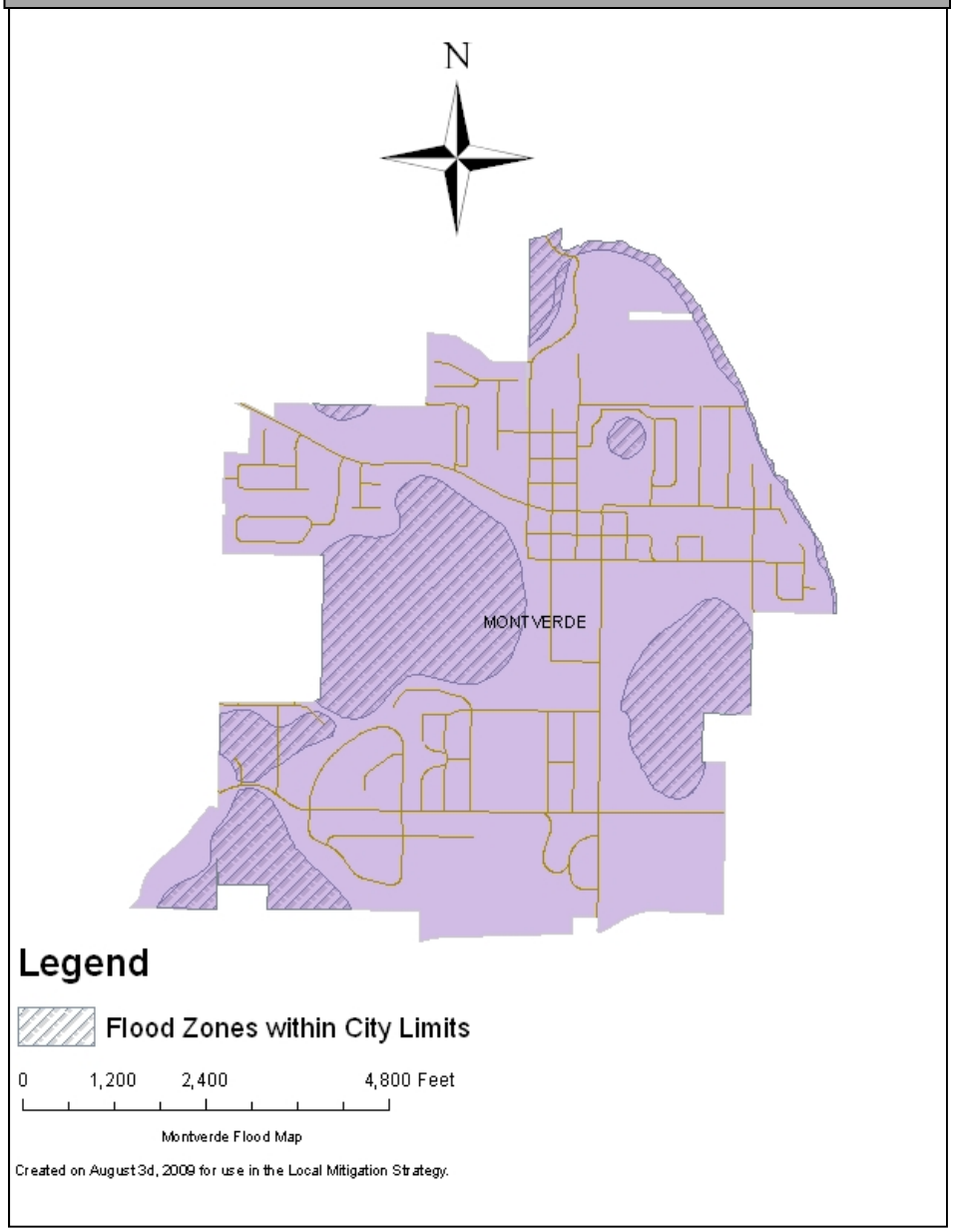
The City of Minneola map indicates that there are a few pockets within the city limits that lie within the 100-year flood plain.

Figure III-12



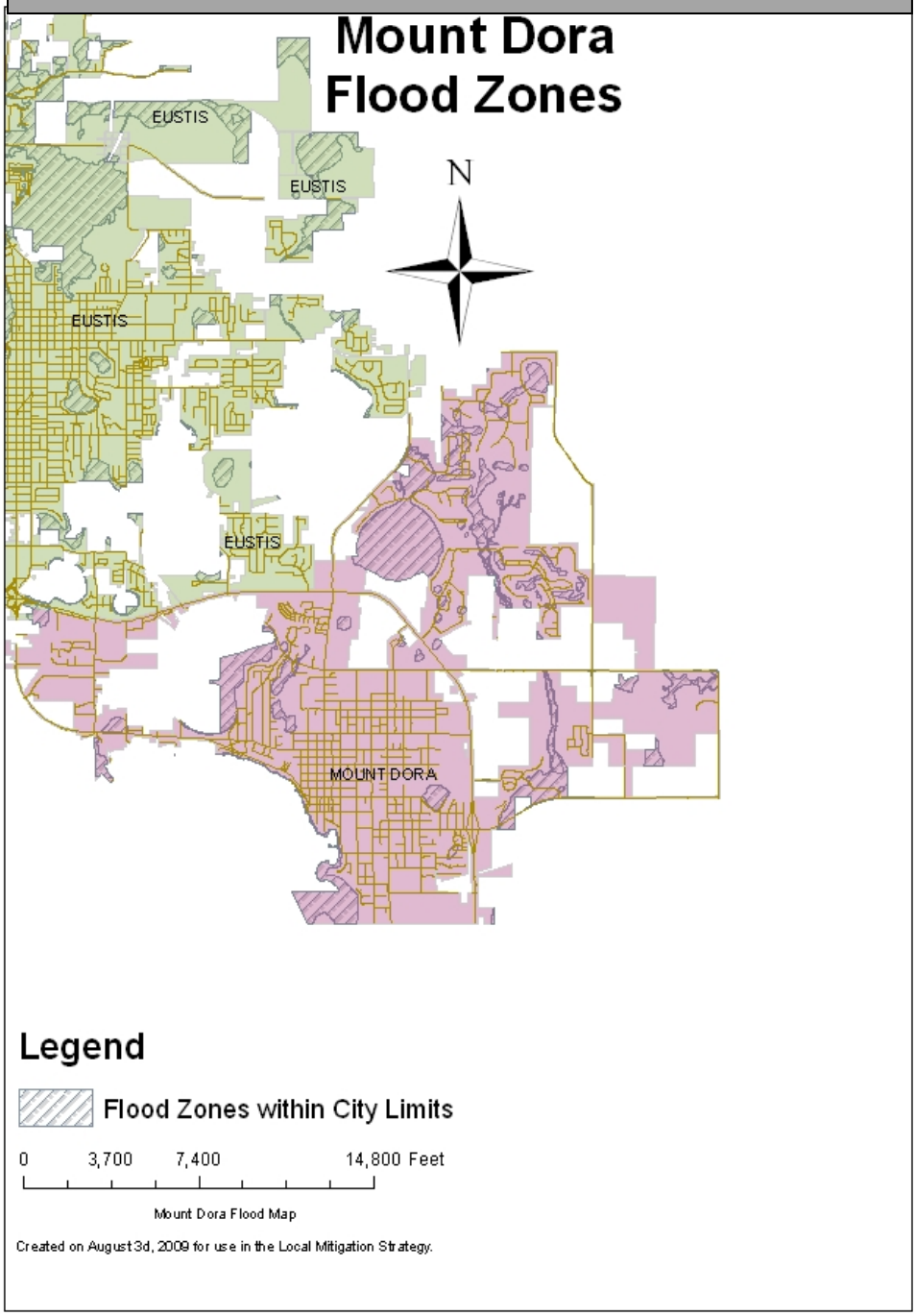
The Town of Montverde map indicates that the areas within the100-year flood plain are primarily concentrated around a small lake located in the west-central part of Montverde; the northeast part of Montverde borders Lake Apopka, which lies between Lake and Orange Counties.

Figure III-13
Montverde Flood Zones



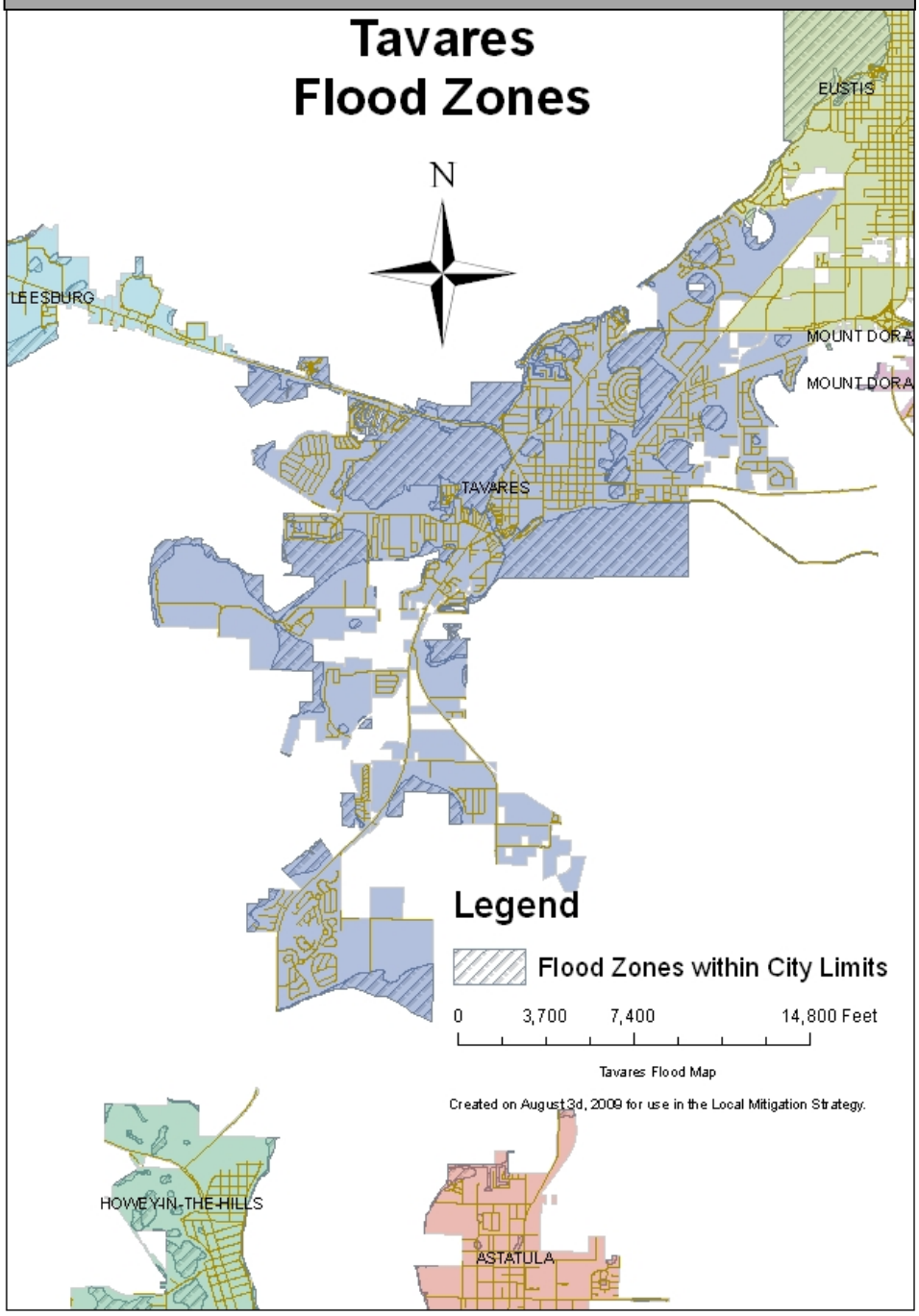
The City of Mount Dora is largely located on a hill in the most concentrated downtown area, with much of the water runoff draining into Lake Dora. Elsewhere, there are small pockets that lie within the 100-year floodplain, as with the other cities.

Figure III-14



The City of Tavares is in a unique geographic location, as it is surrounded by three large water bodies: Lake Dora to the southeast, Lake Eustis to the northeast and Lake Harris to the west and south. **Figure III-15** more clearly identifies the lakes in proximity to Tavares.

Figure III-15



The City of Umatilla has numerous fresh water lakes within and around the confines of the city limits that are identified as being within the 100-year flood plain, with the actual bodies of water themselves clearly outlined within the map below.

Figure III-16

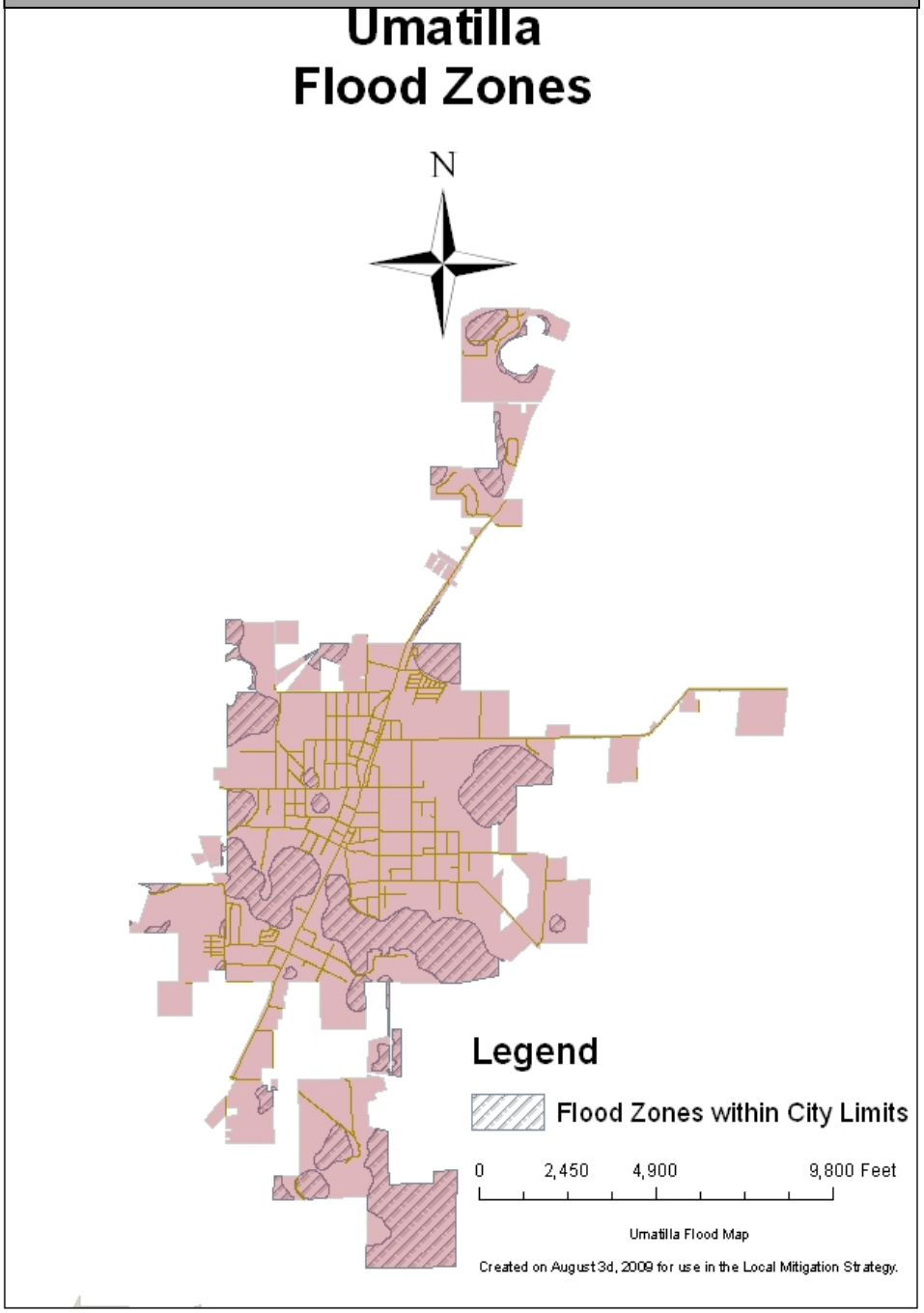


Figure III-17
Lake County, Florida Flood Zones Map, South and North Central, Part 1

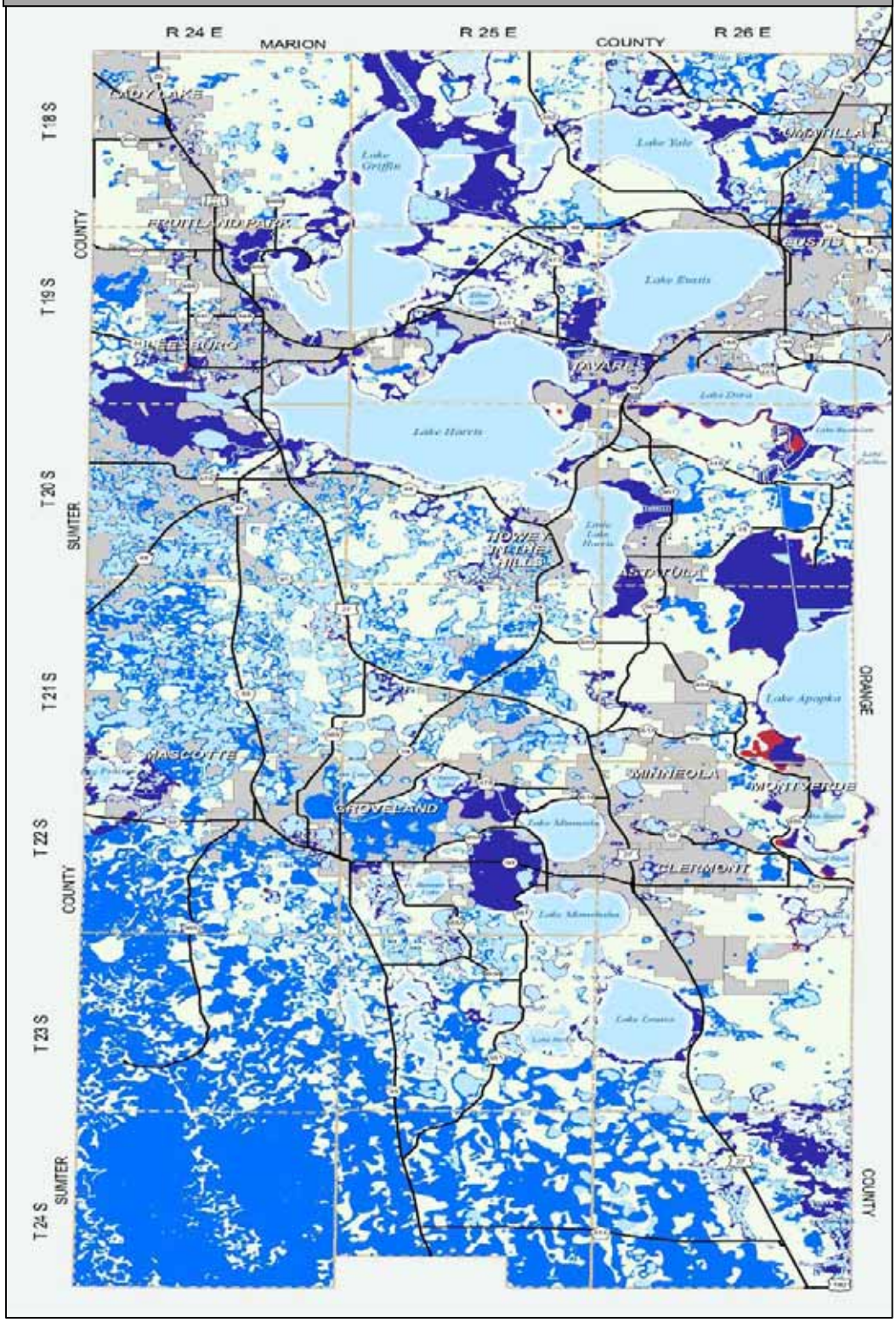
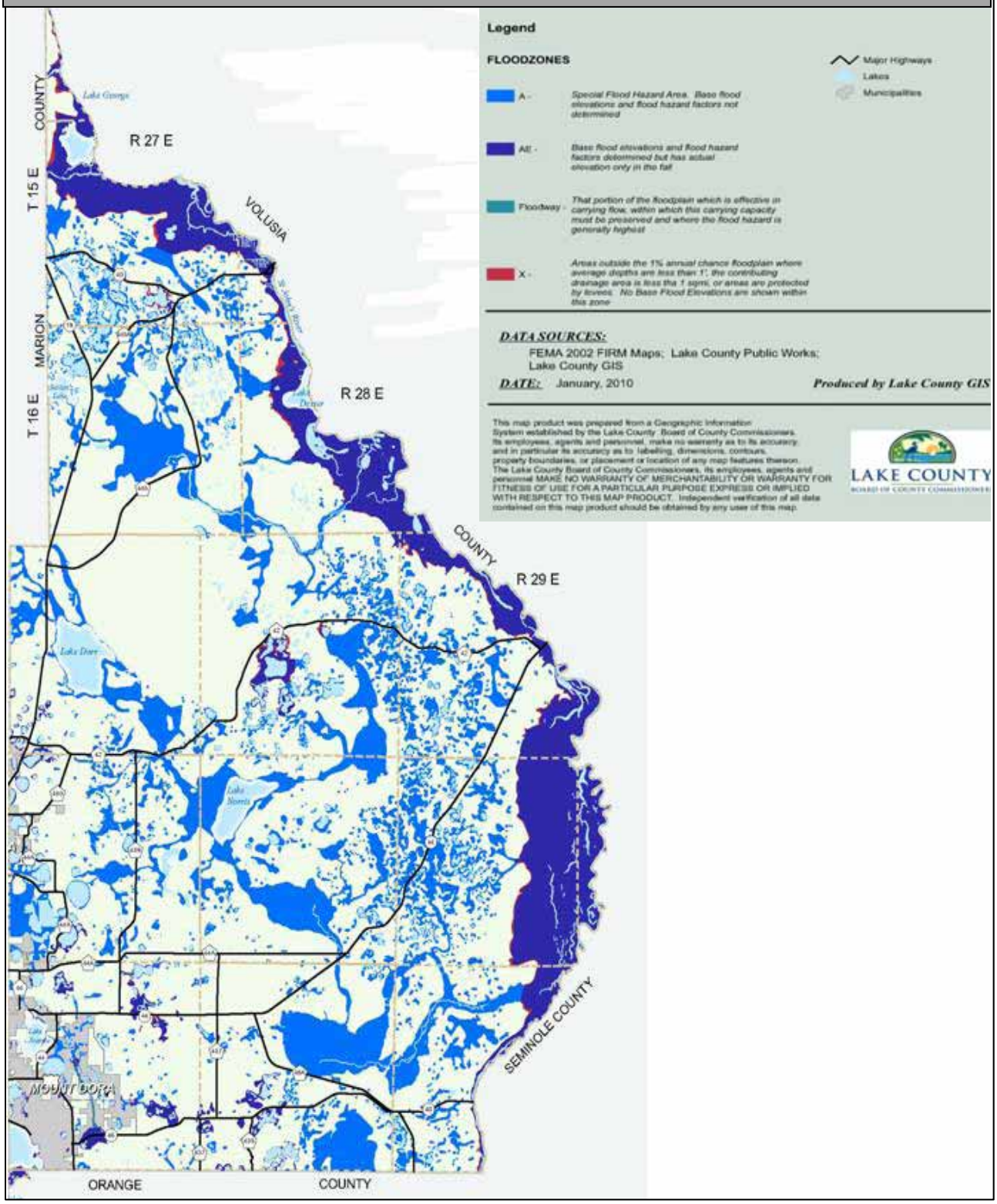


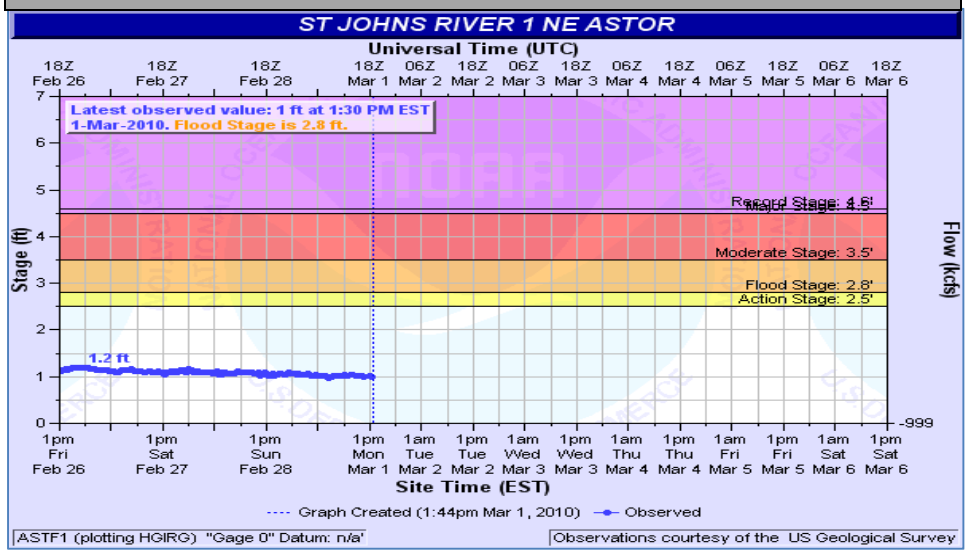
Figure III-17
Lake County, Florida Flood Zones Map, South and North Central, Part 2



In sum, Lake County has an abundance of lakes and fresh water bodies within its boundaries. The County itself lies above the aquifer that hydrates much of the Central Florida region. Southwest Lake County is an Area of State Environmental Concern, as it is an environmentally sensitive recharge area. The various maps provided that identify areas within the 100-year flood plain are merely tools to assist in planning. This is not to say that areas outside of the 100-year flood plain will not flood, because that simply is not the case. In recent years in the United States, it has been said that people have been caught off guard because the maps and plans said that they would not flood. However, the reality is that the State of Florida is extremely flat and subject to flooding a great deal more than other states. Lake County and municipal partners need to continue to monitor drainage patterns and reoccurring flood areas to pursue future mitigation activities.

With regard to determining the extent of magnitude and severity of flooding that has taken place, there is not a scale like hurricanes and tornadoes. Even what has been considered as "minor" flooding could impact roadways, structures and the quality of life of residents. However, one tool that can measure severity along waterways is available from the National Weather Service, as shown within **Figure III-18**. A river guage has been installed at the St. Johns River in Astor to monitor the flood stage of the river to generate forecasts to better warn residents of potential flooding conditions.

Figure III-18
Flood Stage Graph, St. Johns River, Astor, Florida



Source: National Weather Service, Melbourne

With the exception of the highly elevated areas of Lake County that are out of the reach of areas that could collect water, all areas are subject to the effects of flooding, including those areas identified as being less likely to flood. For this reason, Lake County and municipal partners need to be vigilant about monitoring flood conditions with future events to enhance their planning efforts.

Hail

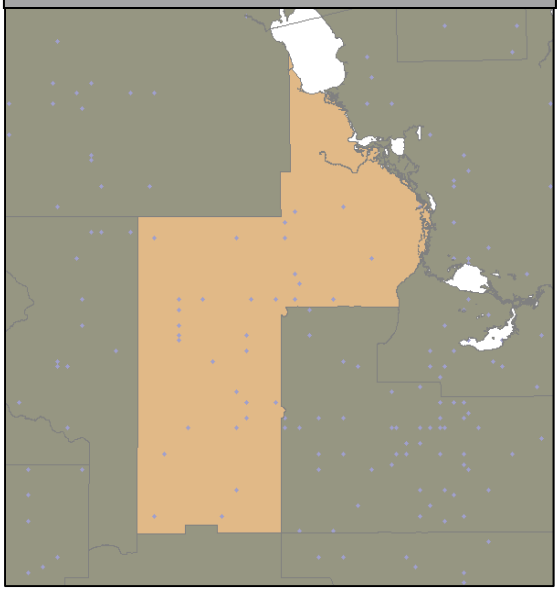
Hail is the precipitation of small pellets of ice that can cause substantial damage to crops as well as damage to vehicles and other property. Up until January 2010, severe hail in Lake County was defined as three-fourths of an inch (penny size) or larger. However, in January 2010, the National Weather Service raised the hail size criteria for Severe Thunderstorm Warnings from 0.75 inch (penny size) to 1.00 inch (quarter size). According to the National Weather Service, within Florida, this is expected to result in only a small decrease in the number of Severe Thunderstorm Warnings, as many storms which have the potential for 0.75" inch hail also have the potential to produce 50 knot + (58 mph +) winds. Since the wind criteria will remain unchanged, many storms capable of producing 0.75 inch to just below 1 inch size hail will still require Severe Thunderstorm Warnings for 50 knot + (58

mph +) damaging winds. Special Weather Statements will continue to be issued for "strong storms", generally those with 45-57 mph winds and small hail, below 1.00 inch.

Hail storm events occur most often during the late winter and early spring severe weather season and often accompany thunderstorms or tornadoes. Severe thunderstorms can happen anytime of the year in Central Florida and produce hail at any time. Mapping between the years of 1955-2002 indicates fewer than 35 severe hailstorms (using the former criteria) have struck Lake County during that timeframe (see **Figure III-19**). The locations are evenly spread throughout Lake County due to the random nature of the development of severe storms that generate hail. **All areas of Lake County are susceptible to being impacted by hail.**

Since 2002, there has been hail within Lake County, however, research did not show that any of these storm events were in the severe category. A couple of previous occurrences that produced substantial damage include:

Figure III-19
Severe Hail Events
Lake County, FL - 1955-2002



Source: MEMPHIS

Winter Storm in 1986

A storm that hit Lake County produced hail the size of golf balls in and around the Leesburg area of Lake County.

Hail Storm of 1992

The most destructive hailstorm in east central Florida history occurred on March 25, 1992 across Lake, Orange, and Seminole counties. An estimated $60 million dollars in damage occurred, with losses concentrated among nursery greenhouses and car dealerships.

Extreme Heat

Florida is well known for its mild winters, but during the summer months heat can be very dangerous, as it can induce hyperthermia (heat stroke), heat exhaustion, or dehydration. Extreme heat is especially hazardous to certain segments of the population such as the elderly and young children. Additionally, heat increases the demand for electricity to operate air conditioners, increasing the likelihood of brownouts and blackouts within the electrical grid.

While there are various definitions for extreme heat (or heat waves), the National Weather Service issues a heat advisory when the daytime temperatures will exceed a certain temperature depending on the time of the year (**see Table III-2**). It is during these times that those vulnerable populations will be especially prone to extreme heat-related illnesses and conditions. Florida is quite accustomed to daytime temperatures in the 90s in the summertime. Also, with Florida being a peninsula, the breezes from both coastlines assists in keeping the temperatures generally below 100° F.

Research from past years did not indicate data that revealed extraordinary hot spells within Florida. However, a noteworthy period in Central Florida, including all of Lake County, was the heat wave of June – July 1998, when coastal breezes were impeded – allowing temperatures across the region to range between the upper 90s and 101 degrees. Wildfires became extreme in certain parts of Central Florida (National Weather Service, Melbourne).

Table III-2 Excessive Heat Threat Chart	
Excessive Heat Threat Level	**Threat Level Descriptions**
Extreme	**"An Extreme Threat to Life and Property from Excessive Heat."** Highest heat index 120 degrees (F) or greater.
High	**"A High Threat to Life and Property from Excessive Heat."** Highest heat index between 115 - 119 degrees (F).
Moderate	**"A Moderate Threat to Life and Property from Excessive Heat."** Highest heat index between 110 - 114 degrees (F).
Low	**"A Low Threat to Life and Property from Excessive Heat."** Highest heat index between 105 - 109 degrees (F).
Very Low	**"A Very Low Threat to Life and Property from Excessive Heat."** Highest heat index around 105 degrees (F) for July and August...OR...between 102 - 104 degrees (F) for June and September...OR...between 99 - 103 degrees (F) for May and October.
Non-Threatening	**"No Discernable Threat to Life and Property from Excessive Heat."** Warm season weather conditions are non-threatening.

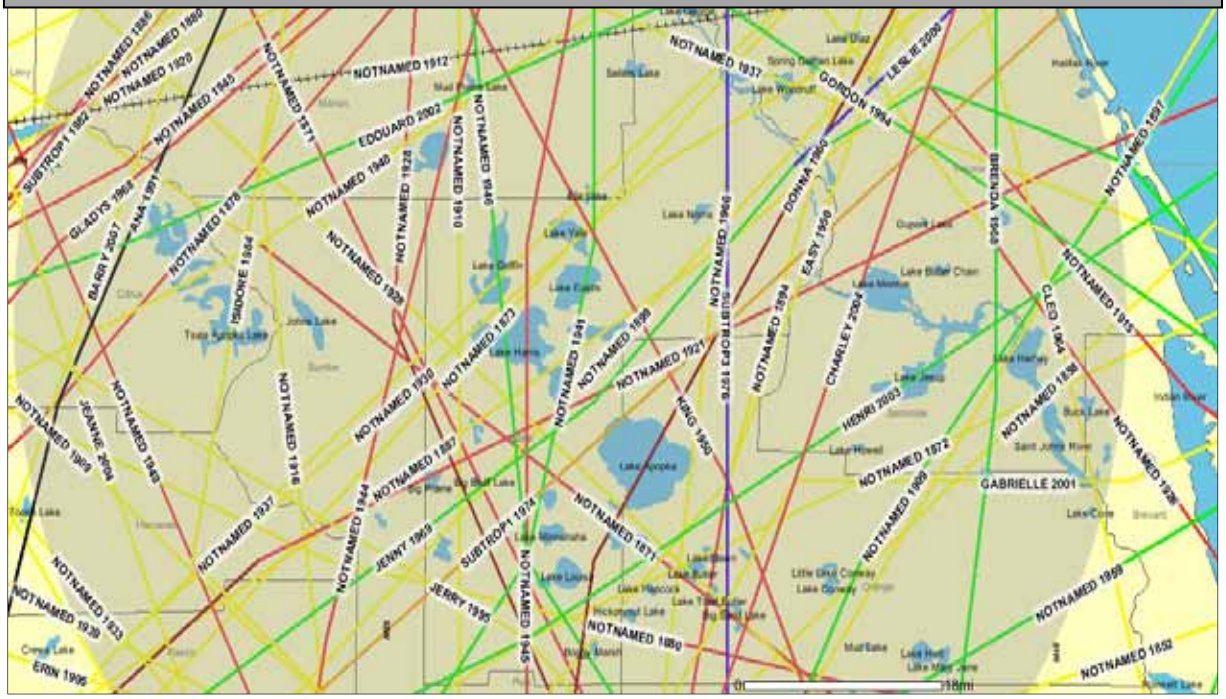
Source: National Weather Service, Melbourne

According to the U.S. Census Bureau, as of 2007, 27.20% of the population in Lake County was aged 65 years or older, representing a rather sizable portion of the county that is more vulnerable to extended periods of extreme heat (or heat waves). The county continues to be a destination for retirees and will most likely see its elderly population grow in the coming years. Also, urbanization will lead to an increase in the "heat island" effect from the increased amount of impervious surfaces, which only exacerbates extreme heat as a hazard in the future. **All areas of Lake County are susceptible to extreme heat in the future and its potential impacts.**

Hurricanes

Hurricanes and tropical storms have long affected Florida because of its location. As a narrow peninsula between two warm bodies of water, Florida is regularly affected by hurricanes. The greatest threats to Lake County posed by a hurricane are wind damage and inland flooding. Wind damage from the storm itself is related to wind speed and the accompanying "pressure" that is exerted on structures. When the wind speed doubles, four times more force is exerted on structures. Wind damage can also be caused by hurricane-spawned tornadoes, which can be more destructive than the hurricane itself. Damage can also be caused by wind-borne debris and flood conditions.

Figure III-20
Hurricane Paths in Lake County and Central Florida, 1851-2010



Source: NOAA Coastal Services Center

Lake County is fortunate to be an inland county, thus not susceptible to storm surge from ocean waters that coastal communities often have to face with hurricanes. Over the course of the past century, a very large number of storms have crossed the Central Florida region from various directions. As indicated by **Figure III-20**, Lake County is no stranger to

tropical systems, which can have severe impacts on health, safety and the economy. Many of the hurricanes identified as crossing through Lake County were during periods when record keeping did not document a storm name or specific information. Sources of historical hurricane information often provide a large amount of information for coastal locations, but less for interior locations. The following storms are a few of the more notable events that have impacted Lake County, based on available information:

Hurricane Donna, 1960: This storm impacted Florida as a Category 4 hurricane and traveled northward through the state, heavily impacting the citrus industry up to the Central Florida region (Wikipedia).

Hurricane Gladys, 1968: This storm entered the state in the Tampa area and proceeded in a northeastern motion towards the east coast of Florida. Nearly 85% of the citrus industry was impacted by this storm (Wikipedia).

Tropical Storm Keith, 1988: The storm spawned a tornado in the City of Clermont, south Lake County, damaging 30 mobile homes (Wikipedia).

Hurricane Charley, 2004: There were some downed trees and power lines in southern Lake County. Three houses were damaged by falling trees. There was no major infrastructure damage (National Weather Service, Melbourne). Orange County and areas to the east of Lake County received substantial damage. This storm is an excellent example of a hurricane that did not lose much potency, despite traveling over land for an extended period of time. The storm exited the state in the Daytona Beach area. If the storm track had been slightly to the west, Lake County could have received substantial damage. The previous LMS notes that Lake County sheltered about 2,000 people during Hurricane Charley.

Hurricane Frances, 2004: This storm resulted in 417 residences being damaged in Lake County, with 69 destroyed (most mobile homes), 77 business damaged and two (2) destroyed. Damage estimates were near six (6) million dollars (National Weather Service,

Melbourne). The previous LMS notes that the damages were higher at approximately $8.5 million and that Lake County sheltered about 4,000 people during Hurricane Frances.

Hurricane Jeanne, 2004: The impacts in Lake County were that approximately 2,800 residences were damaged, 111 residences destroyed and 60 businesses damaged (National Weather Service, Melbourne).

These are only a few of the many tropical systems that have impacted the Central Florida area. Since 1851, there have only been 18 hurricane seasons when a storm has not impacted the State of Florida – and since 1900, a total of 329 systems have impacted the state (Wikipedia).

The intensity of hurricanes is measured by the Saffir-Simpson scale, with sustained wind speeds (measured in miles per hour) to measure the extent of a tropical storm or depression. Once a tropical storm reaches wind speeds of greater than 74 miles per hour, it is then classified as a Category 1 hurricane (see **Table III-3**). It is important to note that in 2010, the National Weather Service and National Hurricane Center have changed its criteria by no longer correlating wind speed with storm surge height. No two storms are the same and less intense storms could in fact created storm surge that is comparable to stronger storms.

Table III-3
Saffir-Simpson Scale and Typical Damages

Saffir-Simpson Scale	Wind Speeds (mph)	Typical Damage
Category 1	75-95	No real damages to building structures. Some coastal flooding, damage to trees
Category 2	96-110	Considerable damage to mobile homes and trees, with some uprooted
Category 3	111-130	Some structural damage to small residences, large trees uprooted
Category 4	131-155	Most trees and signs blown down, complete destruction of mobile homes
Category 5	>155	Complete roof failures on most residences, some complete building failures

Source: National Oceanic and Atmospheric Administration

As mentioned previously, with Lake County being located inland approximately 50 miles from either coast, it is more protected than other parts of the state from the most devastating winds from hurricanes. The county's interior location is not threatened by storm surge from the ocean waters, with the exception of areas along the St. Johns River that may be susceptible to flooding if the outflow of the river into the Atlantic is adversely impacted due to the storm surge pushing the water inland for a period of time.

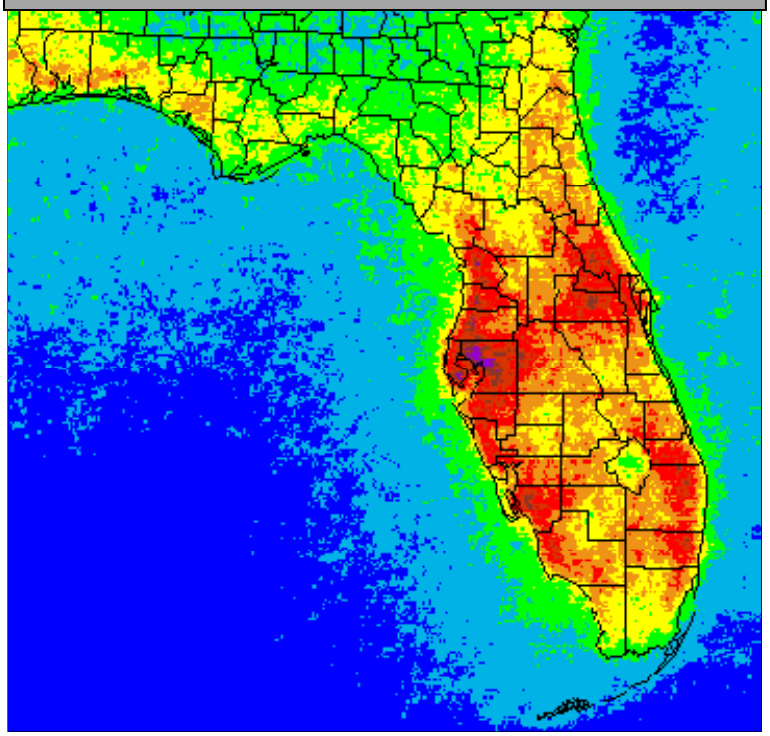
It is important to note that Lake County has not received sustained hurricane force winds from a hurricane. The county has certainly experienced high winds and gusts that have impacted the residents and businesses of Lake County. With the population of Lake County continuing to grow, the effects of even minor hurricanes and tropical systems will be felt even more than in the past. Storms from the past, like Hurricane Donna, while costly, were not in today's dollars and did not impact nearly as many people than if the storm hit today. Storms like Hurricane Charley, which hit the Orlando metro area with sustained winds of 85 MPH, remind public safety officials that predictions are not always accurate. Despite being an interior county, substantial damage can be done away from the coastline. Furthermore, a slight change in path can make all of the difference in the areas that are ultimately impacted by an event. Through the efforts of mitigation activities, areas can be further protected against known hazards. **All areas of Lake County are susceptible to hurricanes in the future, which may potentially be stronger than any others that have previously impacted Lake County.**

Lightning

Any person who has been a resident of Central Florida during the summer is well aware of the typical weather patterns during this season. Warm mornings give way to afternoon thunderstorms that are typically localized and can be very intense. Compared to many other places in the nation, Central and South Florida receive an exorbitant amount of lightning strikes that are responsible for numerous deaths and property damage every year. On average, about 10 people in Florida die every year from lightning strikes, while some 33 people are injured on average (National Weather Service, Melbourne).

For the time period (1959-1994), lightning was responsible for approximately 53% of all weather related deaths, compared to tornadoes (13%) and hurricanes (8.7%) (National Weather Service, Melbourne). The Central Florida region has been dubbed the "Lightning Capital" of the United States. As indicated by **Figure III-21**, much of Lake County is within the orange shade, which represents 6.0 to 7.5 flashes per square km, a relatively high flash density. With regard to a scale for lightning, there is no scale for (such as weak vs. strong). Any lightning bolt can kill.

Figure III-21
Strike Density in Florida (1989-2002)



Yellow = 4.5-6.0 flashes per sq. km; Orange= 6.0-7.5 flashes per sq. km; Red = 7.5- 9.0 flashes per sq. km
Source: Shafer, 2004

There is a large discrepancy between the number of lives lost and the amount spent on education and mitigation against lightning strikes in Florida. The National Weather Service suggests that it is because lightning usually only kills one person at a time, is localized in nature and is random. It is also true that lightning does not cause as much widespread damage as hurricanes, although when looking at data on the ignition source of fires in

Central Florida, lightning is a direct cause. Lightning plays a crucial role in the fire based ecologies of the forests; unfortunately, it also plays a role in fires that might threaten human life and property. Many of the fires in 1998 that impacted the State of Florida were ignited by lightning strikes (U.S. Fire Administration, 2004).

Within Lake County, 13 deaths and 37 injuries occurred between 1959 and 2007, with a total of 449 deaths statewide in the same period. This includes a man who was struck and killed in June of 1990 while on a golf course in Lake County, and a fourth grade teacher at Eustis Heights Elementary School who was struck and injured in 1988 while standing in an exterior doorway. A review of lightning strikes with specific locations on the web site of the National Weather Service from 2006 to 2009 did not show any deaths that took place within Lake County during that time period.

Due to Lake County's location in Central Florida, there are a large number of lightning strikes- and loss of life can primarily be prevented by proper public education. Damage to buildings can also be prevented by lightning rod systems and surge protectors to reduce the risk of fires.

All areas of Lake County are susceptible to lightning strikes and their potential effects.

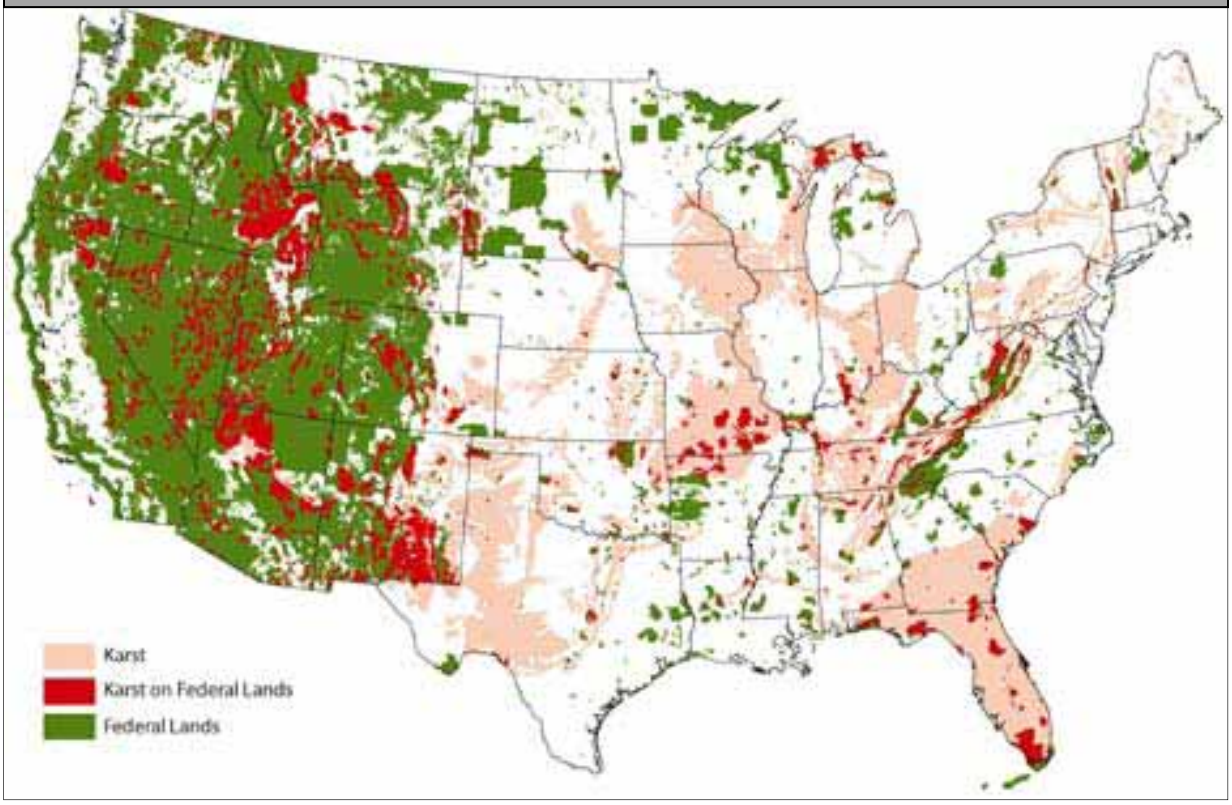
Sinkholes and Subsidence

Topographically, Florida is part of a large Karst formation that comprises a section of the southeastern portion of the United States (see **Figure III-22**). Karst refers to the rock "foundation" that is slowly eaten through by chemical weathering eventually leading to subsidence or sinkholes (Florida Geological Survey, 1986). In Florida, the rock is generally limestone or gypsum, but it can be other types as well. The Karst terrain is also marked by the numerous caves and underground drainages.

Lake County experiences several sinkholes a year, usually on private property. In cases where sinkholes occur in the public right-of-way, the Lake County Department of Public

Works and/or the Florida Department of Transportation are notified to assess the sinkhole activity. Sinkholes impact the community generally by physical destruction. Their extent is generally measured in terms of the diameter of the opening and/or their depth (both usually measured in feet). Any size sinkhole is a threat because they can cause harm to people, vehicles or entire structures, as they succumb to the unstable ground.

Figure III-22
Karst Soils in Florida and United States

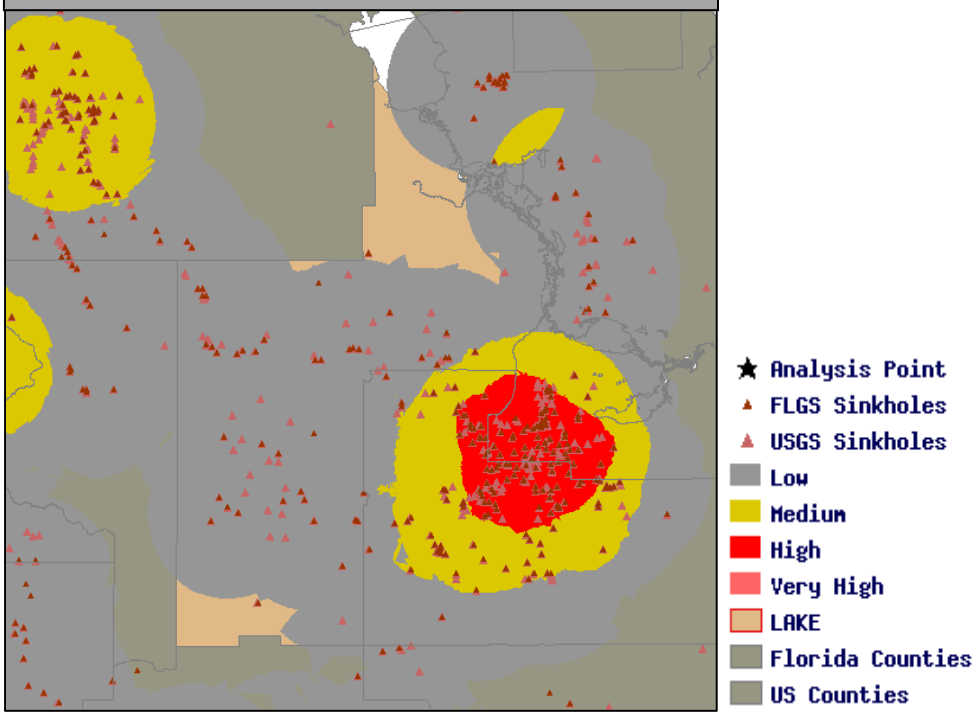


Source: U.S. Geological Survey

Although it might be true that some areas of Central Florida are more prone to sinkholes than others, it must be realized that **all areas of Lake County are susceptible to sinkholes and their potential effects**. As shown in **Figure III-23**, the county as a whole has more sinkhole activity in the central portion of the county, with areas outside of the county to the north and east having much more activity, based on sinkhole reports by the U.S. and Florida Geological Surveys. However, this does not mean that extreme damage

cannot occur anywhere; all it takes is one sinkhole to severely impact life and property. Sinkholes can be caused by water ponding; canting of fence posts; collapse of bulkheads; and other hydro-geological factors.

Figure III-23
Sinkhole Activity in Lake County and Surrounding Area



Source: MEMPHIS

According to the Florida Department of Environmental Protection there were approximately 100 sinkholes reported to that agency since 1964 (FDEP Sinkhole Database), not including reports from other agencies. This number is probably lower than the actual amount considering that there are numerous sinkholes that are never reported to the authorities. Subsidence occurs because of settling of soil underneath the foundation of structures and typically results in minor, repairable damage. It can, however, in some cases result in the structure being condemned.

Below are some of the more notable sinkhole occurrences that have happened in Lake County:

- June 2000: An extended drought was blamed for a sinkhole 20 feet wide that opened in Lake County.
- February 2004: A sinkhole approximately 30 feet in diameter opened up in Clermont, forcing a family to relocate until it could be filled.
- November 2005: A large sinkhole forced a Mascotte family out of their home while it was determined if there was a threat to the structural integrity of the house.
- August 2006: A sinkhole opened in Clermont that was approximately 20 feet in diameter and closed Maridru's Lane.
- September 2007: A large, growing sinkhole forced several families to relocate after a neighbor's house was condemned.

Tornadoes

Similar to hurricane data, there is only reliable recorded data for tornadoes since 1950. Although the Midwest has the reputation for the worst tornadoes, Florida experiences the most number of tornadoes per square mile of all the states. Florida has averaged 52 tornadoes reported per year since 1961, with an average of two fatalities per year. Florida's tornadoes are generally of shorter duration (3 miles) and have narrower paths (125 yards wide). Mapping indicates that about 95 percent of the county is in the 1 in 250-year risk area, and the remainder in the 1 in 500-year risk area. **All areas of Lake County are susceptible to tornadoes and their potential effects.**

Because of the unpredictable patterns of tornadoes, and because the entire state of Florida has a relatively high risk, the entire County is vulnerable to tornado-induced damage. The damage potential for a tornado increases as a function of population density. As the number of structures and people increase, the potential damage/injury rate increases. Mobile homes, poorly constructed and/or substandard housing, apartment complexes and low-rent housing projects are especially susceptible because of their lack of resistance to

high winds, and apartment complexes and low-rent projects because of their size and densities.

There have been 51 recorded tornadoes in Lake County since 1950 that have caused somewhere between $226,470,050 and $241,320,500 in total damage. These same tornadoes have also been responsible for 231 injuries and 26 deaths.

Table III-4
Measuring the Intensity (Extent) of Tornadoes

Fujita Scale		Enhanced Fujita Scale	
Scale	Wind Speed (mph)	Scale	Wind Speed (mph)
F0	40-72	EF0	65-85
F1	73-112	EF1	86-110
F2	113-157	EF2	111-135
F3	158-206	EF3	136-165
F4	207-260	EF4	166-200
F5	261-318	EF5	>200

Source: NOAA, Storm Prediction Center, "The Enhanced Fujita Scale (EF Scale)"

The Fujita Scale (now the Enhanced Fujita Scale) is used to determine the intensity of tornadoes, with **Table III-4** summarizing the scale levels. Most of the tornadoes that have hit Lake County have been on the lower spectrum – in the F0 or F1 range. On February 1, 2007, the National Weather Service switched from the Fujita Scale to the Enhanced Fujita Scale to better reflect examinations of tornado damage surveys, aligning wind speeds more closely with associated storm damage. **Table III-5** summarizes the frequency and intensity of tornadoes in Lake County since 1950.

Table III-5 Frequency of Tornadoes by Intensity Lake County, Florida 1950 - 2009	
F- scale	**Number**
F0	**18**
F1	**20**
F2	**7**
F3	**3**
F4	**0**
F5	**0**
Total	**48***

*There were three tornadoes of unknown f-scale
Source: NOAA, Tornado History Project

Of the total of damages incurred, $215,000,000 and 24 of the 26 deaths were caused by F3 tornadoes, with much of the historical summary focused on these storms. It should be noted, however, that weaker tornadoes can be just as deadly and should be treated with utmost caution.

Mount Dora Tornado, April 15, 1987

This tornado touched down in southern Mount Dora and moved northeast. It was an F2 tornado that killed 1 person and injured 7 people.

Central Lake County Tornado, March 13, 1993

This F2 tornado touched down south of Astatula and in Howey-in-the-Hills – killing one and injuring 60 people.

Central Florida Tornado Outbreak, February 22-23, 1998

A rash of tornadoes throughout Florida resulted in 42 deaths and over $100 million dollars in damage. At approximately 11:37 P.M., an F3 tornado touched down in Lake County, just

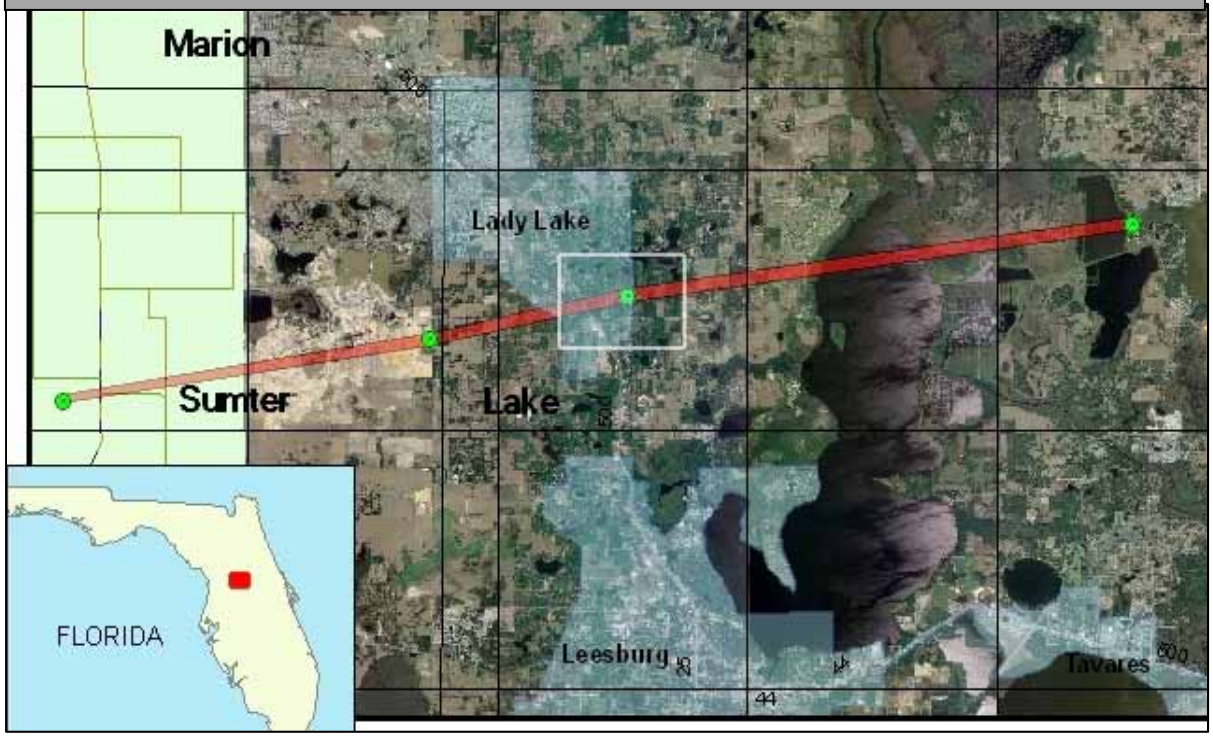
south of Clermont, and proceeded to Orange County where it killed 3 people. There were also six other tornadoes that all touched down east of Lake County and cause considerable amounts of damage to Central Florida.

This outbreak, the worst in Florida's history, could have much been much worse. Many people were alerted to the storms by the news channels and the NOAA weather alert system, thus were able to seek shelter. The hour in which the storms struck was when most people were sleeping. These tornadoes struck in areas where there were no siren systems in place. Since many governmental entities realized these potential shortfalls in the emergency management system, attempts have been made to better prepare for future events.

The Groundhog Day Tornado Outbreak, February 2, 2007

On the morning of February 2, 2007, a powerful storm system moved across Lake County from the west producing three tornadoes, two of which had large impacts on the County and resulted in a Presidential disaster declaration. The first tornado touched down in Sumter County, near Wildwood, and moved toward the Villages and Lady Lake, as indicated by **Figure III-24**. This tornado registered as an EF3 on the Enhanced Fujita Scale and created a swath of destruction along its nearly 17-mile path, killing eight.

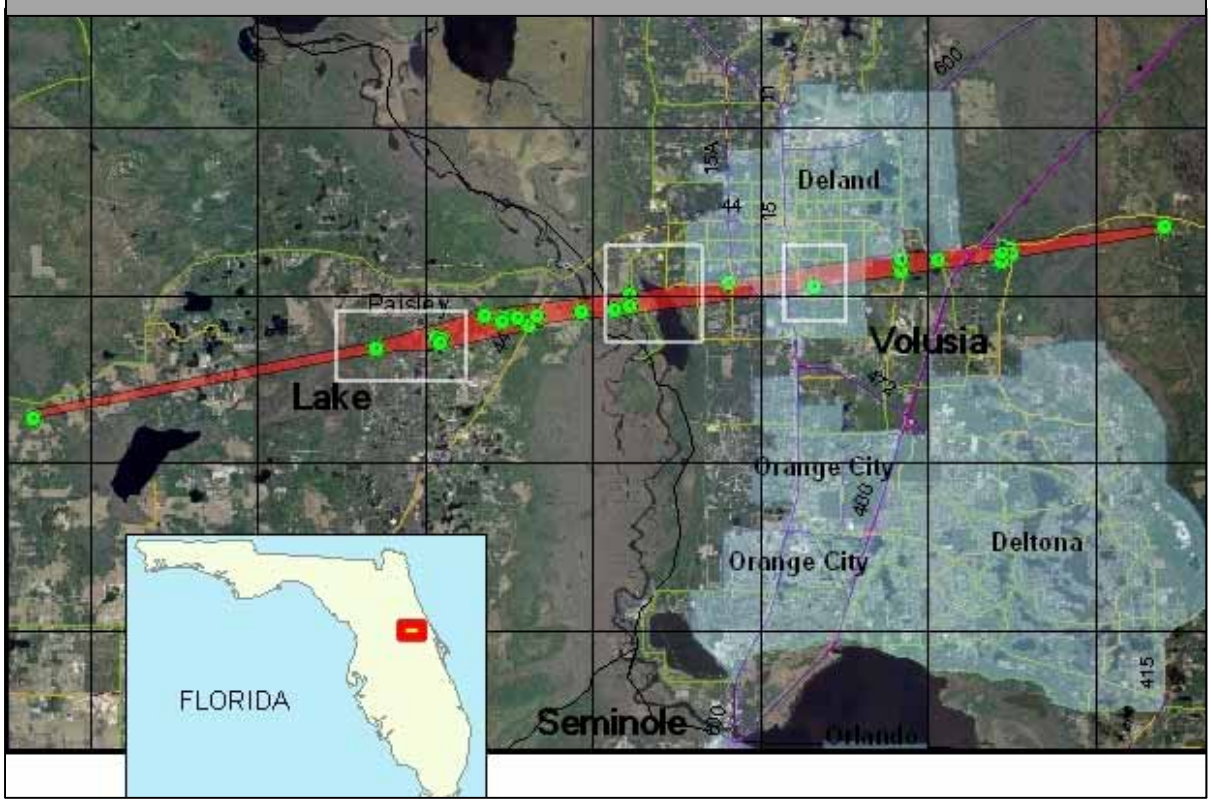
Figure III-24
February 2, 2007, EF3 Tornado Path, Lady Lake, Florida



Source: National Weather Service, Melbourne

The second tornado touched down near County Road 42 in northern Lake County in between Altoona and Paisley, as indicated by **Figure III-25**. This tornado was also responsible for 13 deaths as it traveled its 26-mile path. In addition to killing 21 people in Lake County, these tornadoes caused approximately $98 million in damages. These storms struck in the early morning hours when many people were sleeping and unable to receive emergency messages.

Figure III-25
February 2, 2007, EF3 Tornado Path, Paisley, Florida



Source: National Weather Service, Melbourne

Wildland Fire

While forest fires can pose a serious threat to human health and safety, they play a crucial role in Florida's ecology. Without forest fires the ecological system in Central Florida would be negatively impacted (Sumner, 2007). In the Central Florida area, much of the rainfall gets returned to the atmosphere via evapo-transpiration, which, according to the Southeast Regional Climate Center, can be defined as "the combined water vapor put into the air through evaporation from water on earth's surface and plants giving off water to the atmosphere."

The hydrological system would be negatively impacted, as forest fires increase the evapo-transpiration capabilities of trees, thus allowing the tree to put more moisture back into the atmosphere (Sumner 2007). The implication is that if trees are putting more moisture back

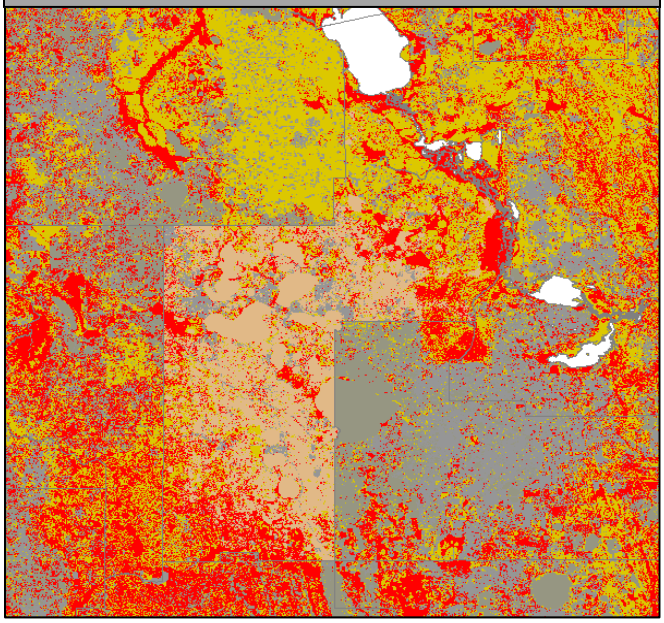
into the atmosphere, this means that there will be more rain and, hopefully, it is less likely that a drought will occur.

It is generally accepted that in order to preserve the natural ecosystem of Central Florida forests it is necessary to incorporate naturally occurring events into the forest management plan (Outcalt 2008). Much of the northeast portion of Lake County lies within the Ocala National Forest, which contains many longleaf pines that are a fire dependent species of tree. It is important to understand that much of the Ocala National Forest is a fire-based ecology, and as such, special precautions should be made by those who reside within it.

Additionally, controlled fires also reduce the amount of fuel that might build up over years of not having a fire. The Florida and U.S. Divisions of Forestry have incorporated controlled, naturally occurring and prescribed burns into their forest management plans. Uncontrolled wild fires, will continue to threaten Lake County and it is important to understand the actions that can take place to reduce the threats posed by wildfires. **All areas of Lake County are vulnerable to wildfires**, particularly in the northeast and southern portions of the county outside the most urbanized areas, as evidenced by **Figure III-26**.

There is no scale, per se, to measure the intensity of fires, as all flames burn and even small fires can adversely impact homes and businesses. While certain jurisdictions are more likely to experience direct incidents of forest fires (those in the southern portion and north eastern portion of the county), the effects can be felt throughout the county in terms of redirected manpower to fight the fires – and smoke coverage. The following highlight a few of the more notable forest fires in Lake County, which are briefly summarized.

Figure III-26
Wildland Fire Potential
Lake County, Florida



Source: MEMPHIS

Astor Fire of 1985

On May 17th, 1985, a forest fire burnt out of control in Astor, destroying a mobile home park. The Governor of Florida at that time, Bob Graham, issued a call for federal aid to the area. The primary jurisdiction affected was Astor in unincorporated Lake County.

Mascotte Fire of 1994

In early 1994, a large fire near Mascotte burned approximately 1,000 acres. The primary jurisdictions affected were Mascotte, Groveland and Leesburg.

Fires of 1998

Unusually extended periods of hot weather coupled with little rainfall created the ideal situation for an outbreak of forest fires in Central Florida in the summer of 1998 (NOAA). Some 2,200 fires occurred that summer, with most of the damage being caused by a few of the very large ones. All jurisdictions within Lake County were affected to some degree by the prolonged heat and wildfire threat.

Fire of 1999

The smoke from a large brush fire near Groveland was responsible for 5 accidents on March 3, 1999. Seven people were hospitalized. The jurisdictions affected were unincorporated Lake County and the City of Groveland.

Fires of 2000

High temperatures and an extended dry period allowed for 13 fires to flare up during the summer of 2000 – burning some 4,000 acres of central and southern Lake County. All jurisdictions within Lake County were affected to some degree by this large scale fire.

Green Swamp Fire of 2001

An illegal trash fire started a 10,000 acre blaze that blanketed much of central and south Lake County in smoke. This smoke was responsible for several accidents due to low visibility on U.S. 27, and respiratory problems for at-risk citizens. The primary jurisdictions affected were Groveland, Clermont, Mascotte, Montverde and unincorporated Lake County.

Wekiva River Fire of 2007

Some 36 residences were evacuated near the Wekiva River after a 1,000 acre fire burned within a quarter mile of the homes in May of 2007. The primary jurisdiction affected was unincorporated Lake County.

Deerhaven Fire of 2008

Approximately 140 homes near Deerhaven (northeast Lake County) were evacuated after a 1,000 acre blaze threatened to close off a main road to these houses. The fire became out of control after 25 mph wind gusts made it difficult to contain. The primary jurisdiction affected was unincorporated Lake County.

Erosion

Erosion is the wearing away of land by the action of natural forces in waves, currents and wind. Even though erosion is a natural process, it can be either mitigated or enhanced by human activity. **Lake County has not seen any large erosion events that have caused widespread damage to property**, however, erosion is being addressed along the Wekiva and St. Johns Rivers. Erosion can result in structures adjacent to water bodies becoming damaged or destroyed because they are not able to be supported by the ground. There is no scale, per se, to measure the magnitude or severity of erosion, as even small amounts of erosion can lead to substantial damage to homes and businesses. **Erosion is most likely to take place within Lake County along the Wekiva and St. Johns Rivers to the northeast,** as well as along streams, creek beds, lakes and other bodies of water that are scattered throughout the county. All residents need to be vigilant about erosion in areas that are adjacent to bodies of water.

According to the St. Johns River Water Management District, the Florida Legislature passed the Wekiva River Protection Act in 1988 which requires the river's surrounding counties to amend their comprehensive plans and land development rules to deter wetlands losses and protect wildlife habitats. The act authorizes local governments to create rules to treat storm water runoff. Special rules are also in place for development in the basin that require additional storm water treatment and established protection zones along the waterways to preserve wetlands, uplands and water quality and reduce erosion and groundwater drawdown.

Winter Storm or Freeze

Each winter, Florida faces the threat of at least a moderate freeze. For Lake County this hazard is a potential problem centered on the vegetable, foliage and citrus industries. **All portions of Lake County have been impacted by episodes of freezing temperatures in the past and are susceptible to freezing temperatures in the future**. Episodes of extreme freezing temperatures would be widespread to all locations and not just specific locales, as extremely freezing temperatures are not typical for the Florida climate. If

temperatures reach freezing levels for extended periods of time, combined with other climatic factors, crop or landscape damage may occur, having a significant impact on the county's economy and employment base.

The freeze line runs through the northern part of Lake County just north of Altoona. Personal injury or death due to freezes is not considered a hazard except for the homeless and indirectly through fire caused by incorrect or careless use of space heaters, etc. Additionally, consumer demand of electricity during periods of very extreme cold weather may overload the electrical grid, which may cause outages and have a significant impact on electrically-dependent critical facilities and persons.

One of the most significant freezes took place within Florida in February, 2001, when the president declared a major disaster declaration for Florida to allow funds to reach those individuals impacted by the event. The agricultural industry was severely impacted and resulted in many being out of work.

With regard to a scale to measure the magnitude or severity, the National Weather Service issues a threat awareness chart regarding one's vulnerability to the hazard of excessive cold temperatures – similar to that of heat. The chart is color-coded with levels ranging from no threat – to very low; low; moderate; high and extreme – and calls for everyone to be continuously informed of the latest threat situation.

Dam or Levee Failure

According to the Florida Department of Environmental Protection, there are four dams within Lake County (see **Table III-6**). These dams are located in unincorporated Lake County, but could affect not only jurisdictions within Lake County, but also in other locations in Central Florida. **To date, there have been no reports of damages as a result of dam failures, however, any issues in the future would likely be as a result of the Burrell Lock and Dam, as well as the Cherry Lake Dam**. The Burrell Lock and Dam is located in northwest Lake County north of the City of Leesburg in the vicinity of Lake

Griffin. The Cherry Lake Dam is located in southern Lake County, between the Cities of Groveland and Clermont at Cherry Lake.

Table III-6 Dams in Lake County, Florida as of June, 2009			
NID ID	**Name**	**Coordinates**	**Hazard Rating**
FL00708	Burrell Lock and Dam	28.87147762, -81.78334004	High
FL00704	M-1	28.74693623,-81.87480155	Low
FL00707	M-6A	28.64541554, -81.8727474	Low
FL00437	Cherry Lake Outlet	28.59693471, -81.822482	Significant

According to Mr. Ron Hart of the Lake County Water Authority:

> "The Burrell Dam has the capacity to cause damages to the low lying property both downstream of the structure as well as around Lake Griffin, especially if discharges out Moss Bluff are not adjusted to accommodate the increases in flow. However, if discharges are managed properly at the Moss Bluff Dam, damages should be limited to low lying areas around Haynes Creek.
>
> The Cherry Lake Dam can cause damage downstream due to prolonged and excessive discharges that result in the capacity being exceeded at any of the five dams downstream. The dam has a very long levee system that increases the exposure to catastrophic damage and uncontrolled discharges."

No evaluations or studies have been conducted to determine the extent of damage that might be caused in the event of a failure. It has been determined, however, that the total amount of damages might exceed the cost to repair or replace these dams.

Probability of Hazards

Based on the history of the hazards occurring and all available information, a summary of probabilities table has been created to determine then likelihood of a hazard occurring within a certain number of years, as shown within **Table III-7**. It is important to note that a hazard with a low probability of occurring can be just as severe as one with a high probability of occurring.

Table III-7 Summary Probabilities for all Hazards												
	Drought	Flooding	Hail	Excessive Heat	Hurricanes	Lightning	Sinkholes	Tornadoes	Wildfire	Erosion	Winter Storm / Freeze	Dam / levee failure
Astatula	M	M	M	M	M	H	M	M	M	L	M	L
Clermont	M	M	M	M	M	H	M	M	M	L	M	L
Eustis	M	M	M	M	M	H	M	M	M	L	M	L
Fruitland Park	M	M	M	M	M	H	M	M	M	L	M	L
Groveland	M	M	M	M	M	H	M	M	M	L	M	L
Howey-in-the- Hills	M	M	M	M	M	H	M	M	M	L	M	L
Lady Lake	M	M	M	M	M	H	M	M	M	L	M	L
Lake County	M	H	M	M	M	H	M	M	H	L	M	L
Leesburg	M	M	M	M	M	H	M	M	M	L	M	L
Mascotte	M	M	M	M	M	H	M	M	M	L	M	L
Minneola	M	M	M	M	M	H	M	M	M	L	M	L
Montverde	M	M	M	M	M	H	M	M	M	L	M	L
Mount Dora	M	M	M	M	M	H	M	M	M	L	M	L
Tavares	M	M	M	M	M	H	M	M	M	L	M	L
Umatilla	M	M	M	M	M	H	M	M	M	L	M	L
Villages	M	M	M	M	M	H	M	M	M	L	M	L

Legend

Probability Rating	Likely to Occur Every
H (high)	1-2 years
M (moderate)	3-15 years
L (low)	16 years or more

Sources

Drought

Associated Press. "Bottling plants face opposition as fears grow over water supplies". April 10, 2008.

Associated Press. "Ongoing drought threatens water restrictions in central Florida". December 10, 2000.

Florida Division of Forestry, Fire Weather. "About the Keetch-Byram Drought Index (KBDI)" <http://www.fl-dof.com/fire_weather/information/kbdi.html> Date Accessed: May 29, 2009.

United Press International. "Fire ravages Florida, drought hits New Jersey". May 18, 1985.

U.S. Drought Monitor Archives.

Washington Post. "Florida drought takes harsh toll, beetles attack thousands of acres of weakened trees; cranes, bear suffer". March 4, 2001.

Flooding

Associated Press. "Central Florida flooded by heavy summer rainstorms". August 21, 2002.

Associated Press. "Henri expected to become storm, hit Fla." September 3, 2003.

"Associated Press". "Sterile gator eggs, deformed hatchlings found in polluted lakes". November 12, 1984.

Astor Flood Study. Lake County Public Works. 2007-8.

CNN. "Hurricane Jeanne Moves Across Florida". Transcripts. September 26, 2004.

Hail

"Thunderstorms over Florida, snow in Southwest". Associated Press. February 8, 1986.

Extreme Heat

United States Bureau of the Census.

National Weather Service.

Hurricanes

NOAA, Historical Storm Reports, Ed Rappaport, Richard J. Pasch, Lixion A. Avila National, James Franklin, Daniel Brown, Stacy R Stewart, Miles Lawrence, Eric Blake, John Beven, Richard Knabb, Michelle Mainelli. National Hurricane Center.

Lightning

Curran, E. B., R. L. Holle, and R. E. López, 1997: Lightning fatalities, injuries and damage reports in the United States from 1959-1994. NOAA Tech. Memo. NWS SR-193, 64 pp.

National Weather Service, Melbourne, Florida. <http://www.srh.noaa.gov/mlb/holtgstats.html>

Shafer, Philip Edmond. "Developing Statistical Guidance for forecasting the amount of warm season afternoon and evening lightning in South Florida". Florida State University, Masters' Thesis. 2004.

U.S. Fire Administration Technical Report. "Wildland Fires, Florida 1998". USFA –TR-126. January 2004.

Sinkholes

Channel 2 News NBC. August 6, 2006. 6PM.

Channel 9 News. November 13, 2005. 11PM.

Florida Geologic Survey. "Karst in Florida". State of Florida, Department of Natural Resources, Division of Resource Management, Bureau of Geology, Tallahassee, Florida. 1986.

Orlando Sentinel. "Central Florida Family forced from home when sinkhole opens". February 2, 2004.

St. Petersburg Times. "Governor asked to seek US aid for drought damage". June 09, 2000.

USGS. National Karst Map.

WFTV. September 17, 2007. 5:05PM.

Tornadoes

NOAA, National Weather Service, Melbourne Office.

NOAA via the Tornado History Project.

NOAA, Service Assessment, "Central Florida Tornado Outbreak, February 22-23, 1998"

NOAA, Storm Prediction Center, "The Enhanced Fujita Scale (EF Scale)"

The Orlando Sentinel.

Wildland Fire

"Analysis of the Utility of Wildfire Home Protection Strategies in Central Florida". Jeff L. De Witt. 2000.

Associated Press. "Fire in Lake Co. forces evacuation of about 140 homes". May 21, 2008.
Associated Press. "Lake County fire almost encircled". April 27, 2000.

Associated Press. "State: Fire situation critical, 1 neighborhood evacuated". May 7, 2007.

Disaster News Network. "New fire ignites in Florida". February 23, 2001.

Evapotranspiration from a Cypress and Pine Forest Subjected to Natural Fires, Volusia County, Florida, 1998-99, By D. M. Sumner, U.S. GEOLOGICAL SURVEY, Water-Resources Investigations Report 01–4245. 2007.

Greenlee, J., McCarrahan, F., and T. Namlick. "Wildfire Mitigation in the 1998 Florida Wildfires. FEMA1223-DR-FL.

"Lightning. Fire, and longleaf pine: using natural disturbance to guide management" Kenneth W. Outcalt. *Forest Ecology and Management* 255 (2008).

Orlando Sentinel. "Wild fires rage across Central Florida". May 13, 2009.

Orlando Sentinel. "Heavy Smoke from raging Florida fire blankets major highway". January 27, 2001.

Southeast Regional Climate Center "Glossary"

St. Petersburg Times. "1,000 acres of woods burn". January 2, 1994.

St. Petersburg Times. "Bush visits neighborhood scorched by wildfires". June 01, 2000.

St. Petersburg Times. "Forestry officials monitor brush fires throughout the state". March 3, 1999.

Dam / Levee Failure

Hart, Ron. Email communication. May 4, 2009.

IV. Vulnerability

What Has Changed?

This update to the Local Mitigation Strategy seeks to provide narrative that clearly explains the vulnerability of each jurisdiction to each natural hazard. While new property appraiser data was utilized, floodplain information had not been updated since the last update to the LMS.

Per Federal Requirement §201.6(c)(2)(ii), the Local Mitigation Strategy must include an assessment of vulnerability to all hazards. For some hazards such as lightning, hail, high winds, excessive heat, and freezes – all jurisdictions are equally at risk to these hazards and have similar vulnerabilities. For other hazards, some areas are more vulnerable than others due to geographical or property characteristics. These hazards include flooding, sinkholes, wildfires and dam / levee failure.

Of the Local Mitigation Strategy working group members who participated in the ranking of the natural hazards that affect Lake County, 86% ranked flooding as the number one hazard, while a little over 64% ranked high winds as the number two hazard. The third highest with the participants was wildfire.

The Hazards Ranked

1. Flooding
2. High Winds (Hurricanes/Tornadoes)
3. Wildfire

This section will have three different areas of focus. The first is the vulnerability of the county and its jurisdictions summarized by hazard. If all jurisdictions are approximately at equal risk to the hazard then there will be a generalized vulnerability summary for that hazard. If, however, one or more jurisdictions are affected differently by a hazard then each jurisdiction's vulnerability will be assessed. The second section will review the potential losses that might occur in the event of a hazard. The third section deals with the future vulnerability of the county including types and numbers of future buildings and land uses and development trends.

Vulnerability Summary

Flooding

As with most places in Florida, flooding is a prevalent hazard within Lake County. It is usually localized and below 18 inches in depth. Nevertheless, a 100-year flood event in Lake County could cause a large amount of damage – especially if the flood event is coupled with a hurricane. **Table IV-1** summarizes the total structures that would be at risk in a 100-year flood event. The largest numbers can be found in the residential land use category, as well as the agricultural and government land use categories.

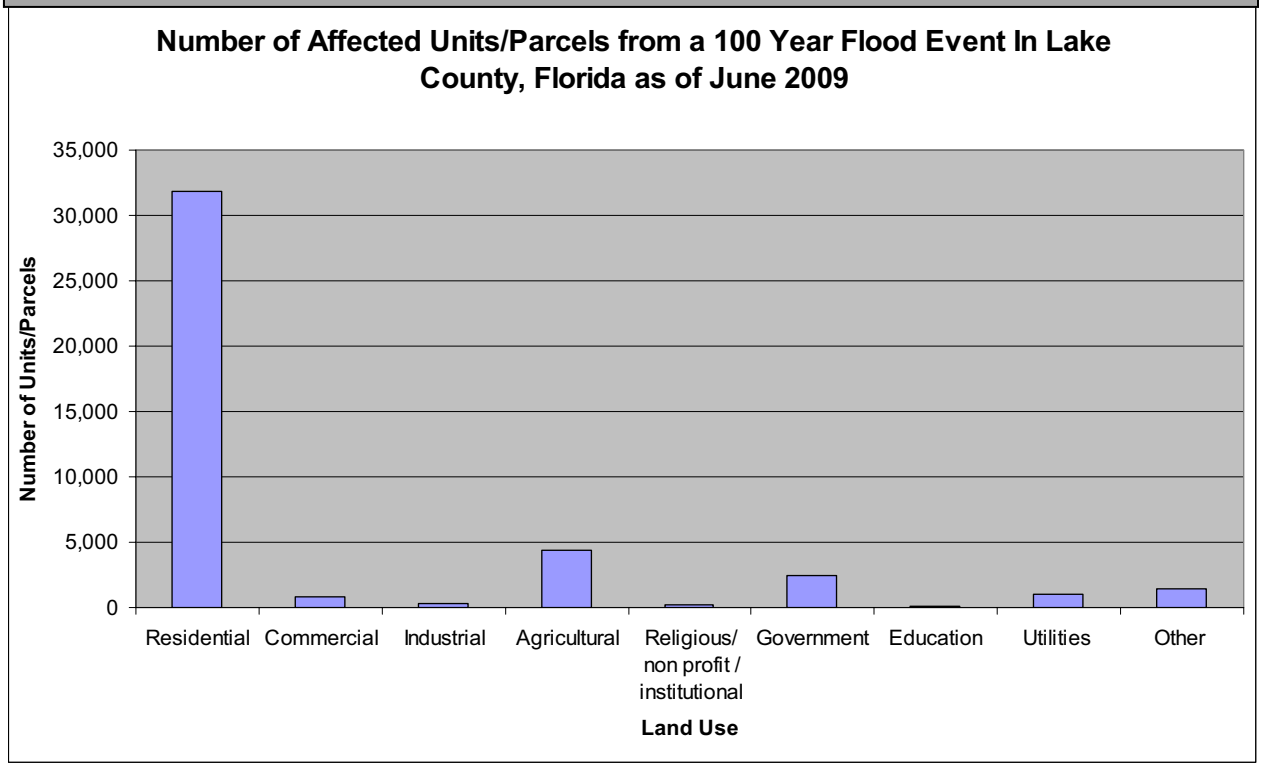
Since the unincorporated section of Lake County represents the largest portions of the county in both land area and population, many of the numbers will be higher for this area compared to the cities and towns. With this in mind, it should be noted that there are two areas of unincorporated Lake County that are especially vulnerable to flooding. These areas are those portions of the county that are adjacent to the St. Johns River in the northeastern portion of the county and those areas adjacent to the Green Swamp in the southwestern portion of the county.

Figure IV-1 graphically shows that the primary land uses associated with the risk of a-100 year flood event. The number of educational and industrial properties at risk to flooding is minimal. Unfortunately, the number of residential parcels is quite high.

Table IV-2 is the vulnerability assessment for the entire county and shows the number of structures in the community compared to the number at risk. It also does this for the value of structures in the community and the value of structures in the risk area. The areas highlighted in yellow represent those land use categories that have the highest percentage of at-risk structures, although residential structures have the greatest dollar loss for a 100-year flood event, despite having a lower percentage of structures in the hazard area.

Table IV-1: Structures at Risk of Flooding, by Type and Jurisdiction, 100 Year Flood Event, Lake County, Florida																
Land Use	**Astatula**	**Clermont**	**Eustis**	**Fruitland Park**	**Groveland**	**Howey-in-the-Hills**	**Lady Lake**	**Lake County Unincorporated**	**Leesburg**	**Mascotte**	**Minneola**	**Montverde**	**Mount Dora**	**Tavares**	**Umatilla**	***Total***
Residential	151	823	858	267	1,011	9	9	24,075	1,521	271	289	151	708	1,463	214	31,820
Commercial	0	35	31	35	51	3	9	350	207	9	4	0	30	73	9	846
Industrial	1	5	5	5	26	1	5	133	82	1	0	0	2	11	1	278
Agricultural	12	7	20	6	84	9	2	3,982	114	94	8	5	5	16	11	4,375
Religious/ Non-Profit / Institutional	0	3	10	15	9	1	0	119	39	9	3	1	17	4	2	232
Government	2	45	63	18	22	0	9	1,960	182	8	8	3	28	44	15	2,407
Education	0	8	2	1	0	3	1	10	14	2	0	4	3	6	5	59
Utilities	1	44	26	9	51	1	0	669	83	11	15	4	56	65	4	1,039
Other	4	5	15	3	29	6	0	1,303	31	11	0	0	5	28	6	1,446
															Total	42,519

Figure IV-1: Gross Number of Units at Risk of Flooding by Land Use Type, Lake County, Florida



There are a few things to note about the method that was used in assembling this data. First, the "Other" category served as very broad group that includes any land use that did not easily fall into any of the other categories. More often than not, this meant that the land was classified as "wasteland", which is usually privately held land wetlands that cannot be built upon. During a flooding event these areas are almost guaranteed to flood since they are low-lying. Additionally, many of these parcels have been valued at $0. The flooding of these wastelands, which are usually located adjacent to residential and commercial land uses, may negatively impact people nearby. Increased mosquito activity, venomous snakes and other impacts encroaching on residential uses could also be effects from a 100-year flood event.

Table IV-2 : Flood Vulnerability Assessment Lake County, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	108,361	31,820	29.36%	$22,533,823,533	$5,348,189,422	23.73%
Commercial	5,182	846	16.33%	$5,308,232,658	$621,663,264	11.71%
Industrial	989	278	28.11%	$1,243,688,615	$146,605,881	11.79%
Agricultural	4,867	4,375	89.89%	$1,026,501,632	$537,230,853	52.34%
Religious / non profit	1,093	232	21.23%	$1,351,999,653	$221,004,038	16.35%
Government	2,682	2,407	89.75%	$1,455,749,537	$758,190,340	52.08%
Education	263	59	22.43%	$543,097,188	$79,233,921	14.59%
Utilities	2,427	1,039	42.81%	$33,556,137	$13,126,764	39.12%
Other	1,446	1,446	100.00%	$350,841,261	$318,911,735	90.90%
Total	127,310	42,519	33.40%	$33,847,490,214	$8,044,156,218	23.77%

The high percentage of government properties being located within a flood zone is more than likely a result of acquisition efforts that have turned many properties that lie within flood zones into passive or active recreational use park. These properties have been designed to be flooded during an event and are more than likely have a low assessment value. This might explain the discrepancy between the percentage of government properties (89.75%) in the hazard area and the percentage of government property value (52.08%).

This analysis reveals the high number of agricultural parcels that are in the flood zone. The percentage of agricultural property value in the hazard zone may be indicative of the productivity of the land that lies within this hazard zone. It may be muck land or wetland parcels that have not been separated from larger, more productive parcels. Nevertheless, a 100-year flood event would cause harm to the agricultural production of Lake County's many farming businesses.

A flooding vulnerability assessment for each jurisdiction within Lake County can be found within **Appendix IV** . With 23.8% of all parcels located within the county at risk to flooding, Lake County could be described as being moderately vulnerable to this hazard.

Potential Losses from a 100-Year Event

This section discusses the potential losses that might occur in the event of a jurisdiction within Lake County experiencing a 100-year flood event. As with all areas within the State of Florida, some areas of the County are more impacted by flooding events than others. Soil types sometimes make the difference, as is the case in Astatula, where the sand is known to percolate large amounts of water. In other places, elevation is crucial (as is the case in Montverde), which is located near Sugar Loaf Mountain, the highest point in peninsular Florida.

Each jurisdiction has its own section within **Appendix IV** that shows what the potential losses are for each area by land use type. It must be noted that this a rather simple classification and that many properties either fit into many categories (although they were only placed in one), or did not fit into any of these categories. In the case of properties not fitting into any other category, they were placed into the "Other" row. The "Other" row also contains properties that were not described in terms of land use in the data set.

The data set used for determining the types and numbers of properties within each jurisdiction came from the Lake County Property Appraiser. According to the metadata, this set was published in October of 2008 and is the best available data for the Local Mitigation Strategy. The floodplain map is a 2002 FEMA Flood Insurance Rate Map (FIRM) that is used in determining National Flood Insurance Program policies. This is the best available data for the Local Mitigation Strategy.

Methodology

The loss estimates were derived by overlaying the FIRM over the Property Appraiser's data. The properties' total value was derived by taking the total assessed value [from the

Table IV-3 : Value of Contents as Percent of Total Assessed Value	
Land Use	**Contents Value**
Residential	50%
Commercial	100%
Industrial	150%
Agricultural	100%
Religious/non profit	50%
Government	125%
Education	125%
Utilities	0%
Other	0%

(Adapted from FEMA Guidance found in Guidebook 386-2)

Property Appraiser's data] and multiplying it by predetermined percentage that represents the contents value of the properties. This related percentage can be found in **Table IV-3**, with the results showing that the greatest value of contents are within the Commercial, Industrial, Agricultural, Government and Education categories. Any properties with a portion of them in the A or AE zones (100 year flood zone) were determined to be losses.

There are two main issues with this method that might result in the loss estimations being higher than actual losses. First, the GIS analysis counted any parcel that had any portion within a 100 year flood zone as a loss. There are a number of properties, especially within Lake County, that have clustered any construction onto portions of parcels that do not lie within the flood zone. The second reason why the GIS analysis might have yielded high estimates is that it did not take into account the mandatory elevation land development regulations that have been in place since 1982 to account for flooding. In most jurisdictions, these land development regulations require that the structure be elevated at least 18 inches above the base flood elevation. As indicated by **Table IV-4**, the majority of

potential losses from a 100-year flood event for Lake County are within the Residential category. Breakdowns by municipal jurisdiction can be found within **Appendix IV**.

Table IV-4: Total Estimated Losses for a 100-year Flood Event for Lake County, Florida (Total)	
Land Use	**Total Potential Losses**
Residential	$8,022,284,133
Commercial	$1,146,223,596
Industrial	$366,514,703
Agricultural	$569,504,128
Religious/ non profit	$331,506,057
Government	$865,872,754
Education	$165,791,987
Utilities	$13,126,764
Other	$316,882,201
TOTAL	**$13,254,336,213**

High Winds (Hurricanes and Tornadoes)

High winds are a recurring hazard for the citizens of Lake County. The four hurricanes of 2004 that crossed the State of Florida and the killer nighttime tornadoes of 2007 that impacted Lake County should be reminders that these high wind events can impact the state at unexpected times and frequency. There are, however, certain actions or conditions that reduce our vulnerability to high winds. Stricter building codes, debris control, and infrastructure upgrades can all help to make communities safer from high winds.

Table IV-5 shows the high wind vulnerability assessment for all of Lake County. The data was analyzed by sorting Property Appraiser's information according to a predetermined hazard rating scheme. The hazard area was defined as those structures that were rated as being at high or medium risk to 130 MPH winds. As marked by the rows shaded in yellow, a large percentage of commercial properties are considered to be at risk to 130 MPH winds, followed by religious and non-profit properties (a categorization that includes hospitals and assisted living facilities) and residential properties. As the table for all of Lake County indicates, a total of 33.9% of the structures within Lake County are within the high wind

hazard area. **Appendix V** shows the vulnerability assessments for each individual municipality within Lake County.

Table IV-5 : High Wind Vulnerability Assessment for Lake County, Florida						
Type of Structure	**Number of Structures**			**Value of Structures**		
	No. in Comm-unity	**No. in Hazard Area**	**% In Hazard Area**	**USD in Community**	**USD in Hazard Area**	**% In Hazard Area**
Residential	108,361	38,578	35.60	$22,533,823,533	$6,921,069,125	30.71
Commercial	5,182	2,072	39.98	$5,308,232,658	$1,477,855,482	27.84
Industrial	989	327	33.06	$1,243,688,615	$355,135,823	28.56
Agriculture	4,867	1,081	22.21	$1,026,501,632	$430,232,188	41.91
Religious/ non profit	1,093	420	38.43	$1,351,999,653	$1,071,217,645	79.23
Government	2,682	227	8.46	$1,455,749,537	$171,869,311	11.81
Education	263	52	19.77	$543,097,188	$81,909,347	15.08
Utilities	2,427	38	1.57	$33,556,137	$29,108,082	86.74
Other	1,446	312	21.58	$350,841,261	$194,809,552	55.53
Total	**127,310**	**43,108**	**33.86**	**$33,847,490,214**	**$11,004,325,906**	**32.51**

Source: Lake County Property Appraiser

Potential Losses from a Category 3 Hurricane

This section discusses the potential losses that might occur in the event of a jurisdiction within Lake County experiencing sustained Category 3 winds (111-130 MPH). While this occurrence is not the norm given the county's inland location, it is not impossible. Hurricane Charley from 2004, which crossed Central Florida and heavily impacted Orlando and vicinity just to the east of Lake County, showed that hurricanes can sustain their winds at high speeds despite being over land for an extended period. Therefore, for the sake of this analysis a Category 3 hurricane is used as the worst case scenario.

Each jurisdiction within Lake County has its own loss data by land use classification within **Appendix V.** It must be noted that this is a rather simple classification and that many properties either fit into many categories (although they were only placed in one) or did not fit into any of these categories. In the case of a property not fitting into any category, it was placed into "Other". The "Other" row also contains those properties that were not described in terms of land use in the data set.

Methodology

The data set used for determining the types and numbers of properties within each jurisdiction came from the Lake County Property Appraiser. According to the metadata, this set was published in October of 2008 and is the best available data for the Local Mitigation Strategy. After each jurisdiction's properties were organized by land use, they were then organized by their risk to high winds.

The Local Mitigation Strategy Working Group decided that the best method to use was a building's year of construction. In conjunction with the Lake County Building Services Division, a rating system was devised by which each structure in Lake County could be categorized as being at High, Medium, or Low Risk to Category 3 winds, as shown within **Table IV-6**. Each hazard rating was then assigned an associated loss rate that was used to determine potential damages to the jurisdictions. These hazard ratings represent the times

Table IV-6: Structure Hazard Rating to Category 3 (130 MPH) Winds

Hazard Rating	Structure Description	Loss Rate
High	All structures constructed before 1991 Mobile Homes constructed before 1994	75%
Medium	All structures constructed between 1991 and 2001 Mobile Homes constructed after 1994	50%
Low	All structures, excluding mobile homes All constructed after 2001	25%

at which the building code within Lake County was strengthened or adjusted to make homes safer from damages associated with high winds.

The total estimated losses from a Category 3 hurricane are given in **Table IV-7** – totaling over $8 billion. This represents the loss rates multiplied by the total estimated value of property. The total estimated value of each property category was determined by taking the total assessed value from each category and multiplying this value by a certain related percentage that represents the value of the contents of each land use category, as shown within **Table IV-4**.

Table IV-7: Lake County (Total) Estimated Losses for Category 3 Hurricane by Land Use	
Land Use	**Total Potential Losses**
Residential	$5,130,272,573
Commercial	$1,124,383,491
Industrial	$266,477,738
Agricultural	$320,024,424
Religious/ non profit	$817,251,654
Government	$128,570,889
Education	$70,238,884
Utilities	$26,226,418
Other	$147,297,904
TOTAL	**$8,030,743,975**

To give an example of how the potential losses were estimated one could assume that within a certain community all the residential units constructed after 2001 are assessed at a total of $10,000,000. This value would then be multiplied by 50% - yielding a total contents value of $5,000,000. The total assessed value and the total contents value would then be added together to yield the total estimated value of $15,000,000. Since these residential units were constructed after 2001 they would be categorized as being at low risk and would therefore have a low loss rate (there would be some damage, of course).

The associated loss rate for structures at low risk is 25%. Therefore, the potential losses for all the residential units that were constructed after 2001 in this community would be $3,750,000. Total estimated values of properties, broken down by High, Medium and Low Risk and land use category for all the entire Lake County (including municipal jurisdictions), are shown within **Table IV-8**. Data broken down by individual jurisdiction is shown within **Appendix V**. It is important to note that the estimated losses and the total value of properties within Lake County are not the same, as that would assume a 100% loss rate.

With regard to tornadoes, while they can generate winds up to Category 3 hurricane strength, the events themselves are much more localized and the damage would obviously not be as widespread as a hurricane wind event. Two of the strongest tornadoes to impact Lake County occurred in February, 2007. The tornado that impacted the Northwest part of Lake County, Town of Lady Lake, resulted in approximately $114,000,000 in damage. The tornado impacting the Paisley area of Northeast Lake County resulted in approximately $98,000,000 of total damage (www.TornadoHistoryProject.com). These two storms are evidence that these short duration events can heavily impact small regions of the county - yet create a substantial amount of damage.

Table IV-8: Types, Numbers, and Values of Structures / Properties at Risk to Category 3 (130 mph) Winds

Lake County (Total)								
	High		Medium		Low		***Total***	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property
Residential	34923	$6,026,576,746	3655	$894,492,379	1701	$652,375,298	40,279	$7,573,444,422
Commercial	1942	$1,297,384,486	130	$180,470,996	127	$244,438,514	2,199	$1,722,293,996
Industrial	297	$304,079,931	30	$51,055,893	26	$51,559,375	353	$406,695,198
Agricultural	821	$315,358,252	260	$114,873,936	167	$104,275,066	1,248	$534,507,254
Religious/ non profit	390	$950,029,931	30	$121,187,714	19	$176,541,395	439	$1,247,759,039
Government	210	$134,247,970	17	$37,621,341	13	$36,296,962	240	$208,166,273
Education	43	$74,604,422	9	$7,304,924	8	$42,532,421	60	$124,441,767
Utilities	36	$34,042,404	2	$439,119	4	$1,900,221	42	$36,381,744
Other	301	$191,171,860	11	$3,637,692	15	$8,400,652	327	$203,210,203
TOTAL	**38964**	**$9,327,496,002**	**4144**	**$1,411,083,994**	**2080**	**$1,318,319,904**	**45,188**	**$12,056,899,900**

Wildfire

Just as some areas are more vulnerable to high winds, some locations in Lake County are more vulnerable to wildfire. In unincorporated Lake County, these areas are in the northeastern and southern portions of the county. Incorporated jurisdictions near these areas have a higher vulnerability to wildfire, and should therefore consider mitigation initiatives to address the hazard. In this section, the Local Mitigation Strategy will review the vulnerability assessment data for Lake County as a whole, with **Appendix VI** containing data for each municipal jurisdiction. There will be three tables for each jurisdiction. The first table gives the population at risk by each wildfire level of concern demographic identification. The second table gives the number of structures at risk by each wildfire level of concern and land use type, and the third table gives the total value of structures by wildfire level of concern and land use type.

Table IV-9: Population at Risk for Florida Division of Forestry (FDOF) Fire Risk Level of Concern (LOC), Lake County, Florida

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	4126	577	1347	1432	297	44	184
Level 2	21163	1561	5662	8262	1971	7	870
Level 3	18696	4310	2921	7470	3157	166	1198
Level 4	6970	921	1706	3366	781	87	411
Level 5 (med)	17647	1282	3776	6940	1156	65	723
Level 6	21038	2666	5607	7976	1839	67	1067
Level 7	34630	5963	8988	15519	3848	356	2005
Level 8	17188	1867	4584	7788	1500	283	764
Level 9 (high)	12337	1846	1988	4008	683	7	471

Source: MEMPHIS

A review of the data for all of Lake County combined, including municipalities, shows that the zone with the greatest number of individuals appears to be in the Level 7, medium-high wildfire category, with a large subset of this group being within the disabled category, as

indicated by **Table IV-9**. The greatest number of structures across all fire risk levels is quite evenly distributed, with the most substantial number of homes being in the Low (Level 1) and Medium-High (Level 7) categories for wildfire, as shown within **Table IV-10**. This equates to an overall risk level of medium.

Table IV-10: Structures at Risk, Florida FDOF Fire Risk LOC, Lake County, Florida

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	21462	1110	12506	4961	1310	1000	575
Level 2	13626	4044	5549	1983	831	473	746
Level 3	10278	3889	3706	1179	665	316	523
Level 4	2014	1064	560	95	83	83	129
Level 5 (med)	8425	4961	1344	355	493	226	1046
Level 6	8453	5092	1182	640	556	233	750
Level 7	21719	12506	4961	1310	1000	575	1367
Level 8	9882	5549	1983	831	473	746	300
Level 9 (high)	6551	3706	1179	665	316	523	162

Source: MEMPHIS

A review of the data for value of structures suggests within **Table IV-11** that the greatest property values also are within Low (Level1) and Medium-High (Level 7) zones.

Table IV-11: Value of Structures by Dept. of Revenue Use for FDOF Fire Risk LOC, Lake County, Florida							
Zone	**Total**	**SF Res**	**Mob Home**	**MF Res**	**Commercial**	**Agr.**	**Gov/Instit**
Level 1 (low)	$ 6.1 BI	$ 345.2 MI	$ 3.7 BI	$ 599.9 MI	$ 297.0 MI	$ 568.7 MI	$ 593.7 MI
Level 2	$ 3.4 BI	$ 1.2 BI	$ 1.3 BI	$ 235.1 MI	$ 275.5 MI	$ 226 MI	$ 275.7 MI
Level 3	$ 3.1 BI	$ 1.1 BI	$ 841.7 MI	$ 158.4 MI	$ 518.6 MI	$ 283.6 MI	$ 166.4 MI
Level 4	$497.9 MI	$ 315.8 MI	$ 67.4 MI	$ 16.3 MI	$ 32.8 MI	$ 31.1 MI	$ 34.5 MI
Level 5 (med)	$ 2.6 BI	$ 1.7 BI	$ 141.2 MI	$ 95.5 MI	$ 250.9 MI	$ 120.5 MI	$ 271.7 MI
Level 6	$ 2.7 BI	$ 1.4 BI	$ 122.2 MI	$ 226.2 MI	$ 478.3 MI	$ 275.1 MI	$ 180.6 MI
Level 7	$ 6.1 BI	$ 3.7 BI	$ 599.9 MI	$ 297.0 MI	$ 568.7 MI	$ 593.7 MI	$ 364.8 MI
Level 8	$ 2.3 BI	$ 1.3 BI	$ 235.1 MI	$ 275.5 MI	$ 226 MI	$ 275.7 MI	$ 55.9 MI
Level 9 (high)	$ 2.01 BI	$ 841.7 MI	$ 158.4 MI	$ 518.6 MI	$ 283.6 MI	$ 166.4 MI	$ 36.5 MI

Source: MEMPHIS

Methodology

The data used for the wildfire analysis is based on Census 2000 data; since that time the county has grown substantially. This data is used as a general assessment regarding the most vulnerable areas within Lake County. The data comes from a 2005 report published by the Kinetic Analysis Corporation and the University of Central Florida. The methodology explanation can be found in Chapter 1 of a report entitled, "A natural hazards risk assessment to support local mitigation strategies in Florida FDOF Wildland Fire Levels of Concern for 069 County". The Level of Concern is an integer scaled from 0 to 9 indicating

the relative risk of wildland fire and is an output of the Florida Division of Forestry Fire Risk Assessment System (FRAS).

Dam/Levee Failure

Due to a level of uncertainty as to who may be responsible for Lake County's Burrell Lock Dam when the current agreement expires in 2011, no information was available as to what the potential losses may be in the event of a dam failure. **Research did not yield any reports or studies that have been conducted on the potential effects on structures from dams / levee failures comparable in size to the ones located within Lake County.**

According to a 2002 press release from the St. Johns River Water Management District, the U.S. Army Corps of Engineers recommends that locks and dams operating in freshwater be rehabilitated every 15 years. As part of the rehabilitation process, structures must be completely drained and inspected before mechanical repairs are made. The Burrell Lock was repaired in 1987, but only minor above water repairs were performed. The Burrell Lock and Dam, built in 1957, was designed to assist in the passage of fishing boats and pleasure crafts. The lock is located in Lake County, just south of U.S. Highway 44 on Haynes Creek. **The lock was again rehabilitated in 2002 at the cost of $296,000**. If a severe flood impacted a few properties adjacent to the dam due to a breach, one could generally conclude that properly maintaining and/or mitigating a dam/levee would be far more economical than paying for damages to structures flooded by failed dams/levees.

Drought

While droughts have impacts on human populations, their affects on agricultural production within Lake County is especially apparent. **Structures are not vulnerable to drought for the purposes of this plan. Vulnerability data for drought impact on structures is not available.**

Lake County has experienced significant growth within the past 20 years and agribusiness continues to be a major component of the local economy. Just some of the contributions (as of 2007) to the local economy that would be affected in the event of a drought include:

- Sales of animals and animal products : $ 3,798,000
- Heads of cattle sold : 9,137
- Farm operations : 1,814
- Horticultural sales : $141,702,000
- Acres of citrus lands : 12,381
- Bee colonies : 214

It must be noted that these numbers are from 2007, which, itself, was a drought year. The average KBDI for Lake County as of April 1, 2007 was 547 whereas as of July 22, 2009 it was only 98. It can be assumed that agricultural production has improved in Lake County since the end of the drought – and in the event of severe drought the agricultural operations listed above might be adversely affected throughout the county.

Erosion

With over 1,400 lakes, shoreline erosion is a concern for many residents throughout the county. This issue has been addressed by many municipalities and the county who have included measures in their land development regulations that help to stem the causes and effects of shoreline erosion on the many lakes in the area.

Overall, the county vulnerability could be described as low to moderate. Figures in a 2008 flood study show the highest vulnerability is in the Northeast unincorporated areas along the St. Johns River. Fortunately, any erosion that may take place within interior counties of Florida is much less intense than coastal counties – which are often impacted by heavy surf from the Atlantic Ocean or the Gulf of Mexico. Lake County residents are not subject to erosion from rough seas. **Vulnerability data for erosion impact on structures within Lake County is not available for the purposes of this plan.**

Extreme Heat

While soaring temperatures are not unfamiliar within Central Florida, these extended periods of heat do affect certain portions of the population. Especially vulnerable are the elderly, young children, homeless, outside workers and those without air conditioning. The determination for what constitutes a heat wave is made by the National Weather Service, and appropriate heat advisories sent to all affected counties. Climate change and urbanization will compound the effects of an extended period of high temperatures. The county could be described as having a moderate to moderately high vulnerability to this hazard. **Structures are not vulnerable to extreme heat for the purposes of this plan and vulnerability data for extreme heat impact on structures is not available.**

Hail

While hail can have impacts on human populations, it can also negatively affect agricultural production within Lake County. The county has experienced significant growth within the past 20 years, yet agribusiness continues to be a major component of the local economy. Just some of the contributions (as of 2007) to the local economy that would be affected by a hailstorm event include:

- Horticultural sales : $141,702,000
- Acres of citrus lands : 12,381

Lake County can be described as having a high vulnerability to this hazard. Data reviewed by MEMPHIS indicates that the threat is defined in terms of the chances that a thunderstorm *or* hail will cause economic damage or loss over $50. Lake County has a 1 in 50 chance of this occurring. The MEMPHIS data was not placed in this report for projected damages because the thunderstorms and hail were placed together. Thunderstorms and gusty winds from thunderstorms are virtually a part of daily life for the average Floridian; by placing hail and thunderstorms together it is more difficult to determine whether damages are caused by winds or hail.

According to the National Climatic Data Center, there have been approximately 80 hail events since 1957 in Lake County (see **Table IV-12**). The largest event took place in 1992,

when an estimated $60 million dollars in damage occurred (mostly in adjacent Orange County), with losses concentrated among nursery greenhouses and car dealerships. The damage cited in Lake County was predominantly due to millions of shattered glass panes from the impact of the hail stones. There was also approximately $50K in damages in 1993 in Eustis, however, the notes indicated that the damage was caused by winds ripping off 30 feet of roofing (there happened to be hail in that storm). Therefore, it is not completely accurate that hail caused $50K in damage. The National Climatic Data Center also had $0 in property damage from the catastrophic 1992 event, which is not accurate due to the documentation that was reviewed from this event.

Table IV-12: Historical Hail Impacts, Lake County, Florida 1957 - 2009

Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
LAKE	3/22/1957	0300	Hail	1.75 in.	0	0	0	0
LAKE	6/03/1960	1315	Hail	2.00 in.	0	0	0	0
LAKE	4/08/1982	1355	Hail	1.75 in.	0	0	0	0
LAKE	2/08/1986	0830	Hail	0.75 in.	0	0	0	0
LAKE	2/08/1986	1030	Hail	1.75 in.	0	0	0	0
LAKE	5/24/1988	1200	Hail	1.75 in.	0	0	0	0
LAKE	4/20/1991	1840	Hail	1.75 in.	0	0	0	0
LAKE	3/06/1992	1520	Hail	0.75 in.	0	0	0	0
LAKE	3/06/1992	1540	Hail	1.75 in.	0	0	0	0
LAKE	3/25/1992	1735	Hail	1.75 in.	0	0	$60MIL Mostly Orange/ also Lake	0
LAKE	3/25/1992	1750	Hail	1.00 in.	0	0	0	0
LAKE	7/14/1992	1605	Hail	0.75 in.	0	0	0	0
Bassville	3/24/1993	1930	Hail	1.00 in.	0	0	0	0
Mt. Dora	3/26/1993	1420	Hail	0.88 in.	0	0	0	0

Table IV-12: Historical Hail Impacts, Lake County, Florida 1957 - 2009								
Location	**Date**	**Time**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Eustis	8/03/1993	1839	Hail	0.88 in.	0	0	50K	0
LAKE	3/08/1995	0800	Hail	0.75 in.	0	0	0	0
Leesburg	3/30/1996	1740	Hail	1.75 in.	0	0	0	0
Mt Dora	3/31/1996	1620	Hail	1.75 in.	0	0	0	0
Lady Lake	5/30/1996	2050	Hail	0.75 in.	0	0	0	0
Paisley	6/26/1997	1600	Hail	0.75 in.	0	0	0	0
Altoona	2/22/1998	2200	Hail	0.75 in.	0	0	0	0
Leesburg	2/28/1998	2205	Hail	1.00 in.	0	0	0	0
Clermont	5/05/1998	1400	Hail	0.75 in.	0	0	0	0
Clermont	5/05/1998	1425	Hail	1.25 in.	0	0	0	0
Altoona	6/19/1998	1405	Hail	0.75 in.	0	0	0	0
Tavares	6/29/1998	1650	Hail	2.00 in.	0	0	0	0
Umatilla	4/29/1999	1645	Hail	1.75 in.	0	0	0	0
Umatilla	5/06/1999	1835	Hail	0.75 in.	0	0	0	0
Howey In The Hills	5/07/1999	1354	Hail	0.75 in.	0	0	0	0
Lady Lake	5/07/1999	1357	Hail	0.75 in.	0	0	0	0
Mt Dora	5/07/1999	1451	Hail	1.75 in.	0	0	0	0
Mt Dora	5/07/1999	1511	Hail	0.75 in.	0	0	0	0
Leesburg	5/28/1999	1715	Hail	0.75 in.	0	0	0	0
Clermont	5/28/1999	1758	Hail	1.75 in.	0	0	0	0
Bay Lake	6/03/1999	1725	Hail	0.75 in.	0	0	0	0
Groveland	6/03/1999	1756	Hail	0.75 in.	0	0	0	0
Astatula	6/03/1999	1955	Hail	0.75 in.	0	0	0	0
Leesburg	6/04/1999	1605	Hail	0.75 in.	0	0	0	0

Table IV-12: Historical Hail Impacts, Lake County, Florida 1957 - 2009								
Location	**Date**	**Time**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Leesburg	6/04/1999	1605	Hail	0.75 in.	0	0	0	0
Sorrento	7/09/1999	1600	Hail	1.75 in.	0	0	0	0
Clermont	8/01/1999	1540	Hail	0.75 in.	0	0	0	0
Minneola	4/15/2000	1515	Hail	1.75 in.	0	0	0	0
Tavares	5/09/2000	1330	Hail	0.88 in.	0	0	0	0
Leesburg	7/20/2000	1830	Hail	0.75 in.	0	0	0	0
Paisley	7/26/2000	1725	Hail	0.75 in.	0	0	0	0
Eustis	9/04/2000	1736	Hail	0.75 in.	0	0	0	0
Clermont	3/29/2001	1055	Hail	1.00 in.	0	0	0	0
Cassia	3/31/2001	1600	Hail	0.75 in.	0	0	0	0
Umatilla	5/31/2001	1816	Hail	0.88 in.	0	0	0	0
Altoona	6/14/2001	1335	Hail	1.00 in.	0	0	0	0
Clermont	6/14/2001	1245	Hail	1.50 in.	0	0	0	0
Umatilla	6/14/2001	1245	Hail	1.75 in.	0	0	0	0
Minneola	8/13/2001	1750	Hail	0.88 in.	0	0	0	0
Leesburg	7/20/2002	1806	Hail	0.75 in.	0	0	0	0
Altoona	3/17/2003	1648	Hail	1.00 in.	0	0	0	0
Altoona	4/25/2003	1435	Hail	0.75 in.	0	0	0	0
Mt Dora	4/25/2003	1443	Hail	0.75 in.	0	0	0	0
Lady Lake	5/17/2003	1650	Hail	1.00 in.	0	0	0	0
Eustis	5/19/2003	1710	Hail	0.75 in.	0	0	0	0
Clermont	7/09/2003	1600	Hail	0.75 in.	0	0	0	0
Mascotte	7/21/2003	1410	Hail	0.75 in.	0	0	0	0
Clermont	6/07/2004	1730	Hail	0.75 in.	0	0	0	0

Table IV-12: Historical Hail Impacts, Lake County, Florida 1957 - 2009								
Location	**Date**	**Time**	**Type**	**Magnitude**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
Clermont	6/26/2004	1651	Hail	0.75 in.	0	0	0	0
Astor	4/07/2005	1600	Hail	1.25 in.	0	0	0	0
Fruitland Park	4/07/2005	1635	Hail	1.00 in.	0	0	0	0
Tavares	5/04/2005	0930	Hail	0.75 in.	0	0	0	0
Cassia	4/21/2006	1725	Hail	1.00 in.	0	0	0	0
Clermont	7/27/2006	1540	Hail	1.00 in.	0	0	0	0
Clermont	8/04/2006	1445	Hail	1.00 in.	0	0	0	0
Eustis	10/07/2006	1811	Hail	0.75 in.	0	0	0	0
Mt Plymouth	10/07/2006	1841	Hail	0.75 in.	0	0	0	0
Leesburg	5/13/2007	1510	Hail	0.88 in.	0	0	0	0
Leesburg	6/10/2007	1518	Hail	0.75 in.	0	0	0	0
Altoona	7/19/2007	1625	Hail	0.88 in.	0	0	0	0
Ferndale	6/28/2008	1530	Hail	0.75 in.	0	0	0	0
Lake Yale	10/09/2008	1459	Hail	1.75 in.	0	0	0	0
Eustis	10/09/2008	1512	Hail	0.88 in.	0	0	0	0
Chain O Lakes	10/09/2008	1605	Hail	0.75 in.	0	0	0	0
Whitney	04/14/2009	0430	Hail	1.00 in.	0	0	0	0
Tavares	05/24/2009	1555	Hail	1.25 in.	0	0	0	0

Source: National Climatic Data Center

In conclusion, hail events in the past have been equally dispersed across Lake County. These events are random in nature and there is no way to predict when they might impact

the county. While most hail events cause little or no property damage, all it takes is one extreme hail event to cause damage like in 1992.

Lightning

Central Florida, especially the western portion, is nationally known for its lightning strikes. Each area in the county is equally at risk for these, and the effects would be the same for a direct strike. On average there are 36 strikes per square mile, per year within Lake County. The damages and effects are generally not disastrous because the events are spread out over time, and generally do not directly affect more than one or two people at a time.

As shown within **Table IV-13**, historical damage to properties within Lake County reveals there have been a few incidents that have caused property damage within the county.

Table IV-13: Property Damage Incurred from Lightning Strikes Lake County, Florida 1993 - 2009

Location or County	Date	Time	Type	Property Damage	Details
Clermont	08/18/2001	1605	Lightning	$3,000	Lightning put a hole in roof
Eustis	09/25/2003	1400	Lightning	$8,000	Student was burned by a piece of transformer that was struck by lightning
Lady Lake	07/24/2008	2005	Lightning	$431,000	Lightning started a fire that destroyed a home and antique car

Source: National Climatic Data Center

Lighting is extremely common in Central Florida and the probability of future occurrences is high; all areas of Lake County are susceptible to random lightning strikes.

Sinkholes / Subsidence

Sinkholes are a constant problem for Central Florida counties and Lake County is no exception. Most sinkholes occur on private property and are handled by the owners of that property, as municipal jurisdictions and county government generally cannot address the issue directly due to liability issues. Over the years, numerous sinkholes have been reported in the central and southern Lake County, with most having a diameter of 10 feet or less, as indicated by **Figure IV-2**. A few of the sinkholes have been 200 feet or greater in diameter – primarily in the central portion of Lake County. It is important to note that available information is *reported* sinkholes. There are likely many more in the sparsely inhabited regions of Lake County that have not been reported, such as around the Ocala National Forest and the Green Swamp.

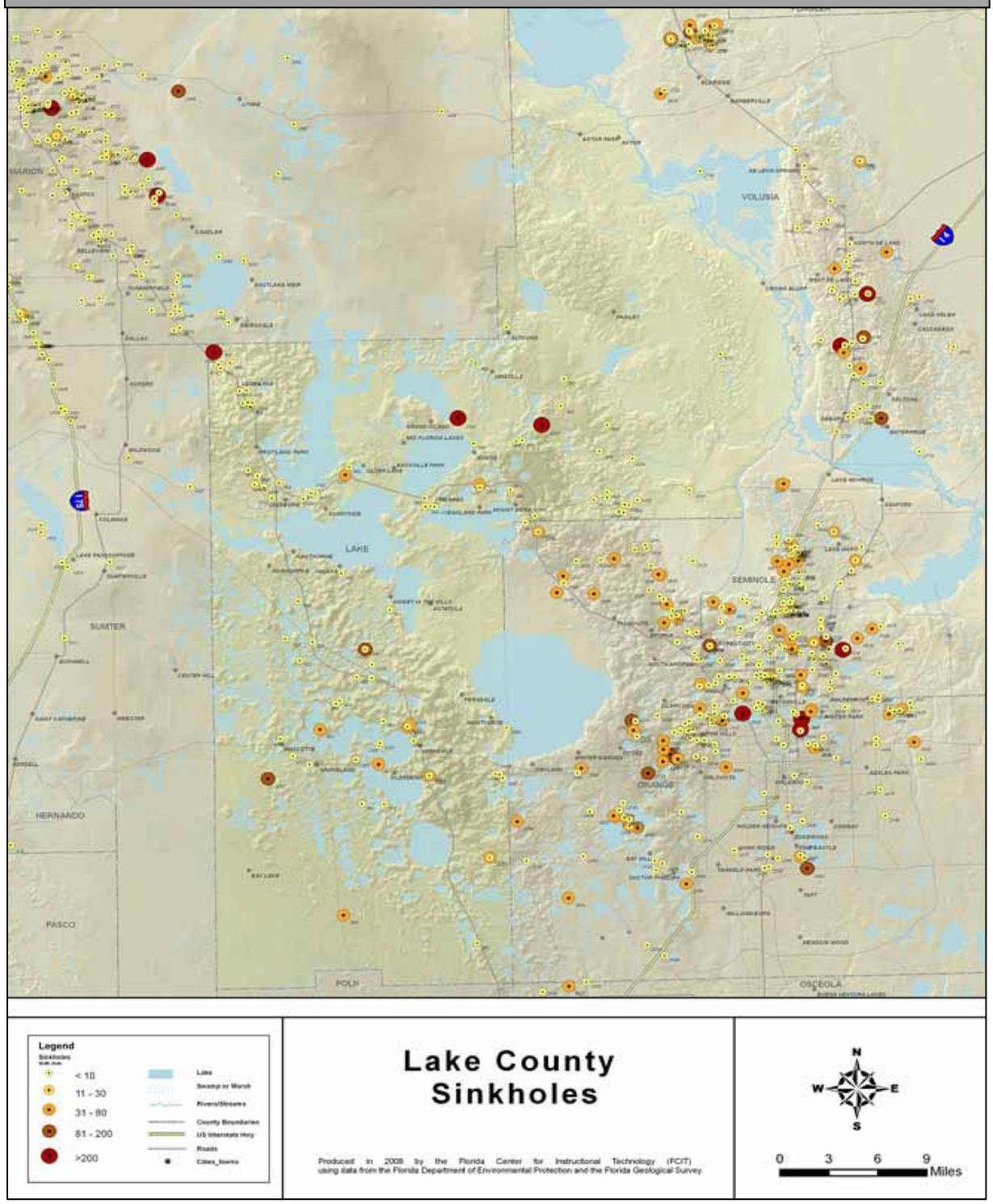
A review of data shows that the majority of the county's population is at medium risk to sinkholes, as indicated within **Table IV-14**, coinciding with the highest number of structures and associated value within the medium risk category – as shown within **Tables IV-15** and **IV-16**. Unfortunately, due to Florida's geography, it is very difficult to predict when or where sinkholes may develop. Florida's wet and dry seasons can aggravate

Table IV-14: Population at Risk for Sinkholes Lake County, Florida

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	4249	168	792	2188	628	0	195
Medium	153844	17700	38340	61330	12993	878	7013
High	23939	4499	5398	9927	2773	141	1341
Very High	8210	1576	1166	2923	1244	176	519
Extreme	14705	2292	7805	6865	1744	27	642
Adjacent	228	0	53	75	13	0	13

Source: MEMPHIS

Figure IV-2: Sinkholes by Diameter Size
Lake County, Florida



Source: http://fcit.usf.edu/florida/maps/pages/11100/f11137/f11137.htm

Table IV-15: Structures at Risk for Sinkholes Lake County, Florida							
Zone	**Total**	**SF Res**	**Mob Home**	**MF Res**	**Commercial**	**Agriculture**	**Gov/Instit**
Low	2284	532	1140	49	12	126	425
Medium	65733	38571	13457	3989	3019	1345	5352
High	12204	7748	1848	871	886	349	502
Very High	5907	3743	1022	405	413	183	141
Extreme	2664	1431	496	215	266	174	82
Adjacent	145	88	23	18	11	3	2

Source: MEMPHIS

Table IV-16: Value of Structures by DOR for Sinkhole Risk, Lake County, Florida							
Zone	**Total**	**SF Res**	**Mob Home**	**MF Res**	**Commercial**	**Agriculture**	**Gov/ Instit**
Low	$ 343.7 MI	$ 112.37 MI	$ 103.64 MI	$ 1.16 MI	$ 3.20 MI	$ 16.69 MI	$ 106.6 MI
Medium	$ 18.75 BI	$ 12.34 BI	$ 1.63 BI	$ 1.05 BI	$ 1.68 BI	$ 777.62 MI	$ 1.28 BI
High	$ 3.73 BI	$ 2.18 BI	$ 231.46 MI	$ 178 MI	$ 661.08 MI	$ 382.69 MI	$ 103.5 MI
Very High	$ 1.98 BI	$ 1.04 BI	$ 115.24 MI	$ 82.66 MI	$ 325.12 MI	$ 343.60 MI	$ 70.10 MI
Extreme	$ 1.09 BI	$ 397.48 MI	$ 55.84 MI	$ 41.93 MI	$ 227.03 MI	$ 353.00 MI	$ 17.30 MI
Adjacent	$ 30.29 MI	$ 19.42 MI	$ 2.30 MI	$ 3.79 MI	$ 2.98 MI	$ 676.59 TH	$ 1.12 MI

Source: MEMPHIS

sinkholes in areas where people never thought possible, or facilitate sinkholes redeveloping in problem areas. As recent as March 2010, two sinkholes (approximately 20 to 30 feet in width) opened off Spyglass Loop in Clermont adjacent to two homes, where sinkhole activity has occurred in the past decade. One home had to be evacuated; the other was vacant (WFTV.com).

Methodology

The methodology contains a general assessment of the potential sinkhole development using MEMPHIS data. Sinkhole potential was determined according to points assigned to each 90m grid cell in the state. Three classes of points were assigned, for distance to historic sinkholes, geology and soils:

2 points if cell was within 2000m of an existing sinkhole;
1 point if cell between 2000m and 5000m of an existing sinkhole;
1 point if the cell was in the same USGS surface geologic unit as an existing sinkhole;
1 point if the cell was in the same NRCS soil unit as an existing sinkhole.
Thus, each cell received an ultimate value of from 0 to 4:
0: Very Low risk ; 1: low risk ; 2: moderate risk; 3: high risk; 4: very high risk.

The loss estimates in this document are based on the census housing survey. The housing data includes the number and median value of various types of housing units such as mobile homes, single family, etc. From that data the total infrastructure in each census block was estimated. Thus, the exposure in the block is a composite of the survey data (for housing) and estimate of other intrastructure (commercial, governmental) that typically supports a given level of housing.

Note that these estimates can (and will) differ from the DOR tax parcel based data, which should be more accurate. The census based estimates are included because these are used in the real time damage estimation system. Census based loss estimates are total losses (insured and uninsured), including cleanup. Something to consider with respect to the

Census based estimates is the impact of georeferencing and flood data. The Census data is at the block group level and the exact position of the block group centroid may fall in or out of the flood zone. For lower flood levels such as Category 1 storms with very narrow flood zones, there may be a larger difference between the tax based assessment and census based assessment because of the potential for any given block group to hit or miss the zone.

Tax records normally undervalue property; this analysis assumed that properties were valued at 80fair market value. Contents and additional property such as automobiles and boats were estimated according to use type, in keeping with practices used in the insurance industry. For Census based estimates, the following method was used: housing values were obtained from the STF-3 files. Contents were estimated as with tax parcel based system. Infrastructure, commercial exposures and government/institutional exposures were estimated from the satellite derived land cover.

Winter Storm / Freeze

While freezes have impacts on human populations, their affects on agricultural production within Lake County is especially apparent. Lake County has experienced significant growth within the past 20 years, yet agribusiness continues to be a major component of the local economy. Just some of the contributions (as of 2007) to the local economy that would be affected in the event of a hard freeze include:

- Horticultural sales : $141,702,000
- Acres of citrus lands : 12,381

It can be assumed that in the event of a winter storm / freeze event, the agricultural operations listed above would likely be adversely affected throughout the county. It must also be noted that the "freeze line" does run through northern Lake County, but this does not mean that freezes will only take place in areas north of this line. The entire county is at risk to freezes, and in the event of a hard freeze the entire county's agricultural production would be affected. The county's vulnerability to this hazard could be described as moderate.

Structures are not vulnerable to winter storms / freeze for the purposes of this plan and vulnerability data for winter storms / freeze on structures is not available.

Future Vulnerability

While the growth rates that Lake County was experiencing up until recently have been reduced dramatically, the population will continue to grow. According to the Bureau of Economic and Business Research (BEBR), Lake County can expect to have around 351,100 people by 2035 (low projection series). If the economy rebounds within a reasonable amount of time, Lake County may be looking at a population of approximately 504,500 people by 2035 (medium projection series). Many counties and municipalities in the Central Florida area may be tempted to relax any regulations currently in place in hopes to spur new development in their area. If not careful, these places might negatively impact their vulnerability to natural hazards.

One method of getting an idea of future growth might consist of looking at proposed Developments of Regional Impacts (DRIs) within the area. A DRI is any planned development that might affect areas outside of the immediate planning area and is therefore subject to special consideration by the Florida Department of Community Affairs. Several Developments of Regional Impact (DRIs) and Planned Unit Developments (PUDs) are located in the county.

In Lake County most of the large developments have already been constructed – with only a few developments anticipated. With the decline in the housing market, the construction of new developments has virtually come to a standstill. The proposed new units would total approximately 16,000 dwelling units. One of these proposed projects, Secret Promise, would add 9,208 dwelling units alone. Based on the 2007 ratio of people per dwelling unit (2.16), Lake County could expect approximately 35,000 people as these developments are built out in the next 20 to 30 years. This would also total an additional $1,381,200,000 in real estate property value, assuming a $150,000 value per property. **Table IV-17 and Figure IV-3** summarize the approved and proposed DRIs located within Lake County.

It is imperative that Lake County and its jurisdictions maintain and enforce its current regulations and restrictions so that the effects of the new growth can be properly mitigated. By inspecting the current future land use map (**Figure IV-4**) it appears much of the growth will be directed towards already existing growth or areas adjacent. There might be concerns with the future growth in the southern and northeastern portions – as these areas are the most susceptible to wild fires due to their proximity to forested areas.

Table IV-17: Developments of Regional Impact (DRIs) in Lake County, Florida and Municipalities

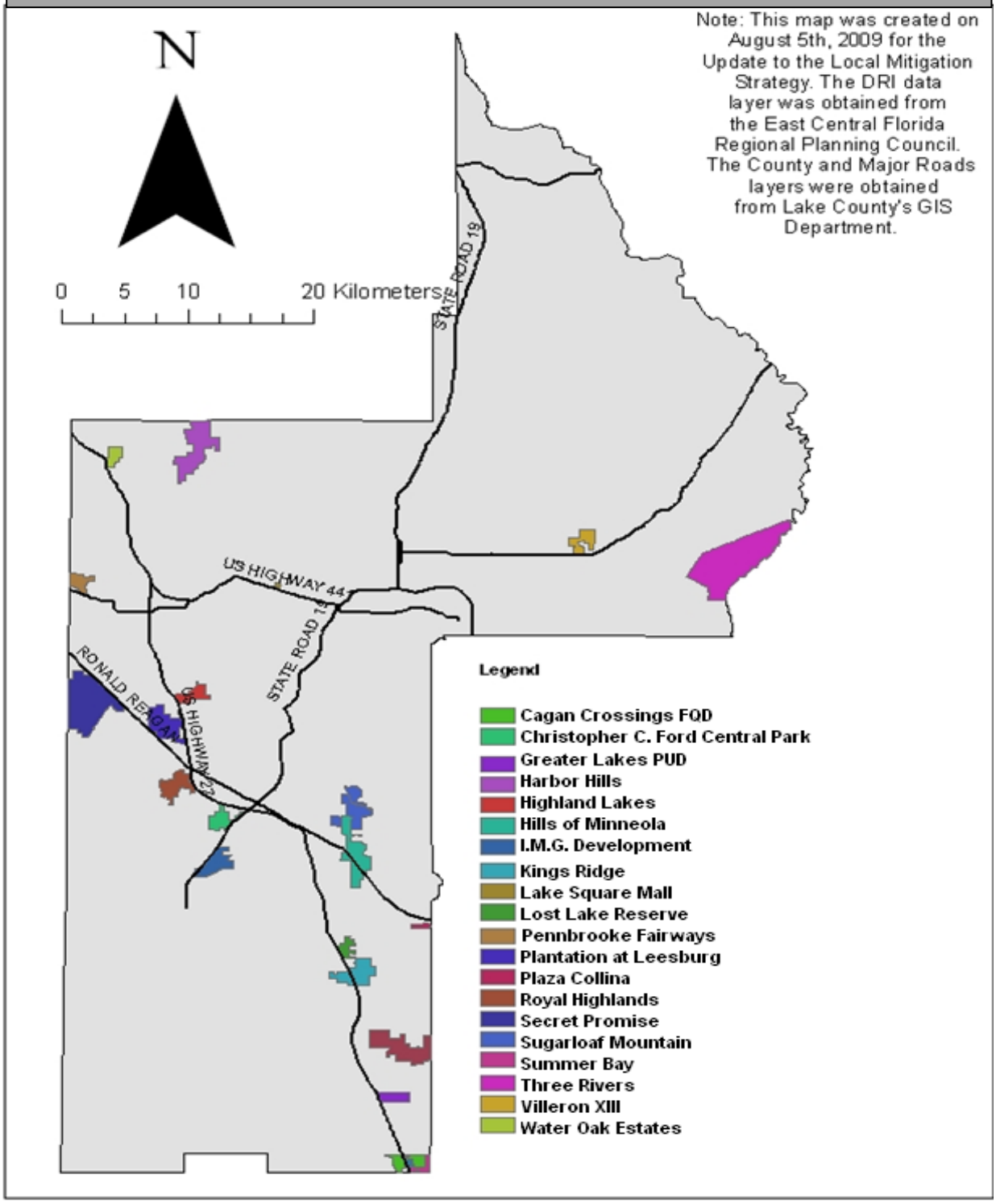
Name	*Acres*	*Dwelling Units*	*Retail Floor Area (ft^2)*	*Office Floor Area (ft^2)*	*Industrial Floor Area (ft^2)*	*Status*
Cagan Crossing	624	8,000	700,000	0	0	Approved
C. C. Ford Central Park	791	0	0	13,000	8,056,200	Approved
Greater Lakes	709	0	0	0	0	Approved
Harbor Hills	1,974	2,174	0	0	0	Approved
Highland Lakes	686	990	60,000	20,000	0	Approved
Hills of Minneola	1,894	3,927	500,000	1,000,000	1,900,000	Proposed
I.M.G. Development	1,089	3,308	190,000	150,000	0	Proposed
Kings Ridge	253	4,337	155,000	145,000	0	Approved
Lake Square Mall	62	0	58,000	0	0	Approved
Lost Lake Reserve	440	1,216	638,000	135,750	0	Approved
Pennbrooke Fairways	567	2,097	0	90,000	0	Approved
Plantation at Leesburg	1,954	3,050	0	0	0	Approved
Plaza Collina	158	200	0	0	0	Approved
Royal Highlands	520	1,500	5,000	0	0	Approved
Secret Promise	3,766	9,208	1,035,000	0	2,737,000	Proposed
Sugarloaf Mtn.	1,547	2,434	120,000	0	0	Approved
Summer Bay	297	2,631	250,000	0	0	Approved

Source: East Central Florida Regional Planning Council

In 2010, Lake County updated its Comprehensive Plan and in that process developed a new proposed Future Land Use Map (**Figure IV-5**). Wildfire concerns are addressed, as the map distinguishes densities in these areas by "rural" or "rural transition" designations. With the approval of this future land use map, vulnerability to certain natural hazards such as wildfire, will not increase. Hazards such as flooding, sinkholes, and wind damage are covered by existing land development regulations and building codes. The Comprehensive Plan for Lake County states that habitable structures need to be 18" above the 100-year food elevation of the property. Continued enforcement of respective development regulations will ensure that Lake County's vulnerability will not increase in the future.

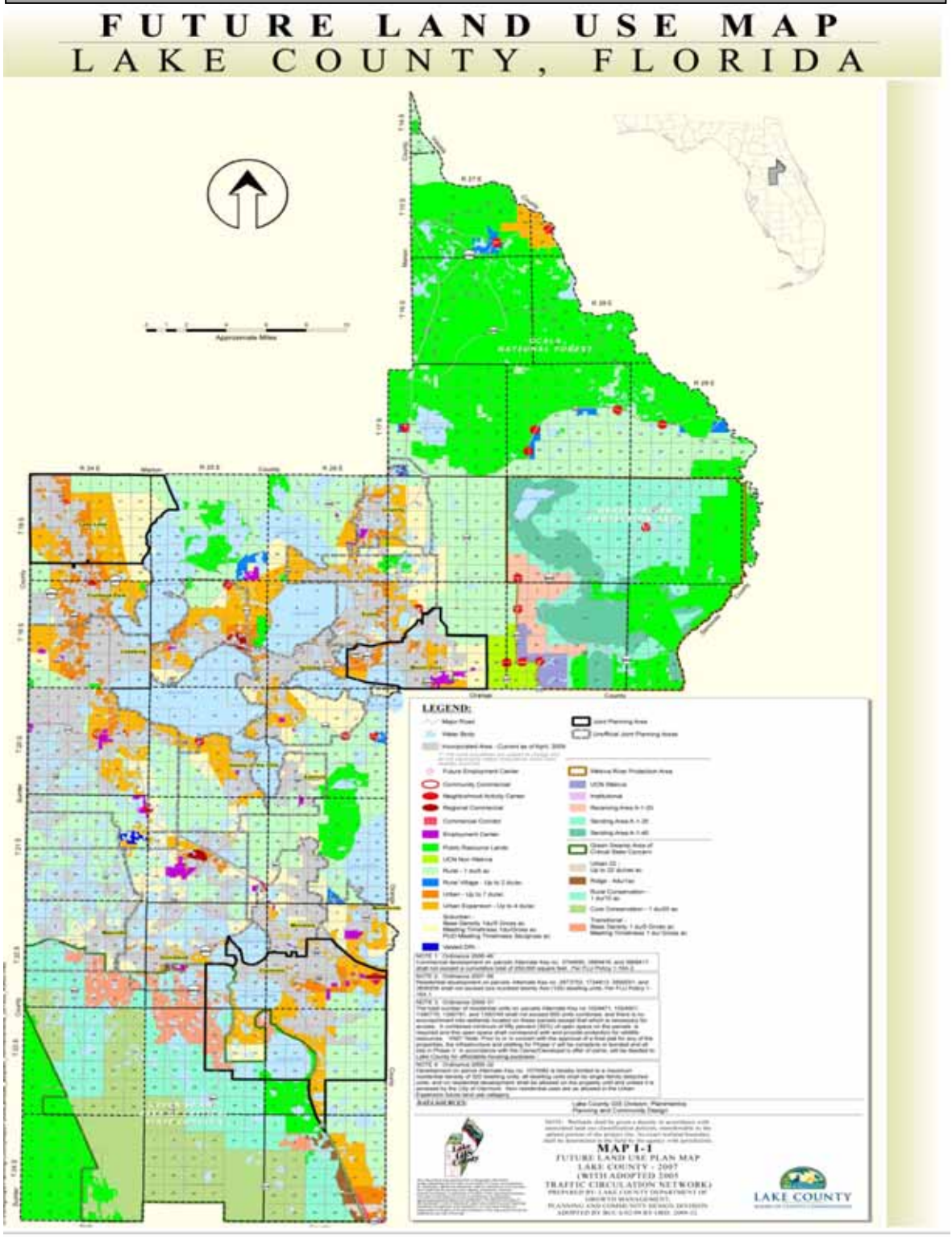
The Local Mitigation Strategy Working Group is very much dedicated to ensuring that the Local Mitigation Strategy document and the Lake County Comprehensive Plan become better integrated to ensure that planning efforts are more cohesive and less disjointed within Lake County.

Figure IV-3: Developments of Regional Impact Within Lake County, Florida and Municipalities



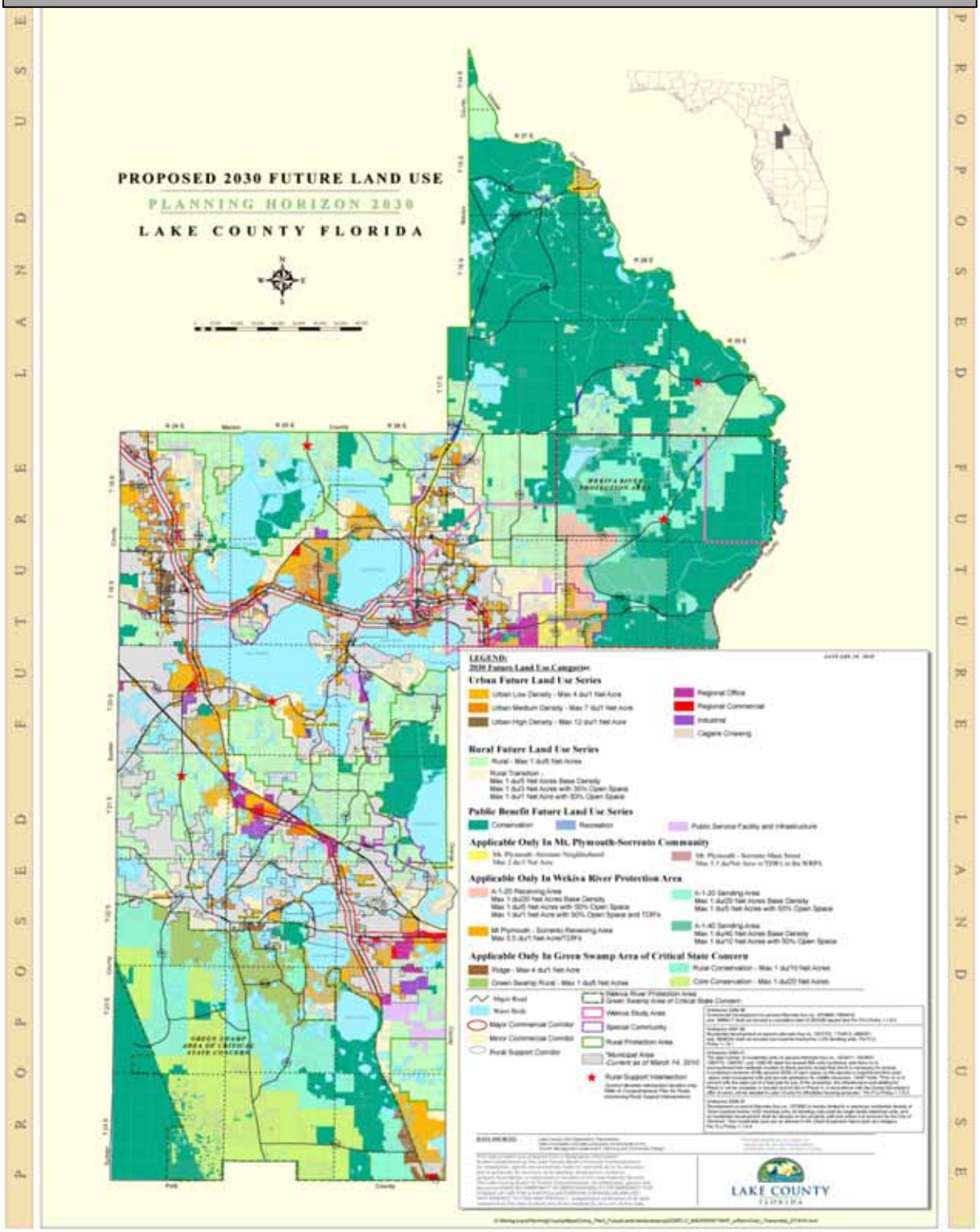
Source: East Central Florida Regional Planning Council

Figure IV-4



Source: Lake County Department of Growth Management

Figure IV-5: Proposed Future Land Use Map
Lake County, Florida



Source: Lake County Department of Growth Management

Overview of Potential Impacts from Hazards

As indicated by **Table IV-18**, each hazard can have impacts on structures and infrastructure within the communities. This table provides a general overview of the structures, infrastructure and industries that could be impacted by each hazard. The hazards given priority consideration by the LMS Working Group (flooding; high winds from tornadoes and hurricanes; and wildfires) all show that they have the greatest potential impacts on Lake County. All structures, for example, can be potentially impacted by the listed hazards, with the exception of drought, extreme heat and winter storm / freeze which typically do not impact structures. Various forms of infrastructure and industries could also be impacted by flooding, high winds or wildfire activity. This table is merely a starting point to visually depict the potential impacts from identified hazards within Lake County.

Table IV-18: Potential Impacts from Hazards
Lake County, Florida

Impacts on Structures and Infrastructure from Identified Hazards	All Structures	Mobile Homes	Poorly Constructed Homes	Non Elevated Homes	Telecommunications	Electrical utilities	Sewage Systems	Potable Water	Roadways	Waterways	Airports	Agriculture	Livestock	Fisheries	Economic Disruptions	Environmental Damage
Dam / Levee Failure	X									X						X
Drought								X		X		X	X	X		
Erosion	X								X	X						X
Extreme Heat						X						X	X			
Flooding	X				X	X	X	X	X	X		X	X	X	X	X
Hail	X				X	X						X				
Hurricanes	X				X	X	X	X	X	X	X	X	X	X	X	X
Lightning	X				X	X										
Sinkholes	X								X							
Tornadoes	X				X	X					X				X	X
Wildfires	X				X	X						X	X		X	
Winter Storm / Freeze					X	X			X		X	X			X	

Comparison of Jurisdictional Risk

The risk levels provided within this LMS thus far are based on available data for each hazard. Another mechanism to identify risk is by analyzing a few key variables by municipal jurisdiction. The previous Local Mitigation Strategy analyzed probability of occurrence; impacted area; health and safety; property; environment; and economic impacts for each hazard. This information could also be useful for analysis within this LMS. It should be noted that the previous LMS comparison of jurisdictional relative risk prepared by a consultant was severely flawed. Some jurisdictions had only a few variables scored, whereas others had many scored. Therefore, some scores were extremely high and others very low. Therefore, a low score gave the allusion that there was a low level of risk – when in reality that simply may not have been the case because some variables were left out.

Table IV-19 consists of each municipal jurisdiction, including unincorporated Lake County, evaluated by the same hazards and criteria. The general conclusion from the numbers is that, overall, the risk is relatively equal among jurisdictions, with the following exceptions:

1) The overall risk score for the wildfires is higher for Lake County due to more available rural acreage and forestland that is susceptible to wildfire activity. This increases the overall risk rating for unincorporated Lake County. The City of Umatilla borders the Ocala National Forest and is therefore more susceptible to wildfires. Therefore, this community's risk rating is slightly higher.
2) Based on historical occurrences, flooding frequency is higher in unincorporated Lake County due to the St. Johns River. The City of Clermont has also had flooding due to flooding at Emerald Lake Estates, thus the risk rating is slightly higher. The City of Tavares has also had flooding in its downtown area due to large amounts of rain, therefore, the risk rating is slightly higher.
3) The two dams identified within this LMS are within Lake County unincorporated, thus the scores for Dam/Levee Failure are higher for Lake County unincorporated than the remaining municipal jurisdictions.

Table IV-19: Lake County LMS Working Group Comparison of Jurisdictional Relative Risk

Jurisdiction / Hazard		Probability of Occurance	Impacted Area	Health & Safety	Property	Environment	Economic
Astatula							
Dam/Levee Failure	Date of Analysis : 3/1/2010	0	0	0	0	0	0
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	3	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis : 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes/Subsidence	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis : 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	3	1	1	1	0	1
Winter Storm / Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Astatula Risk Rating:							***102***
Clermont							
Dam/Levee Failure	Date of Analysis : 3/1/2010	0	0	0	0	0	0
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	4	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis : 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes / Subsidence	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis : 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	3	1	1	1	0	1
Winter Storm / Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Clermont Risk Rating:							***103***

Table IV-19: Developments of Regional Impact Within Lake County, Florida and Municipalities

Jurisdiction Hazard		Probability of Occurance	Impacted Area	Health & Safety	Property	Environment	Economic
Eustis							
Dam/Levee Failure	Date of Analysis : 3/1/2010	0	0	0	0	0	0
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	3	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis: 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes/Subsidence	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis: 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	3	1	1	1	0	1
Winter Storm / Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Eustis Risk Rating:							***102***
Groveland							
Dam/Levee Failure	Date of Analysis : 3/1/2010	0	0	0	0	0	0
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	3	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis : 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes/Subsidence	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis : 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	3	1	1	1	0	1
Winter Storm / Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Groveland Risk Rating:							***102***

Table IV-19: Lake County LMS Working Group Comparison of Jurisdictional Relative Risk

Jurisdiction / Hazard		Probability of Occurance	Impacted Area	Health & Safety	Property	Environment	Economic
Howey-In-The-Hills							
Dam/Levee Failure	Date of Analysis : 3/1/2010	0	0	0	0	0	0
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	3	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis : 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes/Subsidence	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis : 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	3	1	1	1	0	1
Winter Storm / Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Howey-in-the-Hills Risk Rating:							***102***
Lady Lake							
Dam/Levee Failure	Date of Analysis : 3/1/2010	0	0	0	0	0	0
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	3	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis : 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes/Subsidence	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis : 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	3	1	1	1	0	1
Winter Storm / Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Lady Lake Risk Rating:							***102***

Table IV-19: Lake County LMS Working Group Comparison of Jurisdictional Relative Risk

Jurisdiction / Hazard		Probability of Occurance	Impacted Area	Health & Safety	Property	Environment	Economic
Lake County Unincorporated							
Dam/Levee Failure	Date of Analysis : 3/1/2010	1	1	0	1	1	1
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	4	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis : 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes/Sunsidence	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis : 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	5	1	1	1	0	1
Winter Storm / Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Lake County Unincorporated Risk Rating:							***110***
Leesburg							
Dam/Levee Failure	Date of Analysis : 3/1/2010	0	0	0	0	0	0
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	3	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis : 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes/Subsidence	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis : 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	3	1	1	1	0	1
Winter Storm / Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Leesburg Risk Rating:							***102***

Table IV-19: Lake County LMS Working Group Comparison of Jurisdictional Relative Risk

Jurisdiction / Hazard		Probability of Occurance	Impacted Area	Health & Safety	Property	Environment	Economic
Mascotte							
Dam/Levee Failure	Date of Analysis : 3/1/2010	0	0	0	0	0	0
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	3	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis : 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes/Subsidence	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis : 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	3	1	1	1	0	1
Winter Storm/Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Mascotte Risk Rating:							***102***
Montverde							
Dam/Levee Failure	Date of Analysis : 3/1/2010	0	0	0	0	0	0
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	3	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis : 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes/Subsidence	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis : 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	3	1	1	1	0	1
Winter Storm / Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Montverde Risk Rating:							***102***

Table IV-19: Lake County LMS Working Group Comparison of Jurisdictional Relative Risk

Jurisdiction / Hazard		Probability of Occurance	Impacted Area	Health & Safety	Property	Environment	Economic
Mount Dora							
Dam/Levee Failure	Date of Analysis : 3/1/2010	0	0	0	0	0	0
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	3	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis : 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes / Subsidence	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis : 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	3	1	1	1	0	1
Winter Storm/Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Mount Dora Risk Rating:							***102***
Tavares							
Dam/Levee Failure	Date of Analysis : 3/1/2010	0	0	0	0	0	0
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	4	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis : 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes/Subsidence	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis : 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	3	1	1	1	0	1
Winter Storm/Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Tavares Risk Rating:							***103***

Table IV-19: Lake County LMS Working Group Comparison of Jurisdictional Relative Risk

Jurisdiction / Hazard		Probability of Occurance	Impacted Area	Health & Safety	Property	Environment	Economic
Umatilla							
Dam/Levee Failure	Date of Analysis : 3/1/2010	0	0	0	0	0	0
Drought	Date of Analysis : 3/1/2010	2	4	0	1	0	0
Erosion	Date of Analysis : 3/1/2010	1	1	1	1	1	2
Extreme Heat	Date of Analysis : 3/1/2010	2	4	1	0	0	0
Flooding	Date of Analysis : 3/1/2010	3	3	1	2	1	2
Hail	Date of Analysis : 3/1/2010	2	1	1	1	0	1
Hurricanes	Date of Analysis : 3/1/2010	4	4	2	2	2	2
Lightning	Date of Analysis : 3/1/2010	5	1	1	1	0	0
Sinkholes	Date of Analysis : 3/1/2010	2	1	1	1	1	0
Tornadoes	Date of Analysis : 3/1/2010	4	1	2	3	1	2
Wildfires	Date of Analysis : 3/1/2010	4	1	1	1	0	1
Winter Storm / Freeze	Date of Analysis : 3/1/2010	4	4	1	1	2	1
Total Umatilla Risk Rating:							***103***

Legend

Probability of Occurrence

0 No probability of occurance
1 Unknown but rare occurrence
2 Unknown but anticipate an occurrence
3 100 years or less occurrence
4 25 years or less occurrence
5 Once a year or more occurrence

Impact Area

0 No developed area impacted
1 Less than 25% of developed areas impacted
2 Less than 50% of developed area impacted
3 Less than 75% of developed area impacted
4 Over 75% of developed area impacted

Health & Safety

0 No Health and Safety impact
1 Few injuries/illnesses
2 Few fatalities but many injuries/illnesses
3 Numerous fatalities

Property

0 No property damage
1 Few properties destroyed - few properties damaged
2 Few destroyed - many damaged
2 Few damaged - many destroyed
3 Many properties destroyed and damaged

Environment

0 Little or no environmental damage
1 Resources damaged with short term recovery practical
2 Resources damaged with long term recovery feasible
3 Resources destroyed beyond recovery
3 High direct & high indirect costs

Economic

0 No economic impact
1 Low direct and/or low indirect costs
2 High direct & low indirect costs
3 Low direct & high indirect costs

Sources

East Central Florida Regional Planning Council. Accessed online at www.ecfrpc.org

Lake County Department of Growth Management. Accessed online at www.lakecountyfl.gov

National Agricultural Statistics. USDA. 2007.

KBDI Report Archive. Florida Department of Agricultural and Consumer Affairs. Florida Division of Forestry. http://flame.fl-dof.com/cgi-bin/KbdiArchiveListing.py. Accessed July 23, 2009.

University of South Florida. http://fcit.usf.edu/florida/maps/pages/11100/f11137/f11137.htm. Accessed March 1, 2010

WFTV. Sinkholes Threaten Homes, Family Evacuated. http://www.wftv.com/news/22849666/detail.html. Accessed April 1, 2010.

V. Mitigation Goals, Objectives and Actions

What has changed?

The intent of this narrative is to provide more detail for each new project instead of simply listing each project. Also, instead of using the Mitigation 20/20 software, as was used in the last update, it was decided that the Working Group would integrate STAPLEE into the prioritization process for mitigation initiatives.

It is in this section that the Local Mitigation Strategy identifies goals, objectives and policies, as well as evaluates mitigation initiatives. The Lake County Emergency Management Division is responsible for maintaining the Hazard Mitigation Initiatives database, and current project lists can be requested from the Division upon request at any time.

Mitigation initiatives are any actions that seek to reduce the long-term vulnerability of a community to a given hazard or set of hazards. Special consideration is placed on the long-term aspect of mitigation actions. The more long–lasting the actions are, the more cost effective they become. This is certainly a criterion taken into consideration in the project prioritization process.

The 2010 update identifies several new and exciting projects that, if completed, will lower Lake County's vulnerability to natural hazards. While new projects were submitted to the Local Mitigation Strategy working group, there still are a number of projects on the list to be pursued and completed by the local jurisdictions as funding becomes available. The following Goals and Objectives have been reviewed by the Lake County LMS Working Group for the 2010 update and are as follows:

LMS Goals and Objectives – Lake County, Florida

1. Local government will have the capability to develop, implement and maintain effective mitigation programs

- Data and information needed for defining hazards, risk areas and vulnerabilities will be readily available
- Emergency services organizations will have the capability to detect emergency situations and promptly initiate emergency response operations
- The capability to effectively utilize available data and information related to mitigation planning and program development will be available
- The effectiveness of mitigation initiatives implemented in the community will be measured and documented
- There will be a program to derive mitigation "lessons learned" from each significant disaster event occurring in or near the community
- Up-to-date technical skills in mitigation planning and programming will be available for the community

2. All sectors of the community will work together to create a disaster resistant community of the year

- A business continuity and recovery program will be established and implemented in the community
- Local agencies and organizations will establish specific interagency agreements for the development and implementation of mitigation-related projects and programs
- Local elected governing bodies will promulgate the local mitigation plan and support community mitigation programming
- Outreach programs to gain participation in mitigation programs by business, industry, institutions and community groups will be developed and implemented
- The community will be periodically updated regarding local efforts in mitigation planning and programming

- The community's public and private sector organizations will partner to promote hazard mitigation programming throughout the community

3. The community will have the capability to initiative and sustain emergency response operations during and after a disaster

- Designated evacuation routes will be maintained and improved wherever possible to remain open before, during and after disaster events
- Designated evacuation shelters will be retrofitted or relocated to ensure their operability during and after disaster events
- Local emergency services facilities will be retrofitted or relocated to withstand the structural impacts of disasters
- Response capabilities will be available to protect visitors, special needs individuals, and the homeless from a disaster's health and safety impacts
- Shelters or structures for vehicles and equipment needed for emergency services operation will be retrofitted or relocated to withstand disaster impacts
- Utility and communications systems supporting emergency services operations will be retrofitted or relocated to withstand the impacts of disasters
- Vehicle access routes to key health care facilities will be protected from blockage as a result of a disaster

4. The continuity of local government operations will not be significantly disrupted by disasters

- Buildings and facilities used for the routine operations of government will be retrofitted or relocated to withstand the impacts of disasters
- Community redevelopment plans will be prepared to guide decision-making and resource allocation by local government in the aftermath of a disaster
- Important local government records and documents will be protected from the impacts of disasters

- Plans and programs will be available to assist local government employees in retrofitting or relocating their homes to ensure their availability during a disaster

- Plans will be developed, and resources identified, to facilitate reestablishing local government operations after a disaster

- Redundant equipment, facilities, and/or supplies will be obtained to facilitate reestablishing local government operations after a disaster

5. Mitigation efforts will be a continuing activity to protect the health, safety and welfare of the community's residents

- Adequate systems for notifying the public at risk and providing emergency instruction during a disaster will be available in all identified hazard areas

- Effective structural measures will be developed to protect residential areas from the physical impacts of disasters

- Facilities in the community posing an extra health or safety risk when damaged or disrupted will be made less vulnerable to the impacts of a disaster

- Public and private medical and health care facilities in the community will be retrofitted or relocated to withstand the impacts of disasters

- Residential structures will be removed or relocated from defined hazard areas

- Residential structures will be retrofitted to withstand the physical impacts of disasters

- Safety devices on transportation networks will not fail because of a disaster

- Structures, facilities and systems serving visitors to the community will be prepared to meet their immediate health and safety needs

6. The policies and regulations of local government will support effective hazard mitigation programming throughout the community

- There will be adequate resources, equipment and supplies to meet victims' health and safety needs after a disaster

- All reconstruction or rehabilitation of local government facilities will incorporate techniques to minimize the physical or operational vulnerability to disasters

- Land use policies, plans and regulations will discourage or prohibit inappropriate location of structures or infrastructure components in areas of higher risk
- Local governments will ensure that hazard mitigation needs and programs are given appropriate emphasis in resource allocation and decision-making

- Local governments will establish and enforce building and land development codes that are effective in addressing the hazards threatening the community

- Local governments will protect high hazard natural areas from new or continuing development

- Local jurisdictions will participate fully in the National Flood Insurance Program and the associated Community Rating System

- New local government facilities will be located outside of hazard areas and/or will be designed to not be vulnerable to the impacts of such hazards

- Reconstruction and rehabilitation of structures and utilities in the community will incorporate appropriate hazard mitigation techniques

- Regulations will be established and enforced to ensure that public and private property maintenance is consistent with minimizing vulnerabilities to disaster

7. Community residents will have homes, institutions and places of employment that are less vulnerable to disasters

- Economic incentive programs for the general public, businesses and industry to implement structural and non-structural mitigation measures will be established

- Local government will support key employers in the community in the implementation of mitigation measures for their facilities and systems

- Programs for removal, relocation or retrofitting of vulnerable structures and utilities in hazard areas will be established and implemented

- The vulnerability to disasters of schools, libraries, museums, and other institutions important to the daily lives of the community will be minimized

8. The community's economic vitality will be less threatened by a disaster

- Components of the infrastructure needed by the community's businesses and industries will be protected from the impacts of disaster
- Local government emergency response and disaster recovery plans will appropriately consider the needs of key employers in the community
- Local government will encourage community businesses and industries to make their facilities and operations disaster resistant
- Local government will establish programs, facilities and resources to support business resumption activities by impacted local businesses and industry
- Local government will implement programs to address public perceptions of community condition and functioning in the aftermath of a disaster
- Local government will strive to diversify the employment base of the community

9. The community's infrastructure will be better protected and less vulnerable to a disaster

- Local governments will encourage hazard mitigation programming by private sector organizations owning or operating key community utilities
- Routine maintenance of the community's infrastructure will be done to minimize the potential for system failure because of or during a disaster
- Sources of energy normally used by the community will not be unwarrantedly vulnerable to the impacts of a disaster
- The telecommunications systems and facilities serving the community will not be unwarrantedly vulnerable to the impacts of a disaster
- Transportation facilities and systems serving the community will be constructed and/or retrofitted to minimize the potential for disruption during a disaster
- Water and sewer services in the community will not fail because of a disaster

10. Members of the community will have the opportunity to learn of the hazards threatening local areas and the techniques to minimize vulnerability to those hazards

- All interested individuals will be encouraged to participate in hazard mitigation planning and training activities.

- Education programs in risk communication and hazard mitigation will be established and implemented

- Managers of public facilities will be knowledgeable in hazard mitigation techniques and the components of the community's mitigation plan

- Technical training in mitigation planning and programming will be given to appropriate local government employees

- The owners and operators of businesses and industries in the community will be knowledgeable in appropriate hazard mitigation techniques

- The public living or working in defined hazard areas will be aware of that fact, understand their vulnerability and know appropriate mitigation techniques

- The public will have facilitated access to information needed to understand their vulnerability to disasters and effective mitigation techniques.

Prioritization of Projects

Per FEMA requirement §201.6(c)(3)(iii), all projects submitted to the Local Mitigation Strategy working group and included on the mitigation initiative list must be prioritized using a cost-benefit review process. During the last update in 2003 a program called Mitigation 20/20 was used to rank Lake County's mitigation projects. Unfortunately, at some time the database containing all the projects and their rankings became corrupted and no longer useable. Therefore, the Emergency Management Division has taken a couple of approaches to proceed forward with the ranking process. First, it was decided to use a different method to rank future projects. At the first meeting Local Mitigation Strategy Update Meeting held in June of 2009, the working group agreed that it would be acceptable use the STAPLEE method to prioritize the mitigation projects. A model STAPLEE form was obtained from FEMA and distributed to the working group members.

The STAPLEE acronym stands for Social, Technical, Administrative, Political, Legal, Economic, and Environmental factors and the dimensions along which each project is measured. The STAPLEE system assesses each project using a scale that allows for a raw score to be derived. There were 7 different dimensions that were further divided into 22 smaller criteria considerations. The projects were rated using a scale of 1 to 5 for each smaller unit with a 1 being very unfavorable and a 5 being very favorable. A 3 would be considered neither favorable nor unfavorable. **Table V-1** lists the dimensions along with a short description of what should be measured by each. Each criteria consideration gives some description or guiding questions that might be used in rating the project for that consideration.

The higher an initiative scored the higher it would be placed on the priority list since this meant it received more "favorable" scores on the criteria consideration.

Table V-1: Dimensions and Criteria Considerations for the STAPLEE Hazard Mitigation Project Analysis		
Dimension	**Criteria**	**Description or Guiding Question**
Social	Community Acceptance	Will this project not be objectionable to a large majority of the population being impacted by the hazard?
	Effect on Segment of Population	Thinking of all immediate, direct, and indirect side effects of the implementation of this project, what will the effect be on the segment of the population (things to consider: property access, construction noise, inconvenience of actions)?
Technical	Technically Feasible	Most of the projects are at such a scale that they need to be technically feasible at the time they are submitted to the list.
	Long term Solution	Does the project in, and of, itself or as a part of a large comprehensive program represent a long term solution to the problem at hand?
	Secondary Impacts	Secondary impacts include things like scalability of solutions and potential re use of technologies used in the project.
Administrative	Staffing	Do you have enough staff to administer and manage the project?
	Funding Allocation	Are there funds currently budgeted for the project?
	Maintenance/ operations	Will you have enough personnel to maintain and operate the project, if applicable?
Political	Political Support	What do the elected officials think of the project? Are they aware of it? What might they think of it?
	Local Champion	The existence of a single person or group of persons that is very vocal in their support for a project might make it easier to realize the mitigation action.
	Public Support	What does the community think about the project? Do they think it is a fair use of resources?

Legal	State Authority	Does the state have jurisdiction with this kind of project?
	Existing Legal Authority	Does the municipality have the legal authority to undertake the project?
	Potential Legal Action	Will the project potential cause legal action that might
Economic	Cost of Action	How expensive is the project?
	Benefit of Action	How many and how great are the benefits to the project?
	Contributes to economic goals	Does the project align with your community's economic goals?
	Outside funding required	Will you need outside funding to finance your share of the cost?
Environmental	Effect on land/water	What are the long term affects on the land and water on and adjacent to the site?
	Effect on Endangered Species	Will any endangered species be impacted by the project?
	Consistent with Community Environmental Goals	Will the project be consistent with the community's environmental goals?
	Consistent with Federal Laws	Will the project be in any danger of breaking any federal rules or regulations?

Thus far, there have been no projects that have been submitted to FEMA for funding consideration using the new STAPLEE criteria. All projects up until the plan update have used the old rating criteria. All new projects submitted for consideration to the LMS Working Group for the 2010 update were scored using the new criteria. The LMS Working Group still needs to rescore all of the previous LMS projects using the new STAPLEE criteria. The project listing, as shown within **Appendix I**, shows the projects ranked using both the old and new criteria. The LMS Working Group wants to ensure that not only is the

most user friendly scoring used for this process, but that all municipalities feel the rating criteria results in their projects being fairly ranked for funding consideration. The LMS Working Group will continue to refine the scoring process as needed.

Administration of Projects

The implementation and completion of approved mitigation projects will be administered by the agency or organization that proposed the initiative. On an annual basis, the Lake County Emergency Management Division, in coordination with the LMS Task Force, will check the status of the mitigation initiatives to ensure that efforts have been made to complete any projects on the LMS initiative list. Setbacks and project-specific circumstances will be documented to ensure that a detailed account of the challenges faced within Lake County is prepared.

Mitigation Initiatives

Since the last LMS plan update, Lake County has completed 13 projects, with four (4) projects that were terminated. Explanations for these terminations are within **Table V-2**, but generally speaking the projects that were terminated were pursued by another agency or simply changed in scope. Projects that remain open are generally open due to the fact that match funding is even more difficult to find within local government budgets and mitigation initiatives and generally do not take precedence over providing the basic services that are expected to be provided by local governments to citizens. Also, it is important to note that although a project may be listed as completed, that does not mean it was necessarily funded by FEMA. The initiative may have been completed by the local government on its own or was funded by alternative funding sources. This LMS document is meant to be a planning tool that is not completely reliant on FEMA assistance to add, fund, or complete projects identified within the plan.

It is anticipated that the list of completed projects will grow, as there a few mitigation projects that are currently underway as of the plan update that are not yet completed. The intent is to identify a comprehensive range of hazards with involvement by all jurisdictions

within Lake County. Every jurisdiction has an identifiable project / action item within the LMS project listing. **Appendix I** identifies all of the projects, listed by priority score.

Table V-2: Projects Completed or Terminated Since Last LMS Submittal				
Jurisdiction	**Project Name**	**Hazard(s) Mitigated**	**Status**	**Comments**
Clermont	Retrofit Storm Water System, Bloxam	Flooding	Completed	
Eustis	Harden Room, Water Tower for Public Safety Radio System	High Winds	Terminated	Lake County initiated 800 MhZ radio system hardening project
Howey-in-the-Hills	Generator for Well 2 and SCADA system	Flooding	Completed	
Howey-in-the-Hills	Warning Alert and GPS Equipment/ Generator	Various	Terminated	The project has been refined for the 2010 update
Lady Lake	Well Site Security System	Various	Completed	
Lake County (Unincorporated)	800 MhZ Radio System Hardening	High Winds	Completed	
Lake County (Unincorporated)	Weather Monitoring System	High Winds / Hail / Lightning	Completed	
Lake County (Unincorporated)	Storm Shielding and Emergency Power Backup for Fire Stations	High Winds	Completed	
Lake County (Unincorporated)	Astor Topography Mapping	Flooding	Completed	
Lake County (Unincorporated)	Lake Claire Home Flooding	Flooding	Completed	
Lake County (Unincorporated)	Harden Lake County EOC	High Winds/ Flooding	Terminated	Did not pursue; County pursuing new EOC building
Lake County (Unincorporated)	Dead River Estate Land Purchase	Flooding	Completed	
Lake County (Unincorporated)	NE Community Park Purchase	Flooding	Completed	
Leesburg	Harden Community Center	High Winds	Completed	

Table V-2: Projects Completed or Terminated Since Last LMS Submittal				
Leesburg	Reverse 911 System	Various	Terminated	County purchased a Reverse 911 System
Mount Dora	Fire Dept. Substation	Various	Completed	
Mount Dora	Hardening of Public Safety Building	High Wind	Completed	

New Projects

These projects include hardening fire stations, flood control projects, and the creation of a community wildfire protection plan. A brief description of each project can be found within **Table V-3** below; these projects are also listed in the comprehensive project listing within **Appendix I**, sorted by hazard; priority score and jurisdiction.

Table V-3: Projects Added to Project Listing- With Detailed Information
The Villages- Fire Station No. 43 Hurricane Hardening This project would shutter all exposed windows, install protective screening on 3 bay doors at Fire Station No. 43. *Estimated Cost: $18,356.00*
The Villages- Fire Station No. 43 Hurricane Hardening and Uninterruptable Power Supply This project would shutter all exposed windows, install protective screening of 3 bay doors and install an uninterruptable power supply system at Fire Station No. 43. This fire station is the busiest within The Villages and serves the most vulnerable portions of the community. *Estimated Cost: $73,143.00*
Florida Division of Forestry- Develop a Community Wildfire Protection Plan for Lake County This project would seek to develop a Community Wildfire Protection Plan for the county so that its vulnerability to wildfires might be reduced. *Estimated Cost: $1*

Table V-3: Projects Added to Project Listing- With Detailed Information
Astor- Stormwater Management-Bass and Indigo Roads This project would seek to reduce flooding on the roads mentioned above by regrading the swales to meet the County's current level of service, design and install culverts to meet the County's level of service, and construct a wet detention pond to the east of Indigo Road on vacant upland, adjacent to existing wetland. This jurisdiction has continued compliance with NFIP. *Estimated Cost: $1,106,000.00*
Astor- Stormwater Management- James Street, Lisa Street, and Trespass Trail This project would seek to make stormwater improvements at the above mentioned locations. It would do so by restoring or improving the drainage system to the County's level of service, by reconstructing culverts C509 and C534 with 30 inch by 30 inch CBC and restore the remaining downstream as an open channel, and by installing an end-of-pipe treatment at the most downstream pipe location to provide some water quality treatment. This jurisdiction has continued compliance with NFIP. *Estimated Cost: $649,000.00*
Astor- Stormwater Management-Ward Street This project would seek to reduce flooding on the above mentioned road by regrading the swales to meet the County's current level of service, designing and installing culverts to meet the County's current level of service, and expand the pond east of Alco Road and Smith Street to provide additional storage as well as water quality treatment. This jurisdiction has continued compliance with NFIP. *Estimated Cost: $4,010,000.00*

Table V-3: Projects Added to Project Listing- With Detailed Information
Astor- Emergency Shelter-First Baptist Church of Astor, Family Life Center This project would seek to complete the Family Life Center so that it might be used as an emergency shelter during times of need. The Astor area's problems with flooding and wildfires have long been known, and yet they are still without an adequate sheltering facility. *Estimated Cost: $800,000*
Clermont – Center Lake Flood Control Project This project will seek to alleviate flooding at Center Lake, a land-locked basin. This jurisdiction has continued compliance with NFIP. *Estimated Cost: $3,500,000.00*
Unincorporated Lake County- Tornado Shelter Program for Mobile Home Residents With over 40,000 mobile homes in Lake County it is imperative that the residents of these homes have adequate shelter in the event of a tornado warning or watch. This program would conduct a study for the most suitable locations in each of the County's three regions, construct them, and notify the citizens. *Estimated Cost: $150,000*
Howey-in-the-Hills Central Avenue Property Acquisition There is a condemned building that has suffered damages from fire, flooding, and high winds. The initiative would acquire the property and building for demolition and return the property to open space. Further damage to the property will result in damage and/or destruction of neighboring properties. Neither the owner nor the Town has the financial means to demolish or refurbish the property. *Estimated Cost: $100,000*

Table V-3: Projects Added to Project Listing- With Detailed Information
Howey-in-the-Hills Equipment for Debris, Erosion, Flooding, and Fire Controls The initiative would provide equipment to assist in debris removal from high wind hazard events, filling in areas of erosion and directing water in flooding conditions, setting fire lines, etc. *Estimated Cost: $75,000*
Howey-in-the-Hills Ground Storage Tank/High Service Pumps The initiative would construct a .5 MG ground storage tank and high service pumps for a potable water system. Howey's water system currently relies on a single, antiquated small, elevated water storage tank for storage of potable water. In a hazard event, the water system's fire fighting and drinking water supply capacity would be seriously compromised. By constructing a ground storage tank and associated high service pumps, the Town would have a much more secure water storage system, and it would be available for use even if the elevated tank is damaged or destroyed. *Estimated Cost: $ 480,000*
Howey-in-the-Hills Town Library Hurricane Hardening/Uninterruptable Power Supply The Library is an old convenience store converted to a library in the 1960s. There are large plate glass windows along the front of this building that, if shattered during a hazard event, could become a danger to the public as well as to the contents of the building. The initiative would enclose the exterior plate glass window areas leaving two to three foot glassed areas at the top of the window, which will be shuttered. The glass entrance doors and glass panels on each side of the doors would also be shuttered. The last part of this initiative would supply the building with an uninterruptable power supply which would maintain the integrity of the building's contents. *Estimated Cost: $ 49,000*

Table V-3: Projects Added to Project Listing- With Detailed Information
Howey-in-the-Hills Lightning Rod System and Surge Protectors for all Government Buildings The initiative would protect government facilities from lightning strikes and power surges that may cause loss of power, damage to structures, damage to critical equipment necessary to perform duties and tasks, damage to wells that provide potable water to users, and injury to personnel within the buildings. *Estimated Cost: $ 100,000*
Howey-in-the Hills Public Works Uninterruptible Power Supply for SCADA Water System The Public Works SCADA system for the potable water supply does not have an uninterruptible power supply source. The SCADA system is a necessary component for supplying the potable water to users. The initiative would provide an uninterruptible power supply to the SCADA System which is needed to keep the system from shutting down. A loss of power will shut the SCADA System down preventing alarms from sounding and notifications to the appropriate personnel that the system is experiencing problems. *Estimated Cost: $15,000*
Howey-in-the-Hills Town Storage Hurricane Hardening The Town's Storage facility for government records and archive files is located in a space that is attached to the Town's Library. There is a large exterior window that has two plate glass panes that flying debris could damage allowing for damage to the government records and archived files. The entrance to the storage facility is a glass door that could also easily be shattered or broken by an event. The initiative would remove the exterior window and block up the opening with cement blocks matching the exterior of the building. The glass door should be replaced with a steel door. *Estimated Cost: $12,000*

Table V-3: Projects Added to Project Listing- With Detailed Information
Howey-in-the-Hills GPS / GIS Software & Plotter Equipment This initiative was first presented in 2004 under Initiative Name LA-0013 Warning Alert & GPS Equipment / Generator. The only part of this initiative that has not been mitigated was the GPS/GIS Software & Plotter Equipment. All others have been mitigated. This initiative is an update to the original submitted in 2004. The purchase of the GPS/GIS equipment will enable the Town of Howey-in-the-Hills to analyze and map potential hazards using local, state, and federal data. In addition, the technology will be utilized to locate and delineate hazards, as well as damage in the field. Examples of applications include overlaying flood hazard zones and parcels within the Town and providing the coordination of wildfires in real-time to County and State Officials. The use of GIS software will enable the Town to rapidly assess the geographic location and costs associated with a disaster. For example, using digital map layers and the County Property Appraiser's database, the Town will be able to identify the path of a tornado on the computer and summarize the market value of affected properties. This digital mapping information will be passed on to County, State, and Federal officials in order to determine the need for emergency aid and FEMA intervention. The GIS software will be installed on desktop PCs in the Police Department, as well as on laptop computers for mobile use in a police vehicle, thereby providing real-time access to map information. *Estimated Cost: $40,000*

Table V-3: Projects Added to Project Listing – with Detailed Information
Howey-in-the-Hills Police Department Hurricane Hardening /Telephone System Upgrade The Police Department serves as the "EOC" for the Town of Howey-in-the-Hills. The building was built in the 1950s as a residence and converted to the Police Department in the 1980s. The exterior windows in the building are old casement type windows and not hurricane compliant. The initiative would replace the old windows and add roll down hurricane shutters for Hazard events. This would include the exterior doors that are also not hurricane compliant. The telephone system is not a standalone system, as it comes from the Town Hall next door. When their phone system does down so does the Police Department's phones. Upgrading the phone system would provide a standalone system for the Police Department and provide better communications with the residents, businesses, and surrounding areas (including State/Local EOCs) during hazardous events. *Estimated Cost: $55,000*
Howey-in-the-Hills Fire Controls The initiative would install six (6) new fire hydrants in an area where none currently exist and to replace approximately 75 fire hydrants that do not have isolation valves. Current hydrants were installed in the 1930s. Growth over the years has occurred where no fire hydrants exist causing the need for the new six hydrants for protection in a hazard event. Repair of the existing hydrants is not an option as parts are not available; replacement is the only option available. If work on any hydrant is needed, the whole potable water system is forced to be shut down until work is completed. Should there be a break in a hydrant due to a hazard event, the water tower could be drained completely causing the water tower to become a potential hazard as well as causing the potable water supply to be unavailable to users. *Estimated Cost: $1,000,000*

Lake County has a wide range of mitigation projects that, when completed, will make the community a safer place. The plan has a comprehensive range of projects, with the Flooding and High Wind categories having the most projects. The Lightning and Wildfire categories also have a project listed for each. There is also a comprehensive list of projects under the "All Hazards" category. These are projects to mitigate facilities, etc. that would address threats caused by all hazards. The retrofit of an Emergency Operations Center, for example, would benefit any emergency situation by providing a safe and secure location for first responders and emergency management personnel. Therefore, the project listing is comprehensive, with every hazard having more than one project listed within the LMS.

National Flood Insurance Program

The Mitigation Directorate, a component of the Federal Emergency Management Agency (FEMA), manages the National Flood Insurance Program (NFIP) and associated Community Rating System (CRS). The Florida Division of Emergency Management acts as the pass through agency for Florida jurisdictions. Nearly 20,000 communities across the United States and its territories participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce future flood damage. In exchange, the NFIP makes Federally-backed flood insurance available to homeowners, renters, and business owners in these communities. Community participation in the NFIP is voluntary.

Flood insurance is designed to provide an alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. In addition to providing flood insurance and reducing flood damages through floodplain management regulations, the NFIP identifies and maps the Nation's floodplains. Mapping flood hazards creates broad-based awareness of the flood hazards and provides the data needed for floodplain management programs and to actuarially rate new construction for flood insurance.

Table V-4 summarizes the participation in the Community Rating System Program by the individual jurisdictions and **Table V-5** provides the number of NFIP policy holders.

Table V-4 Communities Participating in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) in Lake County		
Jurisdiction	**NFIP**	**CRS Rating**
Astatula	Yes	No
Clermont	Yes	No
Eustis	Yes	No
Fruitland Park	Yes	No
Groveland	Yes	No
Howey-in-the-Hills	Yes	No
Lady Lake	Yes	No
Leesburg	Yes	No
Mascotte	Yes	No
Minneola	Yes	No
Montverde	Yes	No
Mount Dora	Yes	No
Tavares	Yes	No
Umatilla	Yes	No
Lake County Unincorporated	Yes	7

The Lake County Emergency Management Division and the Local Mitigation Strategy Working Group will continue to promote and educate the community about the benefits of this program and its implications on reducing flood hazards throughout the community. Jurisdictions within Lake County are continuing to conduct a variety of activities associated with the NFIP. Activities include, but are not limited to:

- Collecting flood elevation certificates
- Eliminating repetitive flood loss properties
- Informing residents of map changes
- Adopting new maps

As the jurisdictions of Lake County adopt the Local Mitigation Strategy, the list of actions related to the NFIP within individual jurisdictions will continue to be refined and updated

to reflect the most comprehensive list of possible of activities within the LMS relating to the NFIP and CRS.

Table V-5 National Flood Insurance Program Policy Holders, Lake County, Florida			
Jurisdiction	**Policy Holders (as of 7/31/09)**	**Insurance In force**	**Written Premium In Force**
Astatula	4	$644,800	$1,954
Clermont	198	$53,190,200	$81,854
Eustis	126	$29,215,800	$52,495
Fruitland Park	22	$4,627,600	$8,122
Groveland, City of	51	$11,651,900	$31,687
Howey-in-the- Hills	15	$3,764,900	$5,403
Lady Lake	135	$26,756,300	$44,364
Leesburg	373	$74,417,100	$173,142
Mascotte	28	$4,600,300	$9,991
Minneola	58	$12,032,000	$25,228
Montverde	28	$6,706,500	$10,177
Mt. Dora	176	$46,304,300	$59,504
Tavares	266	$51,765,100	$114,288
Umatilla	21	$4,713,700	$8,364
Lake County Unincorporated	3,308	$734,643,800	$1,307,258

Source: Lake County Comprehensive Emergency Management Plan

Repetitive Loss Properties

As of the LMS plan update, there is one remaining repetitive loss property within Lake County- and the Lake County Department of Public Works is working with the property owner(s) to find possible solutions to the flooding problems. Total payments made for all repetitive flood properties in the past has been $79,540.33 and Lake County and jurisdictions are continuing to work with property owners to resolve all issues related to repetitive flooding.

Local Match Requirement / Potential Funding Sources

A very important component of the application process for mitigation process is the identification of funding source(s) to meet the local match requirements for respective projects. While cash match provided by the applicant is an option, the identification of outside funding sources is often sought to create less financial hardship for the applicant. There are a variety of other programs that could potentially be viable sources for mitigation projects. While they all have their own programmatic rules and requirements, there is often the ability to use these programs as tools and resources to assist in the completion of mitigation projects.

The first source of funding may come from the various programs sponsored by the Florida Division of Emergency Management (FDEM). The Emergency Management Preparedness and Assistance (EMPA) Trust Fund, for example, is one potential source. This program provides grants to county emergency management programs within the State of Florida – which are intended to further state and local emergency management initiatives. Various Federal programs under the direction of the FDEM Mitigation Unit are a potential resource as well, such as the National Flood Insurance Program, the Flood Mitigation Assistance Program, the Pre-Disaster Mitigation Program, the Repetitive Flood Claims Program, and the Severe Repetitive Loss Program. There is also the Residential Construction Mitigation Program (RCMP), which provides technical and financial resources to homeowners for

hurricane retrofitting. If homeowners are recommended for the program, they are eligible for a forgivable loan to complete the retrofitting recommendations.

There are also other programs offered by the Florida Department of Community Affairs , such as the Community Development Block Grant (CDBG) Program and Florida Communities Trust; the Florida Department of Environmental Protection's Florida Coastal Management Program, and various programs under the U.S. Army Corps of Engineers; U.S. Department of Agriculture; U.S. Department of Commerce; U.S. Department of Homeland Security; and the U.S. Department of Housing and Urban Development. This list is not exhaustive, as there are also various other agencies and organizations that provide funding opportunities. This list will continue to be improved upon and shared with mitigation partners in order to assist them in their planning and funding efforts.

Project Timelines

Historically, there has not been an aggressive timetable to complete projects within the LMS with a specified timeframe. As discussed earlier, the financial realities of local governments has been the predominant factor in projects not being completed or being stalled in implementation. The reality is that projects have been submitted when funding is available. Therefore, if a jurisdiction submits a project under a declared disaster, that project may be ranked lower than a more expensive project than a jurisdiction has identified within the LMS. Even though the project being submitted is ranked lower, that does not mean that the jurisdiction should not submit the project for funding consideration. For planning purposes, the following schedule will be used as a general benchmark to achieve for implementing projects:

- Scores 90 and higher (New STAPLEE Method): Implemented within Two Years of 2010 LMS Update
- Scores 89 and lower (New STAPLEE Method): Implemented Two Years or More After 2010 LMS Update
- Scores 30 and higher (Previous Mitigation 20/20 Method): Implemented within Two Years of 2010 LMS Update

- Scores 29 and lower (Previous Mitigation 20/20 Method): Implemented Two Years or More After 2010 LMS Update

It should be noted that the goal of the LMS Task Force is to ensure all projects are using the same scoring criteria as soon as possible. Until then, the projects are listed with the new STAPLEE method and the previous Mitigation 20/20 method.

VI. Plan Maintenance

What has changed?

Compared to the last LMS, not much has changed with the maintenance of the plan. One of the largest differences is the database used to track mitigation projects. The Mitigation 20/20 database became corrupt and a new one was created. This database will still be maintained by Lake County Emergency Management, which will coordinate with participating jurisdictions on the progress of mitigation projects.

Lake County continues to maintain the Local Mitigation Strategy as a mechanism to guide mitigation actions that are being pursued in both the incorporated and unincorporated areas. One of the primary methods by which to maintain the plan is to track the status of the mitigation initiatives. The Lake County Emergency Management Division has devised a database management system that will track the projects as they are completed in the county.

At each LMS meeting, working group representatives will report on the current status of projects, and if a project's scope or details have changed. It may also be reported that the project has been cancelled all together, in which case the project will be removed from the mitigation initiative prioritization list with an explanation. All changes and activities as a result of the LMS meeting will be considered part of the overall evaluation process, which will be administered and documented by the Emergency Management Division and become an official component of the LMS. With the County gradually incorporating LMS activities within the plan, this will make for a much easier plan update in five years –keeping the update schedule on target. It is anticipated that the Emergency Management Division will continue to update the plan and be the responsible organization for this activity.

The LMS Working Group will use the following criteria, among others, as a starting point for assessing the overall LMS process:

- Goals and objectives address current and expected conditions
- The nature, magnitude and/or type of risks have changed
- The current resources are appropriate for implementing the plan
- There are implementation problems, such as technical, political or coordination issues with other agencies
- The outcomes have occurred as expected (demonstrating progress)
- The agencies and other partners participated as originally proposed

The Lake County LMS working group will make all attempts to complete projects within five years (before the next plan update). Partnerships with other various departments, divisions, or entities (such as the Public Works and Growth Management Departments or the Board of County Commissioners) should be forged early on so that the necessary data and other information will be gathered with time left to complete the update process.

The LMS Working Group will meet at least annually to discuss any projects or changes that might have occurred that would be addressed by the update. These meetings will be organized by the Lake County Emergency Management Division. The Emergency Management Division will also maintain an up-to-date list of all active working group members.

Public Participation

As was the case during this LMS update, electronic notifications will be sent to all working group members in the future and those groups or individuals who have expressed interest in the Local Mitigation Strategy. Public meeting notifications will continue to be placed on the Lake County web site, as well as in the lobby of the County Administration Building. As noted within the Bylaws (**Appendix II**), meetings will be posted at least 10 working days prior to any meeting.

Suggestions have been made that would allow for more people to participate such as utilizing teleconference software, holding meetings more often, setting up an online forum that would allow citizens to comment on the Local Mitigation Strategy and express their vision for a safer Lake County.

It should be noted that the public meetings that will be held with all jurisdictions to adopt the latest Lake County LMS will provide additional opportunities for public officials and the citizens of Lake County to provide input on the LMS update. Upon approval by FEMA, the document will also be posted on the Lake County web site for viewing by the public.

Capability Assessment

In order to better understand the successes and weaknesses of the current LMS update, all participants were asked to fill out a capability assessment of both the planning process as they had experienced it and their mitigation initiatives list. Most people, generally, were pleased with both the planning process and their jurisdiction's project list. Many mentioned that it seemed that the projects addressed their main concerns with natural hazards in their community. Several people, however, were not as pleased with their experience with the local mitigation strategy, as they still had not seen much progress since the previous update in 2004. A conclusion that can be made is that all parties are a part of the LMS proceeding more expediently in the future – from the participating jurisdictions to the Emergency Management Division, which provides the staff support and guidance for the LMS Working Group. Also, an improved economy may also help local governments in the future implement more LMS projects due to lessened budgetary constraints.

VII. Integrating LMS with Other Planning Mechanisms

While some jurisdictions have taken steps towards integrating mitigation actions into their plans, some have not explicitly addressed these concerns in their documents. It is important that some or all of the goals and actions of this local mitigation strategy be incorporated into other plans so that they will have a greater chance of being accomplished. Integrating plans can be accomplished by having groups invite each other to each other's meetings. Information sharing through these interactions can ensure that the common elements are understood and documented within the various plans within Lake County. For those plans that have integrated mitigation, with the exception of Lake County, it is currently unclear whether the mitigation elements were a result of direct consultation with the Lake County LMS Working Group. However, through the upcoming meetings that will be taking place with jurisdictions to adopt the Lake County LMS, integrating the LMS with their respective planning mechanisms will be discussed and encouraged to promote further continuity.

This section of the local mitigation strategy will assess each jurisdiction's planning mechanisms (Comprehensive Plan, Comprehensive Emergency Management Plan, Long Range Transportation Plan, and Community Wildfire Protection Plan) – identifying examples of existing mitigation elements and opportunities and suggestions for the inclusion of mitigation elements.

Comprehensive Plans

A Comprehensive Plan is the community's expression and manifestation of their goals and values. In it is expressed the desired types, rates, and patterns of growth that will guide the community as it grows. In this section, each jurisdiction's comprehensive plan will be reviewed in hopes of identifying those goals, objectives, or policies that might contribute to a reduction in risk to specific hazards. The intention of this section is not to provide a comprehensive list of all items in the comprehensive plans but rather to identify patterns that can be seen by comparing all of the jurisdiction's plans.

Astatula

Policy 1-1.1.3 requires a minimum of landscape vegetated buffer located within the building setbacks from the adjacent property line of a non-compatible land use. A fence or screening device will be allowed where the presence of a fence does not impede the movement of *wildfire.* This and similar policies are part of a growing trend of "firewise" policies intended to mitigate against the effects of wild land fire.

Policy 1-1.2.1 allows no more than 10% of wetlands to be developed on a site pending approval of all state permits. This affects the community's mitigation actions against *flooding*. While certainly better than having no restriction on construction and development within a wetland, it must be important to understand that some portions of wetlands are more environmentally sensitive than others – and as such only the least sensitive 10% should be allowed to develop.

Policies 1-1.2.2 and 5-1.8.2 seek to protect the 100 year flood plain by placing development restrictions on land within the floodplain.

Policies 1-1.2.4 and 5-1.2.13 place restrictions on land development around karst areas, namely where the aquifer might be exposed to the surface (*sinkholes* and cave entrances). These types of policies are important because they address one of the more pressing issues surrounding Florida's frequent experiences with sinkholes and that is groundwater contamination. The immediate effects of sinkholes need to be mitigated against as well, and these kinds of policies do just that – by setting development back from areas that might be more prone to sinkholes or subsidence.

Policies 4-1.11.1, 4-2.1.1, 4-2.3.2 all concern the protection of the flood plain and the conservation of water. By requiring a mandatory connection to the city water system the jurisdiction can limit the number of wells that are being placed. This would affect *sinkholes*. Also, this could prevent misuse of water supplies, which would have a mitigating effect in

the case of *drought.* These policies also address the elevation of structures within the 100 year flood plain.

Policy 5-1.1.4 reduces wind-related soil erosion due to construction or other processes.

There are various others policies that also affect the amount of risk that the community will be exposed to such as open space requirements (6 acres/ 1000 residents) and level of service standards for the capital improvements plan.

Clermont

Policies 2-1 and 2-2 from the Future Land Use Element of the Clermont Comprehensive Plan incorporate innovative planning methods to reduce the impact of home construction on the natural environment. Efforts like cluster housing in planned unit development (PUD) and the concentration of high densities reduce the overall amount of runoff that will be generated by the community, thus affecting *flooding*.

Policies 2-16 and 3-5 from the Future Land Use Element echo the policies that are found in many other comprehensive plans in Lake County. These policies call for the protection on wetlands and the 100 year flood plain by prohibiting all commercial activities within these areas and by conserving the land that is found in the 100 year floodplain.

Policy 2-2 of the Public Facilities Element calls for discouraging private septic tanks since these might lead to water contamination problems in the event of *flooding*.

There are also other policies that help reduce the amount of risk that the community is exposed to such as open space requirements and level of service standards public facilities.

Eustis

Conservation elements such as those found in Policies 1.4.1, 2.1.1 and 2.1.2 in the Conservation Element of the Comprehensive Plan for Eustis affect the community's

vulnerability to *flooding*. By prohibiting any net loss in the 100 year flood storage area the jurisdiction is maintaining its flood handling capabilities. By remapping its floodplains and flood hazard areas, communities also can take better steps to redirect growth away from those potentially hazardous areas. Also, by prohibiting growth in the 100 year flood plain, the community will see fewer dollars expended on flooding problems than would otherwise occur. These floodplain regulation policies are also covered in Policy 1.2.2 of the Future Land Use Element.

Fruitland Park

Fruitland Park has several policies within its comprehensive plan that contribute to hazard mitigation. Policy 1-2.2 covers regulation about building in the floodplain and requires that all approved (state permitted) structures must be at least 18 inches from the flood plain's elevation. It also prohibits septic tanks and public facilities from being placed in the 100 year flood plain. These policies effectively limit the number of single family residences and other uses that can be placed within the flood plain.

Policy 1-2.4 requires setbacks from sinkholes. This policy protects structures from being damaged by the expansion of the existing sinkhole (or the occurrence of a new sinkhole) and protects the water supply that may or may not be impacted by runoff flowing into the sinkhole.

Other policies such as 1-1.2 and 3-1.4 also contribute to the community's mitigation by requiring open space and committing to an affordable housing standard.

Groveland

Objective 7.8 and its related policies in the Conservation Element deal with the protection of environmentally sensitive lands, which can be defined as any number of things. It is, however, generally accepted that these lands include floodplains and karst areas. This affects the jurisdiction's vulnerability to *flooding* and *sinkholes.*

Objectives 7.2, 7.10, and 7.13 from the Conservation Element all deal with flooding, storm water management, and the regulation of development within the Green Swamp Area of Critical State Concern, portions of which can be found in Groveland.

Howey-in-the-Hills

Policy 1-2.2.2 calls for the protection of floodplain by prohibiting the uses of land within the floodplain, and by also requiring a minimum floor height for the first finished floor (18 inches). It also refers to the types of materials that may be used and the additional open space requirement for any development within the area. This policy also requires clustering of any development as to impact the floodplain as little as possible.

Policy 1-1.2.4 places restrictions on the filling in of sinkholes. Sinkholes may only be filled if the filling is determined by a geologist not to affect the water supply.

Policies 4.2.3.1 (a) and Policy 5-1.7.1 help the community mitigate against *flooding* and *erosion*. This is done by establishing a storm water management system and erosion control system. Also a shoreline protection zone is defined and protected.

Policies 5-1.8.1 and Policy 8-1.2.1 protect the community against flood damage by designated environmentally sensitive areas (such as floodplains) and using special development restrictions for these lands. Also by prohibiting public facilities or other public investments from being placed in flood zones the jurisdiction will know that it will not lose as much public funding in the event of a 100 year flooding event.

Lady Lake

Policies such as FLU 1-9.3, which requires cluster development; FLU 2-4.4 which explicitly states that the maximum number on the range of densities given by the comprehensive plan is not necessarily the highest density that will be granted; and FLU 3-2.2 which refer to the land development regulations that concern flood plain management; fire prevention

and protection; and erosion control all help to protect the community against *flooding* and *erosion.*

The Goal Pub 6 and its related policies all have to deal with preventing flood damage. This is stated as being accomplished through design storms level of service, floor elevations, and offering of adequate flood protection. Policy CIP 1-2.2 requires that all new public facilities not be placed within the 100 year flood plain, while Policy Con 1-11.1 deems the 100 year flood plain as being an environmentally sensitive area that should be protected.

Lake County (unincorporated)

The recently transmitted 2010 Comprehensive Plan for Lake County contains several policies that all impact hazard mitigation in the jurisdiction. The latest update to the Comprehensive Plan consulted with the Local Mitigation Strategy Working Group to better understand the aspects of mitigation so that the Lake County Comprehensive Plan was more cohesive in referencing the Lake County LMS.

Policy I-3.3.10 mandates the protection of floodplains, swamps, and marshes, and requires that all structures within these areas elevate the first floor to at least 18 inches from the flood elevation. These actions will help reduce the amount of damage incurred during a *flood* event.

Policy I-4.4.9 mandates a new detailed flood insurance study that will not only help local officials understand new or existing flood prone areas, but will also help with the community's national flood insurance program rate.

Policy I-7.2.1 calls for the enforcement of regulatory standards on all development within flood prone areas.

Policies IV-2.4.1, IV-3.3.63 and IV-2.1.20 all seek to reduce impacts on floodplains by development, thus affecting the impacts of *floods* on developed areas. Septic tanks must be

located as far as possible away from floodplains, while floodplains should be protected as to maintain their natural function.

Policy IV-2.1.23 states that within areas with sensitive karst features of the county will at the least require storm water treatment to protect the Floridan aquifer. This would help with controlling the water supply, thus affecting the county's vulnerability to *drought.*

Policy IV-2.1.25 mandates that well fields will only be allowed where the risk of a sinkhole is slight.

The Capital Improvements plan also puts forward a number of items that would help to mitigate against *wildfire*. This would mainly be accomplished through funding fire line trails in many of the parks located within the county (Haynes Creek, Lake Idamore, Lake Jem, Marsh, P.E.A.R., Palatlakaha, and Pine Forest).

<u>Leesburg</u>

There are several aspects of Leesburg plan that could be considered as contributing to the goal of mitigating against natural hazards. In the Drainage Element, Policy 1.1.1 outlines a stand of service for storm sewers within the city (10 year storm waters for 24 hours). Policy 1.3.2 requires that the first finished floor must be a minimum of 18 inches above the 100 year flood elevation and at least 12 inches above the crown of the adjacent street.

Policy 1.3.3 requires that where feasible the floodplain shall be reserved for conservation, open space, or recreation. This will affect the risk to *flooding*.

Policies 1.2.19, 1.3.3, and Objective 1.4 and its related policies in the Conservation Element of the Comprehensive Plan all deal with regulating storm waters and the floodplain ordinance.

Policies 1.1.6, 1.2.19, 1.6.4, and Objective 1.7 of its related policies in the Conservation Element deal with the prevention of *erosion* through a number of mechanisms, including requiring stabilization practices and through storm water management.

Policy 1.1.5 from the Future Land Use Element of the Comprehensive Plan calls for a Conservation overlay zoning that would help to protect wetlands, aquifer recharge areas, and the 100 year flood plain. This would effectively help to protect the citizens against the effects of *flooding* and *drought.*

Mascotte

Policies 2.1.12, 3.10.7, 3.11.9, 3.11.13, 3.11.14 from the future land use element of Mascotte's Comprehensive plan all deal with the floodplain management and land use regulations concerning it. New schools may not be sited in flood plains; neither will septic tanks be allowed. There is also a requirement that all new structures within the flood plain will have to have their first floor elevated by 18 inches.

Policy 1.2.9 from the Drainage Element states the minimum acceptable flood protection level of service (25 year, 24 hour). Objective 1.6 dictates that the City shall restrict development within the 100 year floodplain. This would affect the community's risk to *flooding.*

Policy 1.2.9 of the Conservation element requires that no chemicals be stored in the 100 year flood plain or in area of high aquifer recharge.

Montverde

Policies 1-1.2.4 and 5-1.2.13 control development near *sinkholes.*

Policy 4-1.4.4 states that septic tanks will be placed in front yard so that when a central waste system comes online the tanks will be easily hooked up.

Policies 4-2.1.1, 4-2.3.2, 5-1.8.2 all deal with the preservation and protection of flood zones within the jurisdiction. No public facilities are allowed to be constructed within the 100 year flood plain and certain uses of land are restricted.

Policy 5-1.1.3 seeks to reduce the amount of wind-related soil *erosion* through regulations in the land development regulations.

Mount Dora

In the Conservation Element, policies 2f, 5f, and 7e all deal with the protection and preservation of the floodplain.

Policy 5e from the Future Land Use Element and Policy 2.2m from the Water Element deal with the protection of *sinkholes*. If there is a karst feature present, there must be a 50 foot buffer from it. If there is a stream running into the karst feature, there must be a 100 foot buffer from the stream and from the karst feature.

Tavares

Policies 1-1.1.3, 1-1.2.15, 1-1.9.1 all deal with preventing damages caused by *flooding*. This is done through prohibiting commercial and industrial activities in the 100 year flood plain, and by prohibiting any new schools to be constructed in the 100 year flood plain.

Policies 4-1.2.5, 4-4.1.1, 5.1.8.1 also deal with protecting the floodplain and preventing damages that might otherwise occur through *flooding.* This is done by allowing the city to deem floodplains and areas surrounding *sinkholes* to be environmentally sensitive. It also accomplishes this by requiring that the first floor of any structure in the 100 year floodplain to be at least 18 inches higher than the 100 year flood elevation.

Policies 5-1.2.10 and 5-1.8.6 all deal specifically with *sinkholes*. If one is to open up that is deemed environmentally sensitive then it will be designated as being "open space", and

receive such protection. The latter policy prohibits development or construction upon sinkholes except when deemed appropriate by a geologist, hydrologist or certified construction engineer.

Policy 5-1.2.8 deals with protecting shorelines from *erosion.*

Umatilla

Policies 5-1.8.3 and 5-1.8.1 deal with protecting and preserving environmentally sensitive areas such as *floodplains* and karst areas, which includes *sinkholes*.

Policy 1-1.2.2 prohibits any development within the 10 year flood plain, and only limited development within the 100 year flood plain.

As shown, the primary hazards addressed in the comprehensive plans section are flooding, sinkholes and erosion, which, while very important hazards that must be addressed, are only three of the potential hazards that could affect Lake County and its jurisdictions. It is true that many of the hazards might be addressed and mitigated in other documents (such as building codes or land development regulations), but it is the opinion of the Local Mitigation Strategy that all hazards should be addressed in some form by the Comprehensive Plan of each jurisdiction.

Suggestions – Comprehensive Plans Section

In 2005, the Department of Community Affairs recommended that Lake County adopt a more "firewise" building code that would help mitigate forest fires. They also pointed out that many of the goals, objectives, and policies found in the conservation elements of the current comprehensive plans were mitigation and that an explicit statement pointing this fact out would be an important step.

Comprehensive Emergency Management Plan

The Comprehensive Emergency Management Plan (CEMP) is meant to coordinate the efforts of the local, state, and federal government in the event of an emergency. The plan lays out how the community will prepare for, respond to, recover from, and mitigate any disasters that occur. While only counties are required to have these plans, at least two of the jurisdictions within Lake County have prepared their own. This section will review how those plans integrate mitigation actions, and what opportunities there are for more comprehensive and specific actions.

Lake County (unincorporated)

The Lake County Comprehensive Emergency Management Plan contains several elements that integrate it well with the local mitigation strategy. It refers to the LMS in several locations, and address Mitigation in its own section. Some of the more relevant sections include:

1. The CEMP is to assist "in awareness, recognition, prevention and mitigation of emergencies that may be caused or aggravated by inadequate planning for, and regulation of, public and private facilities and land use."
2. "The CEMP provides a format for the shift of focus of the EOC from Response to Recovery and Mitigation. Long range recovery and mitigation is addressed by the ability of the EOC to continue operations in a modified form, after the response phase has been terminated."

The Mitigation section gives an explanation of what mitigation is and how it applies to the CEMP.

Mitigation is identified as one of the phases of management and it recommends that divisions and agencies should request training and support from the Lake County

Emergency Management Division in order to become more familiar with mitigation actions that can be taken.

The CEMP has an annex specifically for mitigation. The CEMP identifies the Lake County Division of Emergency Management as being the lead agency for all mitigation activities. In this annex, the CEMP also explains the purpose of the Local Mitigation Strategy.

Lady Lake (2002)

On page B1-3 the Comprehensive Emergency Management plan identifies and defines mitigation as being a part of the responsibilities of municipal government.

Within Annex I, "hazard mitigation projects" are listed as being a part of the long term recovery process.

Annex II lays out the Mitigation functions of the government. It identifies the Planning Department as the primary coordinator for mitigation actions (p. 2), while the management of the mitigation actions is assigned to the Town Manager (p. 3).

Annex III states that pre-disaster activities include public education, and it also identifies potential sources of funding for pre-disaster activities.

Annex V gives the standard operating procedures for pre-disaster activities.

Leesburg (2003)

Page 58 of the Leesburg plan lists hazard mitigation review and implementation under the long term recovery phase. Also listed under the long term recovery phase is infrastructure repair.

The plan also includes a brief hazard analysis, a list of critical facilities, and a list of special facilities (pages 24-5, 23, and 17, respectively).

Mount Dora

In section X-B.2.D, there are several elements listed under the long term recovery phase that could be considered to be mitigation actions. These include: hazard mitigation review and implementation, risk management review, infrastructure repair, a review of the building codes and zoning laws, condemnation of buildings and properties, and efforts toward economic recovery.

The rest of the jurisdictions either did not have a comprehensive emergency management plan or their plans were very specific and did not address mitigation in a manner relative to the Local Mitigation Strategy.

Suggestions – Mitigation Section

As some of the jurisdictions have done, it is best to devote an entire section or chapter of the comprehensive emergency management plan to mitigation. After a disaster or event, projects or actions that might have prevented damage should be readily identified and reported to a member of the Local Mitigation Strategy Working Group. The Comprehensive Emergency Management Plan should include instructions on either locating this group or representative of this group, or append a member list of this organization.

Potential sources should be identified for these actions, even if they are not explicitly listed as mitigation actions. By focusing more on mitigation, the overall monetary losses experienced by a community can be reduced.

Community Wildfire Protection Plan

Generally, a Community Wildfire Protection Plan (CWPP) seeks to reduce a community's risk to wildfires by addressing any deficiencies that a community has in its public education program, infrastructure, and land development regulations, etc. The Florida Division of Forestry has developed a plan for Lake County in coordination with various Lake County agencies and meetings were held in 2009 and 2010. As of the plan update, the final versions of the plan are being finalized prior to formal distribution. The CWPP is a huge step in addressing wildfire initiatives in areas adjacent to forested areas susceptible to wildfires. This process has also involved growth management officials and integrating wildfire not only into the LMS, but the Lake County Comprehensive Plan. The CWPP and LMS should cross reference each other so that projects can be implemented to help mitigate forest fires – and should include a means of contacting the LMS working group for further corroboration.

Long Range Transportation Plan

The Long Range Transportation Plan (LRTP) seeks to maintain adequate mobility and accommodate the growth that is forecasted for the Lake and Sumter County region. It is an official guide for the expenditure of federal transportation monies and is intended to provide guidance for other plans. It is consistent with the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

This document relates with the Local Mitigation Strategy in several ways. The projects that might be accomplished under this plan might help to decrease evacuation times by improving major roads through the county.

These transportation projects might also be able to acquire and maintain floodplains as easements, thus helping to control the risk of flooding. Any residences or businesses that are adjacent to these potential projects might stand in the way of being able to relocate themselves out of the floodplain, thus reducing the amount of damage that might have otherwise occurred.

Several portions of major arteries within Lake County, including US 19 and US 441, lie within the 100 year floodplain, and improvements to these sections would help mitigate flooding and the chance of increased evacuation times.

Some elements of the LRTP affect and influence the mitigation efforts in Lake County. These include Objective 4.1 which supports collaborative land use and transportation planning efforts that will ensure the community can develop in an efficient and sustainable way. Objective 5.5 seeks to minimize the disruption of established communities, infill areas, environmentally sensitive areas, public lands, recreational areas, and cultural/ historic resources. This includes trying to avoid wetlands so as to reduce the effect on the community's risk to flooding.

Special Needs Populations

There are approximately 1,082 people in Lake County that are classified as residents with "special needs" (**See Table VII-1**). In the event of a disaster, these residents are either assigned to a special needs shelter or are assigned to a hospital. Both Leesburg and Clermont have relatively large special needs populations, while Astatula and Howey-in-the-Hills have only 4 special needs residents each.

In addition to these special needs citizens, there are a number of residential healthcare agencies that have patients on site for varying lengths of time, from only a few hours a day to years. In Lake County, there are a total of 72 such agencies that are all required to have approved emergency plans in place (**see Table VII-2**). Leesburg has a large number of these agencies with 25, while Eustis and Mount Dora have moderate numbers with 13 and 12 agencies, respectively.

The Lake County Department of Public Safety has prearranged agreements in place that accounts for these populations and will ensure their safety and welfare in the event of natural disaster.

Table VII-1: Special Needs Persons by Jurisdiction, Lake County, Florida	
Jurisdiction	**Number of Special Needs Persons**
Astatula	4
Clermont	244
Eustis	86
Fruitland Park	33
Groveland	66
Howey-in-the-Hills	4
Lady Lake	83
Lake County (Unincorporated)	69
Leesburg	315
Mascotte	11
Minneola	17
Montverde	11
Mount Dora	41
Tavares	71
Umatilla	27
Total	**1,082**

Source: Lake County Emergency Management

Table VII-2: Residential Healthcare Agencies by Jurisdiction, Lake County, Florida	
Jurisdiction	**Number of Residential Healthcare Agencies**
Astatula	0
Clermont	4
Eustis	13
Fruitland Park	0
Groveland	1
Howey-in-the-Hills	0
Lady Lake	4
Lake County (Unincorporated)	3
Leesburg	25
Mascotte	0
Minneola	2
Montverde	0
Mount Dora	12
Tavares	7
Umatilla	1
Total	**72**

Source: Lake County Emergency Management

Other Programs

There are several programs in place that would constitute mitigation actions including:

1. The Weather Radio Distribution Program, which includes a Hazard Mitigation Grant Program award received by FEMA to distribute weather radios to citizens of Lake County as a component of its emergency notification system.

2. Review and provide feedback annually on mandatory Emergency Management Plans from each healthcare agency in Lake County.

Sources

Florida Department of Community Affairs. "Integrating Hazard Mitigation into Comprehensive Planning". 2005.

Lake-Sumter Metropolitan Planning Organization. "Lake-Sumter 2025 Long Range Transportation Plan". 2006.

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	**Date**	**Initiative #**	**Initiative Name**	**Estimated Cost to Implement***	**Jurisdiction**	**Responsible Organization**	**Hazard**	**Status**
101								
	7/29/2009	LA-0100	Central Avenue Property Acquisition	$100,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Flood	Open
99								
	7/30/2009	LA-0102	Develop a community Wildfire Protection Plan for Lake County Unincorporated	$1.00	Lake County (Unincorporated)	Division of Forestry	Wildfire	Open
98								
	7/29/2009	LA-0089	Police Department Hurricane Hardening /Telephone System Upgrade	$55,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	High Wind	Open
	7/29/2009	LA-0096	Town Hall Hurricane Hardening/Uninterruptible Power Supply	$60,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	High Wind	Open
97								
	7/24/2009	LA-0103	Emergency Shelter-First Baptist Church of Astor, Family Life Center	$800,000.00	Lake County (Unincorporated)	Astor Area Chamber of Commerce	High Wind	Open
96								
	7/29/2009	LA-0088	Lightning Rod System and Surge Protectors for all Howey Government Buildings	$100,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Lightning	Open
	7/29/2009	LA-0101	Equipment to Mitigate Hazards (such as Erosion, Flooding and Fire Controls)	$75,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	All	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	**Date**	**Initiative #**	**Initiative Name**	**Estimated Cost to Implement***	**Jurisdiction**	**Responsible Organization**	**Hazard**	**Status**
95								
	7/29/2009	LA-0090	Public Works Uninterruptible Power Supply for SCADA Water System	$15,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Flood	Open
	6/24/2009	LA-0092	Stormwater Management- James Street, Lisa Street, and Trespass Trail	$649,000.00	Lake County (Unincorporated)	Astor Area Chamber of Commerce	Flood	Open
94								
	6/24/2009	LA-0093	Stormwater Management-Bass and Indigo Roads	$1,106,000.00	Lake County (Unincorporated)	Astor Area Chamber of Commerce	Flood	Open
93								
	6/24/2009	LA-0094	Stormwater Management-Ward Street	$4,010,000.00	Lake County (Unincorporated)	Astor Area Chamber of Commerce	Flood	Open
92								
	7/29/2009	LA-0091	Secondary Fuel Supply	$28,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	All	Open
91								
	7/29/2009	LA-0098	Town Storage Hurricane Hardening	$12,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	High Wind	Open
	7/26/2009	LA-0105	Fire Station No. 43 Hardening and Uninterruptable Power Supply	$73,143.00	Villages CDD	The Villages Public Safety Department	High Wind	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	Date	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Hazard	Status
	7/29/2009	LA-0106	Ground Storage Tank/High Service Pumps	$480,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Flood	Open
90								
	7/29/2009	LA-0097	Town Library Hurricane Hardening/Uninterruptable Power Supply	$49,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	High Wind	Open
89								
	7/29/2009	LA-0099	Center Lake Flood Control Project	$3,500,000.00	Clermont	City of Clermont	Flood	Open
	7/26/2009	LA-0104	Fire Station No. 43 Hardening	$18,356.00	Villages CDD	The Villages Public Safety Department	High Wind	Open
85								
	8/7/2009	LA-0095	Tornado Shelter Program for Mobile Home Residents	$150,000.00	Lake County (Unincorporated)	Lake County Emergency Management	High Wind	Open
35								
	10/23/2004	LA-0016	Emergency Notification System	$100,000.00	Lake County (Unincorporated)	Lake County Emergency Management	All	Open
33								
	10/24/2004	LA-0015	Weather Monitoring System	$20,400.00	Lake County (Unincorporated)	Lake County Emergency Management	All	Completed

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	Date	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Hazard	Status
	10/22/2004	LA-0020	Generators for Fire Stations	$120,000.00	Lake County (Unincorporated)	Lake County Emergency Management	High Wind	Open
	12/17/2004	LA-0051	Storm Water System Retrofit-Ardice Ave Pond & Land	$140,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0056	Storm Water System Retrofit-Cardinal St. Pond	$50,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0058	Storm Water System Retrofit-Center St. Storm Sewer at Atwater Ave.	$20,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0059	Storm Water System Retrofit-Edgewater Dr. Stormwater Pond	$50,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0061	Storm Water System Retrofit-Eustis St. and Gottsche Ave. Storm Sewer and Pond	$200,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0062	Frosty Way Storm Culvert and Pond	$80,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0063	Getford Ave. Storm Sewer, Swale, and Pond	$190,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0064	Storm Water System Retrofit-Getford Ave. Drainage Swales	$30,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0068	Storm Water System Retrofit-Lakewood Ave. at Edgewater	$90,000.00	Eustis	City of Eustis	Flood	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	Date	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Hazard	Status
	12/17/2004	LA-0069	Storm Water System Retrofit-Northshore Dr. Stormwater Pond	$90,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0070	Storm Water System Retrofit-Northshore Dr. Storm Sewer and Pond	$50,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0071	Storm Water System Retrofit-Oaklynn Ln. Storm Sewer	$40,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0073	Storm Water System Retrofit-Storm Sewer Across Bay St. from Eustis St.	$125,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0075	Storm Water System Retrofit-Wall St. and Harlem Ave. Pond	$100,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0076	Storm Water System Retrofit-Westmoreland Ave. Swale	$25,000.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0077	Storm Water System Retrofit-Woodwater Ave. Swale and Sewer	$40,000.00	Eustis	City of Eustis	Flood	Open
32								
	11/6/2004	LA-0035	Storm Shielding and Emergency Power Backup for Fire Stations	$460,000.00	Lake County (Unincorporated)	Lake County Fire Rescue	High Wind	Completed
	12/17/2004	LA-0050	Harden Addition (Safe Room) to PW Bldg	$156,000.00	Eustis	City of Eustis	High Wind	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	**Date**	**Initiative #**	**Initiative Name**	**Estimated Cost to Implement***	**Jurisdiction**	**Responsible Organization**	**Hazard**	**Status**
31								
	8/25/2004	LA-0023	Emergency Shelter Guide	$5,000.00	Lake County (Unincorporated)	Lake County Emergency Management	All	Open
	1/20/2005	LA-0039	Harden Facility for Special Needs Shelter	$250,000.00	Lake County (Unincorporated)	LifeStream Behavioral Center	High Wind	Open
30								
	11/4/2004	LA-0005	Purchase of Two Portable Trash Pumps	$40,000.00	Groveland	City of Groveland	Flood	Open
	10/23/2004	LA-0017	County Admin/EOC Facility	$12,000,000.00	Lake County (Unincorporated)	Lake County Emergency Management	All	Open
	1/19/2005	LA-0040	Harden City Hall	$50,000.00	Groveland	City of Groveland	High Wind	Open
	12/17/2004	LA-0049	Harden Rm at Water Tower for Public Safety Radio System	$23,000.00	Eustis	City of Eustis	High Wind	Terminated
	12/17/2004	LA-0072	Storm Water System Retrofit-Park Ave. and Northshore Dr. Pond	$455,200.00	Eustis	City of Eustis	Flood	Open
	4/7/2005	LA-0078	Hardening of the Public Safety Building	$250,000.00	Mount Dora	City of Mount Dora	High Wind	Completed
	12/20/2007	LA-0083	800 MHz Radio System Hardening	$48,003.00	Lake County (Unincorporated)/All Municipalities	Lake County Emergency Management	All	Completed

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	Date	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Hazard	Status
29								
	11/4/2004	LA-0004	Stand-by Generator at City Hall	$30,000.00	Groveland	City of Groveland	High Wind	Open
	11/4/2004	LA-0009	Stationary Power Generators	$243,000.00	Groveland	City of Groveland	Flood	Open
	10/24/2004	LA-0024	Health Department Facility Development	$8,000,000.00	Lake County (Unincorporated)	Lake County Health Department	High Wind	Open
	12/17/2004	LA-0048	Alternative Citywide Wireless Comm System	$23,431.00	Eustis	City of Eustis	All	Open
	3/17/2005	LA-0055	Harden PW Admin for Field Operations Center	$185,000.00	Leesburg	City of Leesburg	High Wind	Open
28								
	11/5/2004	LA-0002	Critical Facility Storm Evaluation	$34,500.00	Eustis	City of Eustis	High Wind	Open
	4/29/2004	LA-0010	Portable Power Generation for Lift Stations	$40,000.00	Groveland	City of Groveland	Flood	Open
	11/5/2004	LA-0012	Generator for Well 2 and SCADA System	$200,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Flood	Completed
	8/26/2004	LA-0028	"911" System Enhancement	$500.00	Montverde	Town of Montverde	All	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	Date	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Hazard	Status
	1/19/2005	LA-0041	Harden Community Center	$165,000.00	Leesburg	City of Leesburg	High Wind	Completed
	12/17/2004	LA-0060	Storm Water System Retrofit-Eustis St. and Gottsche Ave. Pond	$782,095.00	Eustis	City of Eustis	Flood	Open
27								
	4/29/2004	LA-0011	Emergency Power Generation for Police Station	$50,000.00	Groveland	City of Groveland	All	Open
	8/20/2004	LA-0014	Well Site Security System	$35,000.00	Lady Lake	Town of Lady Lake	All	Completed
	12/17/2004	LA-0057	Storm Water System Retrofit-Center St. & Howard Ln. Pond & Trench	$1,120,855.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0065	Storm Water System Retrofit-Grove St. and Bates Ave. Pond	$1,191,475.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0066	Storm Water System Retrofit-Key Ave. and Donnelly St. Pond	$1,161,345.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0067	Storm Water System Retrofit-Lakeshore Dr. and Morin St. Pond	$1,109,722.00	Eustis	City of Eustis	Flood	Open
	12/17/2004	LA-0074	Storm Water System Retrofit-Sub-Basin Line	$1,460,786.00	Eustis	City of Eustis	Flood	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	**Date**	**Initiative #**	**Initiative Name**	**Estimated Cost to Implement***	**Jurisdiction**	**Responsible Organization**	**Hazard**	**Status**
26								
	8/17/2004	LA-0013	Warning Alert and GPS Equipment/Generator	$139,962.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	All	Terminated
	10/22/2004	LA-0021	Generators for Emergency Shelters	$45,000.00	Lake County (Unincorporated)	Lake County Emergency Management	All	Open
	1/19/2005	LA-0042	Harden, Flood Control Public Safety Complex	$40,000.00	Groveland	City of Groveland	High Wind	Open
	1/20/2005	LA-0045	Special Needs Shelter/Harden Facility	$185,000.00	Lake County (Unincorporated)	Sunrise ARC Inc	High Wind	Open
25								
	11/5/2004	LA-0003	Emergency Back up Power Supply at Government Buildings	$100,000.00	Fruitland Park	City of Fruitland Park	High Wind	Open
	1/20/2005	LA-0043	Harden City Hall	$75,000.00	Leesburg	City of Leesburg	High Wind	Open
24								
	11/4/2004	LA-0006	Canal Cleaning and Maintenance	$100,000.00	Groveland	City of Groveland	Flood	Open
	7/30/2004	LA-0026	Public Information Program	$6,000.00	Mascotte	City of Mascotte	All	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	Date	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Hazard	Status
	8/16/2004	LA-0029	Fire Department Substation	$625,000.00	Mount Dora	City of Mount Dora	All	Completed
23								
	8/11/2004	LA-0025	SCADA Systems for Lift Stations	$900,000.00	Leesburg	City of Leesburg	Flood	Open
22								
	10/22/2004	LA-0018	Harden Lake County EOC	$200,000.00	Lake County (Unincorporated)	Lake County Facilities Maintenance	High Wind	Terminated
	8/17/2004	LA-0030	El Nino Stormwater Project	$1,400,000.00	Umatilla	City of Umatilla	Flood	Open
	1/20/2005	LA-0044	Harden HQ - Fire Station #1	$275,000.00	Leesburg	City of Leesburg	High Wind	Open
	1/26/2005	LA-0046	Harden HQ - Fire Station #2	$275,000.00	Leesburg	City of Leesburg	High Wind	Open
	12/17/2004	LA-0047	Fire Department Substation	$253,000.00	Eustis	City of Eustis	All	Open
21								
	11/4/2004	LA-0007	Installation of Sewer West Side	$1,000,000.00	Groveland	City of Groveland	Flood	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	**Date**	**Initiative #**	**Initiative Name**	**Estimated Cost to Implement***	**Jurisdiction**	**Responsible Organization**	**Hazard**	**Status**
	9/28/2004	LA-0027	Retrofit Storm Water System	$3,580,000.00	Minneola	City of Minneola	Flood	Open
	11/6/2004	LA-0031	Emergency Power Generator at Lake Technical Institute, Eustis	$35,000.00	Lake County (Unincorporated)	Lake Technical Institute	High Wind	Open
	11/6/2004	LA-0034	Astor Topography Mapping	$250,000.00	Lake County (Unincorporated)	Lake County Public Works	All	Completed
20								
	11/6/2004	LA-0033	Emergency Power Generator at Lake Technical Institute, Tavares	$25,000.00	Lake County (Unincorporated)	Lake Technical Institute	High Wind	Open
19								
	11/4/2004	LA-0008	Retrofit Storm Water System West Side	$2,000,000.00	Groveland	City of Groveland	Flood	Open
	4/6/2009	LA-0086	Cadwell Park Drainage Improvements	$36,370.00	Umatilla	City of Umatilla	Flood	Open
	1/15/2010	LA-0087	City Hall / Community Building Hardening Project, Phase 1	$367,400.00	Umatilla	City of Umatilla	High Wind	Open
18								
	1/31/2005	LA-0054	Retrofit Storm Water System in Bloxam	$1,600,000.00	Clermont	City of Clermont	Flood	Completed

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	Date	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Hazard	Status
	4/6/2009	LA-0084	Alleyway Project	$212,125.00	Umatilla	City of Umatilla	Flood	Open
17								
	8/20/2004	LA-0001	Emerald Lake MH Park Purchase/Relocation	$13,000,000.00	Clermont	City of Clermont	Flood	Open
	11/6/2004	LA-0032	Lake Claire Home Flooding	$250,000.00	Lake County (Unincorporated)	Lake County Public Works	Flood	Completed
	11/6/2004	LA-0036	Lift Station Generator Systems	$280,000.00	Leesburg	City of Leesburg	Flood	Open
	11/6/2004	LA-0037	Portable Generator Special Needs Shelter	$50,000.00	Leesburg	City of Leesburg	All	Open
	11/6/2004	LA-0038	Reverse "911" System	$50,000.00	Leesburg	City of Leesburg	All	Terminated
	1/28/2005	LA-0052	Harden Four Schools for Hurricane Shelters	$600,000.00	Lake County (Unincorporated)	Lake County School Board	High Wind	Open
	1/28/2005	LA-0053	Expand Fire Dept Station	$100,000.00	Montverde	Town of Montverde	All	Open
	4/6/2006	LA-0079	Dead River Estate Land Purchase	$1,780,000.00	Lake County (Unincorporated)	Lake County Growth Management	Flood	Completed

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Priority Score

Lake County LMS Task Force *Initiatives by Priority Score*								
Priority Score**	Date	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Hazard	Status
	4/6/2006	LA-0080	Ricketson Property Purchase	$3,030,000.00	Lake County (Unincorporated)	Lake County Growth Management	Flood	Open
	4/6/2006	LA-0081	Wekiva River Property Purchase	$2,550,000.00	Lake County (Unincorporated)	Lake County Growth Management	Flood	Open
	4/24/2006	LA-0082	Northeast Community Park Purchase	$985,000.00	Lake County (Unincorporated)	Lake County Growth Management	Flood	Completed
16								
	4/6/2009	LA-0085	Orange Avenue Stormwater Improvements	$782,125.00	Umatilla	City of Umatilla	Flood	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Jurisdiction

Lake County LMS Task Force *Initiatives by Jurisdiction*								
Jurisdiction	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Responsible Organization	Hazard	Status
Clermont								
	7/29/2009	89	LA-0099	Center Lake Flood Control Project	$3,500,000.00	City of Clermont	Flood	Open
	1/31/2005	18	LA-0054	Retrofit Storm Water System in Bloxam	$1,600,000.00	City of Clermont	Flood	Completed
	8/20/2004	17	LA-0001	Emerald Lake MH Park Purchase/Relocation	$13,000,000.00	City of Clermont	Flood	Open
Eustis								
	12/17/2004	33	LA-0051	Storm Water System Retrofit-Ardice Ave Pond & Land	$140,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0056	Storm Water System Retrofit-Cardinal St. Pond	$50,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0058	Storm Water System Retrofit-Center St. Storm Sewer at Atwater Ave.	$20,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0059	Storm Water System Retrofit-Edgewater Dr. Stormwater Pond	$50,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0061	Storm Water System Retrofit-Eustis St. and Gottsche Ave. Storm Sewer and Pond	$200,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0062	Frosty Way Storm Culvert and Pond	$80,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0063	Getford Ave. Storm Sewer, Swale, and Pond	$190,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0064	Storm Water System Retrofit-Getford Ave. Drainage Swales	$30,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0068	Storm Water System Retrofit-Lakewood Ave. at Edgewater	$90,000.00	City of Eustis	Flood	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Jurisdiction

Lake County LMS Task Force *Initiatives by Jurisdiction*								
Jurisdiction	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Responsible Organization	Hazard	Status
	12/17/2004	33	LA-0069	Storm Water System Retrofit-Northshore Dr. Stormwater Pond	$90,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0070	Storm Water System Retrofit-Northshore Dr. Storm Sewer and Pond	$50,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0071	Storm Water System Retrofit-Oaklynn Ln. Storm Sewer	$40,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0073	Storm Water System Retrofit-Storm Sewer Across Bay St. from Eustis St.	$125,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0075	Storm Water System Retrofit-Wall St. and Harlem Ave. Pond	$100,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0076	Storm Water System Retrofit-Westmoreland Ave. Swale	$25,000.00	City of Eustis	Flood	Open
	12/17/2004	33	LA-0077	Storm Water System Retrofit-Woodwater Ave. Swale and Sewer	$40,000.00	City of Eustis	Flood	Open
	12/17/2004	32	LA-0050	Harden Addition (Safe Room) to PW Bldg	$156,000.00	City of Eustis	High Wind	Open
	12/17/2004	30	LA-0049	Harden Rm at Water Tower for Public Safety Radio System	$23,000.00	City of Eustis	High Wind	Terminated
	12/17/2004	30	LA-0072	Storm Water System Retrofit-Park Ave. and Northshore Dr. Pond	$455,200.00	City of Eustis	Flood	Open
	12/17/2004	29	LA-0048	Alternative Citywide Wireless Comm System	$23,431.00	City of Eustis	All	Open
	11/5/2004	28	LA-0002	Critical Facility Storm Evaluation	$34,500.00	City of Eustis	High Wind	Open
	12/17/2004	28	LA-0060	Storm Water System Retrofit-Eustis St. and Gottsche Ave. Pond	$782,095.00	City of Eustis	Flood	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Lake County LMS Task Force *Initiatives by Jurisdiction*								
Jurisdiction	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Responsible Organization	Hazard	Status
	12/17/2004	27	LA-0057	Storm Water System Retrofit-Center St. & Howard Ln. Pond & Trench	$1,120,855.00	City of Eustis	Flood	Open
	12/17/2004	27	LA-0065	Storm Water System Retrofit-Grove St. and Bates Ave. Pond	$1,191,475.00	City of Eustis	Flood	Open
	12/17/2004	27	LA-0066	Storm Water System Retrofit-Key Ave. and Donnelly St. Pond	$1,161,345.00	City of Eustis	Flood	Open
	12/17/2004	27	LA-0067	Storm Water System Retrofit-Lakeshore Dr. and Morin St. Pond	$1,109,722.00	City of Eustis	Flood	Open
	12/17/2004	27	LA-0074	Storm Water System Retrofit-Sub-Basin Line	$1,460,786.00	City of Eustis	Flood	Open
	12/17/2004	22	LA-0047	Fire Department Substation	$253,000.00	City of Eustis	All	Open
Fruitland Park								
	11/5/2004	25	LA-0003	Emergency Back up Power Supply at Government Buildings	$100,000.00	City of Fruitland Park	High Wind	Open
Groveland								
	11/4/2004	30	LA-0005	Purchase of Two Portable Trash Pumps	$40,000.00	City of Groveland	Flood	Open
	1/19/2005	30	LA-0040	Harden City Hall	$50,000.00	City of Groveland	High Wind	Open
	11/4/2004	29	LA-0004	Stand-by Generator at City Hall	$30,000.00	City of Groveland	High Wind	Open
	11/4/2004	29	LA-0009	Stationary Power Generators	$243,000.00	City of Groveland	Flood	Open
	4/29/2004	28	LA-0010	Portable Power Generation for Lift Stations	$40,000.00	City of Groveland	Flood	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Jurisdiction

Lake County LMS Task Force *Initiatives by Jurisdiction*								
Jurisdiction	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Responsible Organization	Hazard	Status
	4/29/2004	27	LA-0011	Emergency Power Generation for Police Station	$50,000.00	City of Groveland	All	Open
	1/19/2005	26	LA-0042	Harden, Flood Control Public Safety Complex	$40,000.00	City of Groveland	High Wind	Open
	11/4/2004	24	LA-0006	Canal Cleaning and Maintenance	$100,000.00	City of Groveland	Flood	Open
	11/4/2004	21	LA-0007	Installation of Sewer West Side	$1,000,000.00	City of Groveland	Flood	Open
	11/4/2004	19	LA-0008	Retrofit Storm Water System West Side	$2,000,000.00	City of Groveland	Flood	Open
Howey-in-the-Hills								
	7/29/2009	101	LA-0100	Central Avenue Property Acquisition	$100,000.00	Town of Howey-in-the-Hills	Flood	Open
	7/29/2009	98	LA-0089	Police Department Hurricane Hardening /Telephone System Upgrade	$55,000.00	Town of Howey-in-the-Hills	High Wind	Open
	7/29/2009	98	LA-0096	Town Hall Hurricane Hardening/Uninterruptible Power Supply	$60,000.00	Town of Howey-in-the-Hills	High Wind	Open
	7/29/2009	96	LA-0088	Lightning Rod System and Surge Protectors for all Howey Government Buildings	$100,000.00	Town of Howey-in-the-Hills	Lightning	Open
	7/29/2009	96	LA-0101	Equipment to Mitigate Hazards (such as Erosion, Flooding and Fire Controls)	$75,000.00	Town of Howey-in-the-Hills	All	Open
	7/29/2009	95	LA-0090	Public Works Uninterruptible Power Supply for SCADA Water System	$15,000.00	Town of Howey-in-the-Hills	Flood	Open
	7/29/2009	92	LA-0091	Secondary Fuel Supply	$28,000.00	Town of Howey-in-the-Hills	All	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Jurisdiction

Lake County LMS Task Force *Initiatives by Jurisdiction*								
Jurisdiction	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Responsible Organization	Hazard	Status
	7/29/2009	91	LA-0098	Town Storage Hurricane Hardening	$12,000.00	Town of Howey-in-the-Hills	High Wind	Open
	7/29/2009	91	LA-0106	Ground Storage Tank/High Service Pumps	$480,000.00	Town of Howey-in-the-Hills	Flood	Open
	7/29/2009	90	LA-0097	Town Library Hurricane Hardening/Uninterruptable Power Supply	$49,000.00	Town of Howey-in-the-Hills	High Wind	Open
	11/5/2004	28	LA-0012	Generator for Well 2 and SCADA System	$200,000.00	Town of Howey-in-the-Hills	Flood	Completed
	8/17/2004	26	LA-0013	Warning Alert and GPS Equipment/Generator	$139,962.00	Town of Howey-in-the-Hills	All	Terminated
Lady Lake								
	8/20/2004	27	LA-0014	Well Site Security System	$35,000.00	Town of Lady Lake	All	Completed
Lake County (Unincorporated)								
	7/30/2009	99	LA-0102	Develop a community Wildfire Protection Plan for Lake County Unincorporated	$1.00	Division of Forestry	Wildfire	Open
	7/24/2009	97	LA-0103	Emergency Shelter-First Baptist Church of Astor, Family Life Center	$800,000.00	Astor Area Chamber of Commerce	High Wind	Open
	6/24/2009	95	LA-0092	Stormwater Management- James Street, Lisa Street, and Trespass Trail	$649,000.00	Astor Area Chamber of Commerce	Flood	Open
	6/24/2009	94	LA-0093	Stormwater Management-Bass and Indigo Roads	$1,106,000.00	Astor Area Chamber of Commerce	Flood	Open
	6/24/2009	93	LA-0094	Stormwater Management-Ward Street	$4,010,000.00	Astor Area Chamber of Commerce	Flood	Open
	8/7/2009	85	LA-0095	Tornado Shelter Program for Mobile Home Residents	$150,000.00	Lake County Emergency Management	High Wind	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Jurisdiction

Lake County LMS Task Force *Initiatives by Jurisdiction*								
Jurisdiction	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Responsible Organization	Hazard	Status
	10/23/2004	35	LA-0016	Emergency Notification System	$100,000.00	Lake County Emergency Management	All	Open
	10/24/2004	33	LA-0015	Weather Monitoring System	$20,400.00	Lake County Emergency Management	All	Completed
	10/22/2004	33	LA-0020	Generators for Fire Stations	$120,000.00	Lake County Emergency Management	High Wind	Open
	11/6/2004	32	LA-0035	Storm Shielding and Emergency Power Backup for Fire Stations	$460,000.00	Lake County Fire Rescue	High Wind	Completed
	8/25/2004	31	LA-0023	Emergency Shelter Guide	$5,000.00	Lake County Emergency Management	All	Open
	1/20/2005	31	LA-0039	Harden Facility for Special Needs Shelter	$250,000.00	LifeStream Behavioral Center	High Wind	Open
	10/23/2004	30	LA-0017	County Admin/EOC Facility	$12,000,000.00	Lake County Emergency Management	All	Open
	10/24/2004	29	LA-0024	Health Department Facility Development	$8,000,000.00	Lake County Health Department	High Wind	Open
	10/22/2004	26	LA-0021	Generators for Emergency Shelters	$45,000.00	Lake County Emergency Management	All	Open
	1/20/2005	26	LA-0045	Special Needs Shelter/Harden Facility	$185,000.00	Sunrise ARC Inc	High Wind	Open
	10/22/2004	22	LA-0018	Harden Lake County EOC	$200,000.00	Lake County Facilities Maintenance	High Wind	Terminated
	11/6/2004	21	LA-0031	Emergency Power Generator at Lake Technical Institute, Eustis	$35,000.00	Lake Technical Institute	High Wind	Open
	11/6/2004	21	LA-0034	Astor Topography Mapping	$250,000.00	Lake County Public Works	All	Completed

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Jurisdiction

Lake County LMS Task Force *Initiatives by Jurisdiction*								
Jurisdiction	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Responsible Organization	Hazard	Status
	11/6/2004	20	LA-0033	Emergency Power Generator at Lake Technical Institute, Tavares	$25,000.00	Lake Technical Institute	High Wind	Open
	11/6/2004	17	LA-0032	Lake Claire Home Flooding	$250,000.00	Lake County Public Works	Flood	Completed
	1/28/2005	17	LA-0052	Harden Four Schools for Hurricane Shelters	$600,000.00	Lake County School Board	High Wind	Open
	4/6/2006	17	LA-0079	Dead River Estate Land Purchase	$1,780,000.00	Lake County Growth Management	Flood	Completed
	4/6/2006	17	LA-0080	Ricketson Property Purchase	$3,030,000.00	Lake County Growth Management	Flood	Open
	4/6/2006	17	LA-0081	Wekiva River Property Purchase	$2,550,000.00	Lake County Growth Management	Flood	Open
	4/24/2006	17	LA-0082	Northeast Community Park Purchase	$985,000.00	Lake County Growth Management	Flood	Completed
Lake County (Unincorporated)/All Municipalities								
	12/20/2007	30	LA-0083	800 MHz Radio System Hardening	$48,003.00	Lake County Emergency Management	All	Completed
Leesburg								
	3/17/2005	29	LA-0055	Harden PW Admin for Field Operations Center	$185,000.00	City of Leesburg	High Wind	Open
	1/19/2005	28	LA-0041	Harden Community Center	$165,000.00	City of Leesburg	High Wind	Completed
	1/20/2005	25	LA-0043	Harden City Hall	$75,000.00	City of Leesburg	High Wind	Open
	8/11/2004	23	LA-0025	SCADA Systems for Lift Stations	$900,000.00	City of Leesburg	Flood	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Jurisdiction

Lake County LMS Task Force *Initiatives by Jurisdiction*								
Jurisdiction	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Responsible Organization	Hazard	Status
	1/20/2005	22	LA-0044	Harden HQ - Fire Station #1	$275,000.00	City of Leesburg	High Wind	Open
	1/26/2005	22	LA-0046	Harden HQ - Fire Station #2	$275,000.00	City of Leesburg	High Wind	Open
	11/6/2004	17	LA-0036	Lift Station Generator Systems	$280,000.00	City of Leesburg	Flood	Open
	11/6/2004	17	LA-0037	Portable Generator Special Needs Shelter	$50,000.00	City of Leesburg	All	Open
	11/6/2004	17	LA-0038	Reverse "911" System	$50,000.00	City of Leesburg	All	Terminated
Mascotte								
	7/30/2004	24	LA-0026	Public Information Program	$6,000.00	City of Mascotte	All	Open
Minneola								
	9/28/2004	21	LA-0027	Retrofit Storm Water System	$3,580,000.00	City of Minneola	Flood	Open
Montverde								
	8/26/2004	28	LA-0028	"911" System Enhancement	$500.00	Town of Montverde	All	Open
	1/28/2005	17	LA-0053	Expand Fire Dept Station	$100,000.00	Town of Montverde	All	Open
Mount Dora								
	4/7/2005	30	LA-0078	Hardening of the Public Safety Building	$250,000.00	City of Mount Dora	High Wind	Completed

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Jurisdiction

Lake County LMS Task Force *Initiatives by Jurisdiction*								
Jurisdiction	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Responsible Organization	Hazard	Status
	8/16/2004	24	LA-0029	Fire Department Substation	$625,000.00	City of Mount Dora	All	Completed
Umatilla								
	8/17/2004	22	LA-0030	El Nino Stormwater Project	$1,400,000.00	City of Umatilla	Flood	Open
	4/6/2009	19	LA-0086	Cadwell Park Drainage Improvements	$36,370.00	City of Umatilla	Flood	Open
	1/15/2010	19	LA-0087	City Hall / Community Building Hardening Project, Phase 1	$367,400.00	City of Umatilla	High Wind	Open
	4/6/2009	18	LA-0084	Alleyway Project	$212,125.00	City of Umatilla	Flood	Open
	4/6/2009	16	LA-0085	Orange Avenue Stormwater Improvements	$782,125.00	City of Umatilla	Flood	Open
Villages CDD								
	7/26/2009	91	LA-0105	Fire Station No. 43 Hardening and Uninterruptable Power Supply	$73,143.00	The Villages Public Safety Department	High Wind	Open
	7/26/2009	89	LA-0104	Fire Station No. 43 Hardening	$18,356.00	The Villages Public Safety Department	High Wind	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Hazard

Lake County LMS Task Force *Initiatives by Hazard*								
Hazard	**Date**	**Priority Score****	**Initiative #**	**Initiative Name**	**Estimated Cost to Implement***	**Jurisdiction**	**Responsible Organization**	**Status**
All								
	7/29/2009	96	LA-0101	Equipment to Mitigate Hazards (such as Erosion, Flooding and Fire Controls)	$75,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Open
	7/29/2009	92	LA-0091	Secondary Fuel Supply	$28,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Open
	10/23/2004	35	LA-0016	Emergency Notification System	$100,000.00	Lake County (Unincorporated)	Lake County Emergency Management	Open
	10/24/2004	33	LA-0015	Weather Monitoring System	$20,400.00	Lake County (Unincorporated)	Lake County Emergency Management	Completed
	8/25/2004	31	LA-0023	Emergency Shelter Guide	$5,000.00	Lake County (Unincorporated)	Lake County Emergency Management	Open
	10/23/2004	30	LA-0017	County Admin/EOC Facility	$12,000,000.00	Lake County (Unincorporated)	Lake County Emergency Management	Open
	12/20/2007	30	LA-0083	800 MHz Radio System Hardening	$48,003.00	Lake County (Unincorporated)/All Municipalities	Lake County Emergency Management	Completed
	12/17/2004	29	LA-0048	Alternative Citywide Wireless Comm System	$23,431.00	Eustis	City of Eustis	Open
	8/26/2004	28	LA-0028	"911" System Enhancement	$500.00	Montverde	Town of Montverde	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Hazard

Lake County LMS Task Force *Initiatives by Hazard*								
Hazard	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Status
	4/29/2004	27	LA-0011	Emergency Power Generation for Police Station	$50,000.00	Groveland	City of Groveland	Open
	8/20/2004	27	LA-0014	Well Site Security System	$35,000.00	Lady Lake	Town of Lady Lake	Completed
	8/17/2004	26	LA-0013	Warning Alert and GPS Equipment/Generator	$139,962.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Terminated
	10/22/2004	26	LA-0021	Generators for Emergency Shelters	$45,000.00	Lake County (Unincorporated)	Lake County Emergency Management	Open
	7/30/2004	24	LA-0026	Public Information Program	$6,000.00	Mascotte	City of Mascotte	Open
	8/16/2004	24	LA-0029	Fire Department Substation	$625,000.00	Mount Dora	City of Mount Dora	Completed
	12/17/2004	22	LA-0047	Fire Department Substation	$253,000.00	Eustis	City of Eustis	Open
	11/6/2004	21	LA-0034	Astor Topography Mapping	$250,000.00	Lake County (Unincorporated)	Lake County Public Works	Completed
	11/6/2004	17	LA-0037	Portable Generator Special Needs Shelter	$50,000.00	Leesburg	City of Leesburg	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Hazard

Lake County LMS Task Force *Initiatives by Hazard*								
Hazard	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Status
	11/6/2004	17	LA-0038	Reverse "911" System	$50,000.00	Leesburg	City of Leesburg	Terminated
	1/28/2005	17	LA-0053	Expand Fire Dept Station	$100,000.00	Montverde	Town of Montverde	Open
Flood								
	7/29/2009	101	LA-0100	Central Avenue Property Acquisition	$100,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Open
	7/29/2009	95	LA-0090	Public Works Uninterruptible Power Supply for SCADA Water System	$15,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Open
	6/24/2009	95	LA-0092	Stormwater Management- James Street, Lisa Street, and Trespass Trail	$649,000.00	Lake County (Unincorporated)	Astor Area Chamber of Commerce	Open
	6/24/2009	94	LA-0093	Stormwater Management-Bass and Indigo Roads	$1,106,000.00	Lake County (Unincorporated)	Astor Area Chamber of Commerce	Open
	6/24/2009	93	LA-0094	Stormwater Management-Ward Street	$4,010,000.00	Lake County (Unincorporated)	Astor Area Chamber of Commerce	Open
	7/29/2009	91	LA-0106	Ground Storage Tank/High Service Pumps	$480,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Open
	7/29/2009	89	LA-0099	Center Lake Flood Control Project	$3,500,000.00	Clermont	City of Clermont	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Lake County LMS Task Force *Initiatives by Hazard*								
Hazard	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Status
	12/17/2004	33	LA-0051	Storm Water System Retrofit-Ardice Ave Pond & Land	$140,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0056	Storm Water System Retrofit-Cardinal St. Pond	$50,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0058	Storm Water System Retrofit-Center St. Storm Sewer at Atwater Ave.	$20,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0059	Storm Water System Retrofit-Edgewater Dr. Stormwater Pond	$50,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0061	Storm Water System Retrofit-Eustis St. and Gottsche Ave. Storm Sewer and Pond	$200,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0062	Frosty Way Storm Culvert and Pond	$80,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0063	Getford Ave. Storm Sewer, Swale, and Pond	$190,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0064	Storm Water System Retrofit-Getford Ave. Drainage Swales	$30,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0068	Storm Water System Retrofit-Lakewood Ave. at Edgewater	$90,000.00	Eustis	City of Eustis	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Hazard

Lake County LMS Task Force *Initiatives by Hazard*								
Hazard	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Status
	12/17/2004	33	LA-0069	Storm Water System Retrofit-Northshore Dr. Stormwater Pond	$90,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0070	Storm Water System Retrofit-Northshore Dr. Storm Sewer and Pond	$50,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0071	Storm Water System Retrofit-Oaklynn Ln. Storm Sewer	$40,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0073	Storm Water System Retrofit-Storm Sewer Across Bay St. from Eustis St.	$125,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0075	Storm Water System Retrofit-Wall St. and Harlem Ave. Pond	$100,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0076	Storm Water System Retrofit-Westmoreland Ave. Swale	$25,000.00	Eustis	City of Eustis	Open
	12/17/2004	33	LA-0077	Storm Water System Retrofit-Woodwater Ave. Swale and Sewer	$40,000.00	Eustis	City of Eustis	Open
	11/4/2004	30	LA-0005	Purchase of Two Portable Trash Pumps	$40,000.00	Groveland	City of Groveland	Open
	12/17/2004	30	LA-0072	Storm Water System Retrofit-Park Ave. and Northshore Dr. Pond	$455,200.00	Eustis	City of Eustis	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Lake County LMS Task Force *Initiatives by Hazard*							
Hazard	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Status
	11/4/2004	29	LA-0009	Stationary Power Generators	$243,000.00	Groveland	City of Groveland	Open
	4/29/2004	28	LA-0010	Portable Power Generation for Lift Stations	$40,000.00	Groveland	City of Groveland	Open
	11/5/2004	28	LA-0012	Generator for Well 2 and SCADA System	$200,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Completed
	12/17/2004	28	LA-0060	Storm Water System Retrofit-Eustis St. and Gottsche Ave. Pond	$782,095.00	Eustis	City of Eustis	Open
	12/17/2004	27	LA-0057	Storm Water System Retrofit-Center St. & Howard Ln. Pond & Trench	$1,120,855.00	Eustis	City of Eustis	Open
	12/17/2004	27	LA-0065	Storm Water System Retrofit-Grove St. and Bates Ave. Pond	$1,191,475.00	Eustis	City of Eustis	Open
	12/17/2004	27	LA-0066	Storm Water System Retrofit-Key Ave. and Donnelly St. Pond	$1,161,345.00	Eustis	City of Eustis	Open
	12/17/2004	27	LA-0067	Storm Water System Retrofit-Lakeshore Dr. and Morin St. Pond	$1,109,722.00	Eustis	City of Eustis	Open
	12/17/2004	27	LA-0074	Storm Water System Retrofit-Sub-Basin Line	$1,460,786.00	Eustis	City of Eustis	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Hazard

Lake County LMS Task Force *Initiatives by Hazard*								
Hazard	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Status
	11/4/2004	24	LA-0006	Canal Cleaning and Maintenance	$100,000.00	Groveland	City of Groveland	Open
	8/11/2004	23	LA-0025	SCADA Systems for Lift Stations	$900,000.00	Leesburg	City of Leesburg	Open
	8/17/2004	22	LA-0030	El Nino Stormwater Project	$1,400,000.00	Umatilla	City of Umatilla	Open
	11/4/2004	21	LA-0007	Installation of Sewer West Side	$1,000,000.00	Groveland	City of Groveland	Open
	9/28/2004	21	LA-0027	Retrofit Storm Water System	$3,580,000.00	Minneola	City of Minneola	Open
	11/4/2004	19	LA-0008	Retrofit Storm Water System West Side	$2,000,000.00	Groveland	City of Groveland	Open
	4/6/2009	19	LA-0086	Cadwell Park Drainage Improvements	$36,370.00	Umatilla	City of Umatilla	Open
	1/31/2005	18	LA-0054	Retrofit Storm Water System in Bloxam	$1,600,000.00	Clermont	City of Clermont	Completed
	4/6/2009	18	LA-0084	Alleyway Project	$212,125.00	Umatilla	City of Umatilla	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Hazard

Lake County LMS Task Force *Initiatives by Hazard*								
Hazard	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Status
	8/20/2004	17	LA-0001	Emerald Lake MH Park Purchase/Relocation	$13,000,000.00	Clermont	City of Clermont	Open
	11/6/2004	17	LA-0032	Lake Claire Home Flooding	$250,000.00	Lake County (Unincorporated)	Lake County Public Works	Completed
	11/6/2004	17	LA-0036	Lift Station Generator Systems	$280,000.00	Leesburg	City of Leesburg	Open
	4/6/2006	17	LA-0079	Dead River Estate Land Purchase	$1,780,000.00	Lake County (Unincorporated)	Lake County Growth Management	Completed
	4/6/2006	17	LA-0080	Ricketson Property Purchase	$3,030,000.00	Lake County (Unincorporated)	Lake County Growth Management	Open
	4/6/2006	17	LA-0081	Wekiva River Property Purchase	$2,550,000.00	Lake County (Unincorporated)	Lake County Growth Management	Open
	4/24/2006	17	LA-0082	Northeast Community Park Purchase	$985,000.00	Lake County (Unincorporated)	Lake County Growth Management	Completed
	4/6/2009	16	LA-0085	Orange Avenue Stormwater Improvements	$782,125.00	Umatilla	City of Umatilla	Open
High Wind								
	7/29/2009	98	LA-0089	Police Department Hurricane Hardening /Telephone System Upgrade	$55,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Hazard

Lake County LMS Task Force *Initiatives by Hazard*								
Hazard	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Status
	7/29/2009	98	LA-0096	Town Hall Hurricane Hardening/Uninterruptible Power Supply	$60,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Open
	7/24/2009	97	LA-0103	Emergency Shelter-First Baptist Church of Astor, Family Life Center	$800,000.00	Lake County (Unincorporated)	Astor Area Chamber of Commerce	Open
	7/29/2009	91	LA-0098	Town Storage Hurricane Hardening	$12,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Open
	7/26/2009	91	LA-0105	Fire Station No. 43 Hardening and Uninterruptable Power Supply	$73,143.00	Villages CDD	The Villages Public Safety Department	Open
	7/29/2009	90	LA-0097	Town Library Hurricane Hardening/Uninterruptable Power Supply	$49,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Open
	7/26/2009	89	LA-0104	Fire Station No. 43 Hardening	$18,356.00	Villages CDD	The Villages Public Safety Department	Open
	8/7/2009	85	LA-0095	Tornado Shelter Program for Mobile Home Residents	$150,000.00	Lake County (Unincorporated)	Lake County Emergency Management	Open
	10/22/2004	33	LA-0020	Generators for Fire Stations	$120,000.00	Lake County (Unincorporated)	Lake County Emergency Management	Open
	11/6/2004	32	LA-0035	Storm Shielding and Emergency Power Backup for Fire Stations	$460,000.00	Lake County (Unincorporated)	Lake County Fire Rescue	Completed

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Hazard

Lake County LMS Task Force *Initiatives by Hazard*								
Hazard	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Status
	12/17/2004	32	LA-0050	Harden Addition (Safe Room) to PW Bldg	$156,000.00	Eustis	City of Eustis	Open
	1/20/2005	31	LA-0039	Harden Facility for Special Needs Shelter	$250,000.00	Lake County (Unincorporated)	LifeStream Behavioral Center	Open
	1/19/2005	30	LA-0040	Harden City Hall	$50,000.00	Groveland	City of Groveland	Open
	12/17/2004	30	LA-0049	Harden Rm at Water Tower for Public Safety Radio System	$23,000.00	Eustis	City of Eustis	Terminated
	4/7/2005	30	LA-0078	Hardening of the Public Safety Building	$250,000.00	Mount Dora	City of Mount Dora	Completed
	11/4/2004	29	LA-0004	Stand-by Generator at City Hall	$30,000.00	Groveland	City of Groveland	Open
	10/24/2004	29	LA-0024	Health Department Facility Development	$8,000,000.00	Lake County (Unincorporated)	Lake County Health Department	Open
	3/17/2005	29	LA-0055	Harden PW Admin for Field Operations Center	$185,000.00	Leesburg	City of Leesburg	Open
	11/5/2004	28	LA-0002	Critical Facility Storm Evaluation	$34,500.00	Eustis	City of Eustis	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Hazard

Lake County LMS Task Force *Initiatives by Hazard*								
Hazard	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Status
	1/19/2005	28	LA-0041	Harden Community Center	$165,000.00	Leesburg	City of Leesburg	Completed
	1/19/2005	26	LA-0042	Harden, Flood Control Public Safety Complex	$40,000.00	Groveland	City of Groveland	Open
	1/20/2005	26	LA-0045	Special Needs Shelter/Harden Facility	$185,000.00	Lake County (Unincorporated)	Sunrise ARC Inc	Open
	11/5/2004	25	LA-0003	Emergency Back up Power Supply at Government Buildings	$100,000.00	Fruitland Park	City of Fruitland Park	Open
	1/20/2005	25	LA-0043	Harden City Hall	$75,000.00	Leesburg	City of Leesburg	Open
	10/22/2004	22	LA-0018	Harden Lake County EOC	$200,000.00	Lake County (Unincorporated)	Lake County Facilities Maintenance	Terminated
	1/20/2005	22	LA-0044	Harden HQ - Fire Station #1	$275,000.00	Leesburg	City of Leesburg	Open
	1/26/2005	22	LA-0046	Harden HQ - Fire Station #2	$275,000.00	Leesburg	City of Leesburg	Open
	11/6/2004	21	LA-0031	Emergency Power Generator at Lake Technical Institute, Eustis	$35,000.00	Lake County (Unincorporated)	Lake Technical Institute	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix I - Project Listing by Hazard

Lake County LMS Task Force *Initiatives by Hazard*								
Hazard	Date	Priority Score**	Initiative #	Initiative Name	Estimated Cost to Implement*	Jurisdiction	Responsible Organization	Status
	11/6/2004	20	LA-0033	Emergency Power Generator at Lake Technical Institute, Tavares	$25,000.00	Lake County (Unincorporated)	Lake Technical Institute	Open
	1/15/2010	19	LA-0087	City Hall / Community Building Hardening Project, Phase 1	$367,400.00	Umatilla	City of Umatilla	Open
	1/28/2005	17	LA-0052	Harden Four Schools for Hurricane Shelters	$600,000.00	Lake County (Unincorporated)	Lake County School Board	Open
Lightning								
	7/29/2009	96	LA-0088	Lightning Rod System and Surge Protectors for all Howey Government Buildings	$100,000.00	Howey-in-the-Hills	Town of Howey-in-the-Hills	Open
Wildfire								
	7/30/2009	99	LA-0102	Develop a community Wildfire Protection Plan for Lake County Unincorporated	$1.00	Lake County (Unincorporated)	Division of Forestry	Open

**Cost estimates need to re-evaluated.* ***High scores 85 and up scored by STAPLEE Method.*

Appendix II - Bylaws

What Has Changed?

In order to allow for more expedient activity in the future, the bylaws were amended by special vote on June 24, 2009. The amendments include the elimination of all of the Committees except for the Steering Committee, and temporary subcommittees, as needed. The quorum requirements were also reduced allowing for the opportunity for more work to be completed.

ARTICLE I. PURPOSES OF THE WORKING GROUP

The purpose of the Lake County Mitigation Working Group is to decrease the vulnerability of the citizens, governments, businesses and institutions of Lake County to the future human, economic and environmental costs of natural and technological disasters. The Working Group will develop, monitor, implement, and maintain a comprehensive plan for hazard mitigation which will be intended to accomplish this purpose.

ARTICLE II. MEMBERSHIP

Participation in the Working Group is voluntary by all entities. Membership in the Working Group is open to all jurisdictions, organizations and individuals supporting its purposes.

ARTICLE III. ORGANIZATIONAL STRUCTURE

The organizational structure of the Working Group shall consist of a Steering Committee, and other temporary subcommittees as deemed necessary by the Steering Committee.

A. The Steering Committee

The Working Group shall be guided by a Steering Committee consisting of designated representatives of the following:

• One representative from the government of Lake County and each participating incorporated municipality,

• One representative from organizations and associations representing key business, industry, and community interest groups of Lake County, and

• Other such individuals appointed by a majority vote of the Steering Committee.

Members of the Steering Committee will be designated by formal resolution, appointment or other action to serve as the official representative and spokesperson for the jurisdiction or organization regarding the activities and decisions of the Mitigation Working Group. To

maintain good standing, members of the Steering Committee must not have more than two unexcused absences from meetings during the course of a year.

B. Other committees

Temporary subcommittees may be established at any time for special purposes by the chair of the Steering Committee, and their membership designated at that time.

Membership in the subcommittees is not restricted. To maintain good standing, members of the permanent or temporary committees or subcommittees must not have more than two unexcused absences from meetings during the course of a year.

C. Program Staff

Lake County, or other agency as so designated by the Steering Committee, will serve as the program staff for the Working Group, and assist in the coordination and support of the Working Group's activities.

ARTICLE IV. OFFICERS

Any member in good standing of the Steering Committee is eligible for election as an officer. The Steering Committee will have a chair elected by a majority vote of a quorum of the members. The Steering Committee will also elect by majority vote a vice chair. Representatives of both local government and any participating private sector organizations will be eligible for election as an officer. Each will serve a term of one year, and be eligible for re-election for an unlimited number of terms. The chair and vice chair of the Steering Committee are also considered to be chair and vice chair of the Working Group.

The chair of the Steering Committee will preside at each meeting of the Steering Committee, as well as establish temporary subcommittees and assign personnel to them. The vice chair will fulfill the duties and responsibilities of the chair in his or her absence.

The chair of each temporary committee will be designated from the members in good standing of the Steering Committee by its chair, and will serve at the pleasure of the chair of the Steering Committee.

ARTICLE V. RESPONSIBILITIES

A. Steering Committee

The Steering Committee will be responsible for oversight and coordination of all actions and decisions by the Working Group, and is solely responsible for formal actions in the name of the Working Group, including the release of reports, development of resolutions, issuance of position papers, and similar activities. The Steering Committee makes assignments to the committees and subcommittees, coordinates their work, and takes action on their recommendations.

ARTICLE VI. ACTIONS BY THE WORKING GROUP

A. Authority for Actions

Only the Steering Committee has the authority to take final actions in the name of the Working Group. Actions by other committees, subcommittees or program staff are not considered as final until affirmed by action of the Steering Committee.

B. Meetings, Voting and Quorum

Meetings of the Steering Committee and its committees and subcommittees will be conducted in accord with Robert's Rules of Order, if and when deemed necessary by chair of the meeting. Regular meetings of the Steering Committee will be scheduled at least quarterly with a minimum of 10 working days' notice. Committees will meet at least quarterly prior to Steering Committee meetings, or more frequently as deemed necessary, at the discretion of their chairperson.

All final actions and decisions made in the name of the Working Group will be by affirmative vote of a quorum of the Steering Committee. A quorum shall consist of designated representatives from at least 5 of the participating jurisdictions. Each member of the Steering Committee will have one vote. Voting by proxy, written or otherwise, is not permitted.

C. Special Votes

Special votes may be taken under emergency situations or when there are other extenuating circumstances that are judged by both the chair and vice chair of the Steering Committee to prohibit scheduling of a regular meeting of the Steering Committee. Special votes may be by telephone, email and/or first class mail, and shall be in accord with all applicable statutes for such actions.

D. Public Hearings

When required by statute or the policies of Lake County, or when deemed necessary by the Steering Committee, a public hearing regarding actions under consideration for implementation by the Working Group will be held.

E. Documentation of Actions

All meetings and other forms of action by the Steering Committee and permanent subcommittees will be documented and made available for inspection by the public.

ARTICLE VII. ADOPTION OF AND AMENDMENTS TO THE BYLAWS

The Bylaws of the Working Group may be adopted and/or amended by a two-thirds majority vote of the members in good standing of the Steering Committee. All proposed changes to the bylaws will be provided to each member of the Steering Committee not less than ten working days prior to such a vote.

ARTICLE VIII. DISSOLUTION OF THE WORKING GROUP

The Working Group may be dissolved by affirmative vote of 51% of the members in good standing of the Steering Committee at the time of the vote, by order of a court of competent jurisdiction, and/or by instruction of the Lake County governing body. At the time of dissolution, all remaining documents, records, equipment and supplies belonging to the Working Group will be transferred to Lake County for disposition.

For both of the public meetings that were held sufficient public notice was given by advertising the meeting on the County's website, posting flyers in the main entrance to the Lake County Administration Building, and by sending out emails to known interested parties, and the Local Mitigation Strategy Working Group.

From: Loughlin, Sean
Sent: Thursday, July 16, 2009 2:10 PM
To: Loughlin, Sean
Cc: 'Adam Hall'
Subject: MEETING NOTICE ~ JULY 27, 2009 ~ LAKE COUNTY LOCAL HAZARD MITIGATION PLAN UPDATE

MEETING NOTICE

Local Mitigation Strategy Meeting

Lake County Agricultural Center, Training Room A

1951 Woodlea Road, Tavares

Monday, July 27, 2009

3:00 PM

Meeting Topic: Update of Lake County LMS

Pursuant to 44 CFR § 201.6, Lake County is required to update its Local Hazard Mitigation Strategy (LMS) every five (5) years. The LMS identifies hazards within the county and projects to reduce or eliminate the effects of those hazards. The update process includes two meetings to receive input from mitigation stakeholders and the public. The first meeting was held in June. Since then, significant progress has been made updating the LMS.

Lake County is fortunate enough to have Mr. Adam Hall from Florida State University assist with the plan update. When the LMS update is complete, the Board of County Commissioners as well as the governing bodies of Lake County's municipalities will required to officially adopt the LMS to maintain funding eligibility for the following Federal programs:

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

Please RSVP to Adam Hall regarding your attendance at this meeting. His e-mail is ahall@lakecountyfl.gov , or he can be contacted via telephone at (352) 343-9420.

Your input is crucial to ensure we have a successful plan update. If you know of an individual would be able to provide input, please feel free to forward this meeting notice along.

Please do not hesitate to contact Mr. Hall or myself with any questions you may have.

Thanks,

Sean

_____

Sean Loughlin
Disaster Assistance Coordinator
Lake County Dept. of Public Safety
Emergency Management Division
P.O. Box 7800
315 W. Main St.
Tavares, Florida 32778

(O): 352-343-9420
(F): 352-343-9728
(C): 352-455-3308

News Release: Lake County continues update to Local Mitigation Strategy Page 1 of 1

Residents | Visitors | Business | Government | Departments | How Do I...

Lakes. Hills. Horizons. Where the best comes into view.

Calendar : Directory of Services : Online Services : Contact Us : Register : Login

You are here: Home > Media > News Releases > News Release

Keyword Search

go

Media

Media Home

County Logo
Desktop Wallpapers
Media Request
Newsletter
News Releases
Pictures
Send Postcard
Screensaver
Travel Writer's Info

Citizen Action Request

Send a request through the Citizen Action Request Line

General Information

Lake County BCC
315 West Main St.
P.O. Box 7800
Tavares, Florida 32778

Disclaimer : Contact Us
Employee Login

News Release

Print Email Save Link

For immediate release - July 16, 2009

Lake County continues update to Local Mitigation Strategy

TAVARES — The Lake County Local Mitigation Strategy Task Force will be meeting Monday, July 27, at 3 p.m. in training room A of the Lake County Agricultural Center, located at 1951 Woodlea Road, Tavares, as it continues the process of updating the Local Mitigation Strategy first established in 1999.

The public is invited to attend and provide comment, as the committee will review the preliminary draft written to date and the initiatives that have been brought forward by local municipalities and the County.

The Local Mitigation Strategy is a countywide plan developed with the assistance of local and county government agencies, businesses and residents to help mitigate risk from natural and manmade disasters. This initiative will result in an updated plan, which was last revised in 2004. Initiatives identified within the Local Mitigation Strategy, if implemented before disasters, can lessen the potential impacts.

Lake County is one of 11 counties throughout the state fortunate enough to receive assistance with the plan revision through the efforts of a Florida State University graduate assistant program. This was made possible through a partnership between the Florida Division of Emergency Management and Florida State University.

For more information about Lake County's Local Mitigation Strategy, call the Emergency Management Division at (352) 343-9420.

###

Media contact:
Christopher Patton
Public Information Coordinator
Office: (352) 343-9609; Cell: (352) 455-0445
cpatton@lakecountyfl.gov

E-mail Subscription

Signup to receive a weekly, aggregated listing of Lake County's news releases via e-mail:

E-mail address: Subscribe

☐ I would also like to receive the Lake County Tourism Newsletter via e-mail
☐ I would also like to receive the Lake County Government Newsletter via e-mail
☐ I would also like to receive Public Safety Alerts via e-mail

Privacy Policy. More Information

Lake County BCC Copyright ©2007

Home : Visitors : Residents : Business : Government : Directory of Services : Online Services

http://www.lakecountyfl.gov/media/news_releases/news_release.aspx?id=1014

LAKE COUNTY
FLORIDA

MEETING NOTICE

Local Mitigation Strategy Committee Meeting
Lake County Administration Building, Room 233
315 W. Main Street, Tavares
Wednesday, June 24, 2009
2:00 PM

Topic: Update of the Lake County Local Mitigation Strategy (LMS)

The purpose of the LMS is to reduce or eliminate long-term risk to human life and property from disasters. The plan identifies hazards in the county and projects to mitigate the effects of those hazards.

Input from the public is welcome

For questions, please contact the Emergency Management Division, (352) 343-9420

JENNIFER HILL *District 1* | ELAINE RENICK *District 2* | JIMMY CONNER *District 3* | LINDA STEWART *District 4* | WELTON G. CADWELL *District 5*

Meeting Sign-In Sheet. LMS Working Group Meeting No. 1. June 24th, 2009.

Name	Title/Position	Jurisdiction
Ed Nathanson	chief of Police	Lady Lake
Charles Bobshear	Comm. Off /Fire Liaison	Lady Lake
Sharon Hogan	Stormwater Tech	Lake County
Wayne J. Luckock III	Fire Captain	Tavares
Willie Morgan	Fire Chief	Groveland
Don Ruths	Wildfire Mitigation Specialist/PIO	Division of Forestry
Jerry Smith	Director Lake County EM	Lake County
Gina Lambert	The Villages Public Safety Emergency Management	The Villages / Lake County
Ken White	Public Works Dir.	City of Umatilla
Ray Lovett	Forest Area Supervisor	Lake County & All Florida
Tonya R. Jones	Public Works Admin. Coord.	City of Tavares
Sean Loughlin	Disaster Assistance Coord. Lake County/EM	Lake County
Adam Hall	LMS Intern	Lake County/FSU

Meeting Sign-In Sheet. LMS Working Group Meeting No. 2. July 27,2009

	Name	Title/Position	Jurisdiction
1	Claudia Roland	~~Astor~~	Astor
2	Shannon Hogan	Stormwater Tech Lake County	Lake County
3	Karla Johnson	Astor CC	Lake unincorp.
4	Ethis Gross		Lake
5	James Shadd	Astor	
6	Anthony Omerzu		Astor
7	Zetta Hyde		Astor
8	J. H. Reed		Astor
9	Sean Loughlin		Lake
10	Curtis Lewis		Astor
11	Ivy Hall		Astor
12	Mike Johnson		Astor
13	Tamara Richardson		City of Clermont
14	Curtis Robbins	Police Chief	Howey in the Hills
15	Dollie Jackson	EM Specialist	Lake Co EM
16	Paul R. Han	MD Dow	
17	Ron Hart	Water Resources Program Mgr	LCWA
18	KEN WASTE	PUBLIC WORKS DIRECTOR	CITY OF UMATILLA

	Name	Title/Position	Jurisdiction
19	Charles Bearshear		LAKE LAKE PD
20	Gina Lambert	Emergency Mang	The Villages
21	Adam Hall	LMS Intern / LCEM	FSU

Table A-1: Flood Vulnerability for Astatula						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	999	151	15.12%	$113,529,161	$21,108,728	18.59%
Commercial	16	0	0.00%	$4,001,170	$0.00	0.00%
Industrial	7	1	14.29%	$6,802,738	$2,289,478	33.66%
Agricultural	22	12	54.55%	$4,659,050	$2,905,284	62.36%
Religious/ non profit	6	0	0.00%	$1,035,663	$0	0.00%
Government	4	2	50.00%	$795,051	$343,692	43.23%
Education	1	0	0.00%	$337,500	$0	0.00%
Utilities	15	1	6.67%	$62,754	$0	0.00%
Other	5	4	80.00%	$592,818	$592,726	99.98%
Total	1,075	171	15.91%	$131,815,904	$27,239,907	20.67%

Table A-2: Flood Vulnerability for Clermont						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	11,770	823	6.99%	$3,012,634,447.50	$246,166,278	8.17%
Commercial	688	35	5.09%	$1,139,781,764	$80,570,564	7.07%
Industrial	35	5	14.29%	$44,909,010	$8,471,580	18.86%
Agricultural	22	7	31.82%	$4,317,508	$2,413,774	55.91%
Religious/ non profit	82	3	3.66%	$127,184,829	$1,199,345	0.94%
Government	152	45	29.61%	$66,391,421	$25,926,125	39.05%
Education	26	8	30.77%	$107,859,636	$44,236,665	41.01%
Utilities	353	44	12.46%	$1,175,261	$462,954	39.39%
Other	5	5	100.00%	$534,733	$534,733	100.00%
Total	13,133	975	7.42%	$4,504,788,609	$412,006,776	9.15%

Table A-3: Flood Vulnerability for Eustis

Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	4,287	858	20.01%	$782,407,478	$257,322,474	32.89%
Commercial	417	31	7.43%	$277,479,236	$35,041,764	12.63%
Industrial	33	5	15.15%	$32,121,363	$5,889,990	18.34%
Agricultural	26	20	76.92%	$3,180,114	$2,158,680	67.88%
Religious/ non profit	152	10	6.58%	$63,398,177	$28,893,704	45.57%
Government	176	63	35.80%	$53,213,796	$23,873,141	44.86%
Education	19	2	10.53%	$26,340,854	$3,562,011	13.52%
Utilities	17	17	100.00%	$2,168,575	$77,791	3.59%
Other	19	15	78.95%	$17,158,450	$12,093,990	70.48%
Total	5,146	1,030	20.02%	$1,257,468,041	$371,072,225	29.51%

Table A-4: Flood Vulnerability for Fruitland Park

Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	1,848	267	14.45%	$297,733,059	$67,004,825	22.50%
Commercial	180	35	19.44%	$132,264,316	$31,595,092	23.89%
Industrial	20	5	25.00%	$15,144,765	$1,239,280	8.18%
Agricultural	16	6	37.50%	$4,102,364	$2,893,230	70.53%
Religious/ non profit	29	15	51.72%	$18,782,687	$6,654,803	35.43%
Government	47	18	38.30%	$17,151,993	$10,474,607	61.07%
Education	6	1	16.67%	$7,500,353	$1,552,239	20.70%
Utilities	32	9	28.13%	$105,644	$0	0.00%
Other	3	3	100.00%	$396	$396	100.00%
Total	2,181	359	16.46%	$492,785,576.00	$121,414,471	24.64%

Table A-5: Flood Vulnerability for Groveland						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	5,194	1,011	19.46%	$829,176,771	$184,789,484	22.29%
Commercial	211	51	24.17%	$135,917,552	$50,601,174	37.23%
Industrial	61	26	42.62%	$82,371,790	$46,056,865	55.91%
Agricultural	98	84	85.71%	$16,504,890	$16,148,390	97.84%
Religious/ non profit	68	9	13.24%	$18,716,096	$2,173,359	11.61%
Government	91	22	24.18%	$24,578,145	$10,263,904	41.76%
Education	33	0	0.00%	$23,042,567	$0	0.00%
Utilities	168	51	30.36%	$891,356	$34,030	3.82%
Other	30	29	96.67%	$1,578,429	$1,578,429	100.00%
Total	5,954	1,283	21.55%	$1,132,777,596	$311,650,409	27.51%

Table A-6: Flood Vulnerability for Howey-in-the-Hills

Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	645	72	11.16%	$147,930,218	$34,453,511	23.29%
Commercial	19	3	15.79%	$24,792,086	$19,168,026	77.32%
Industrial	2	1	50.00%	$310,813	$112,928	36.33%
Agricultural	21	20	95.24%	$1,787,742	$1,464,861	81.94%
Religious/ non profit	2	1	50.00%	$617,171	$34,800	5.64%
Government	14	9	64.29%	$2,921,405	$2,372,981	81.23%
Education	14	3	21.43%	$21,015,284	$4,960,058	23.60%
Utilities	1	1	100.00%	$2,690	$2,690	100.00%
Other	7	6	85.71%	$276	$213	77.17%
Total	725	116	16.00%	$199,377,683	64,034,927	32.12%

Table A-7: Flood Vulnerability for Lady Lake						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	6,665	368	5.52%	$1,177,004,984	$101,550,477	8.63%
Commercial	369	77	20.87%	$577,942,178	$79,770,828	13.80%
Industrial	19	5	26.32%	$39,431,258	$8,063,330	20.45%
Agricultural	18	2	11.11%	$3,153,034	$15,876	0.50%
Religious/ non profit	43	10	23.26%	$74,208,518	$12,815,700	17.27%
Government	102	20	19.61%	$35,434,721	$3,215,149	9.07%
Education	2	1	50.00%	$20,247,192	$826,200	4.08%
Utilities	62	15	24.19%	$660,091	$183,496	27.80%
Other	21	13	61.90%	$30,371,300	$18,695,507	61.56%
Total	7,301	511	7.00%	$1,958,453,275	$225,136,563	11.50%

Table A-8: Flood Vulnerability for Lake County (Unincorporated)

Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	54,774	24,075	43.95%	$12,142,999,059	$5,722,435,598	47.13%
Commercial	1,161	350	30.15%	$1,447,041,418	$396,263,880	27.38%
Industrial	422	133	31.52%	$651,086,548	$187,915,100	28.86%
Agricultural	4,294	3,982	92.73%	$921,904,944	$498,825,168	54.11%
Religious/ non profit	266	119	44.74%	$329,390,387	$138,950,990	42.18%
Government	1,333	1,960	147.04%	$596,781,304	$672,044,409	112.61%
Education	49	10	20.41%	$173,624,634	$16,411,955	9.45%
Utilities	1,331	669	50.26%	$19,530,604	$8,604,470	44.06%
Other	1,248	1,320	105.77%	$234,204,988	$241,318,387	103.04%
Total	64,878	32,618	50.28%	$16,516,563,885	$9,221,650,635	55.83%

Table A-9: Flood Vulnerability for Leesburg						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	8,640	1,521	17.60%	$1,387,820,460	$456,511,373	32.89%
Commercial	1,249	207	16.57%	$1,025,510,662	$295,179,878	28.78%
Industrial	294	82	27.89%	$267,198,200	$84,403,663	31.59%
Agricultural	121	114	94.21%	$16,328,624	$18,898,008	115.74%
Religious/ non profit	256	39	15.23%	$473,625,467	$72,461,187	15.30%
Government	412	182	44.17%	$170,320,835	$93,333,782	54.80%
Education	43	14	32.56%	$101,888,354	$55,020,179	54.00%
Utilities	226	83	36.73%	$6,739,994	$3,414,583	50.66%
Other	50	31	62.00%	$43,454,067	$22,916,459	52.74%
Total	11,291	2,273	20.13%	$3,492,886,663	$1,102,139,112	31.55%

Table A-10: Flood Vulnerability for Mascotte

Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	2,197	271	12.34%	$324,518,300	$46,931,177	14.46%
Commercial	99	9	9.09%	$22,232,898	$3,300,884	14.85%
Industrial	9	1	11.11%	$5,187,218	$807,670	15.57%
Agricultural	107	94	87.85%	$16,556,368	$16,395,784	99.03%
Religious/ non profit	23	9	39.13%	$7,709,649	$5,297,249	68.71%
Government	57	8	14.04%	$10,294,985	$1,913,519	18.59%
Education	2	2	100.00%	$2,361,418	$2,361,418	100.00%
Utilities	50	11	22.00%	$56,860	$0	0.00%
Other	12	11	91.67%	$455,304	$198,213	43.53%
Total	2,556	416	16.28%	$389,372,999	$77,205,913	19.83%

Table A-11: Flood Vulnerability for Minneola						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	3,905	289	7.40%	$844,667,625	$88,771,251	10.51%
Commercial	117	4	3.42%	$103,620,280	$9,457,838	9.13%
Industrial	19	0	0.00%	$29,892,633	$0	0.00%
Agricultural	38	8	21.05%	$17,794,272	$2,235,770	12.56%
Religious/ non profit	13	3	23.08%	$8,903,501	$4,514,598	50.71%
Government	47	8	17.02%	$18,776,981	$5,995,109	31.93%
Education	4	0	0.00%	$3,029,598	$0	0.00%
Utilities	101	15	14.85%	$392,185	$114,120	29.10%
Other	1	0	0.00%	$395,996	$0	0.00%
Total	4,245	327	7.70%	$1,027,473,070	$111,088,686	10.81%

Table A-12: Flood Vulnerability for Montverde						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	780	151	19.36%	$194,375,778	$34,559,733	17.78%
Commercial	12	0	0.00%	$4,358,420	$0	0.00%
Industrial	2	0	0.00%	$754,445	$0	0.00%
Agricultural	23	5	21.74%	$946,706	$654,060	69.09%
Religious/ non profit	5	1	20.00%	$582,165	$9,300	1.60%
Government	23	3	13.04%	$3,089,167	$212,639	6.88%
Education	8	4	50.00%	$29,853,576	$15,260,465	51.12%
Utilities	14	4	28.57%	$62,830	$0	0.00%
Other	0	0	0.00%	$0.00	$0	0.00%
Total	867	168	19.38%	$234,023,087	$50,696,197	21.66%

Table A-13: Flood Vulnerability for Mount Dora						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	2,910	708	24.33%	$667,697,483	$319,616,754	47.87%
Commercial	273	30	10.99%	$216,807,770	$44,383,178	20.47%
Industrial	26	2	7.69%	$20,068,575	$9,815,475	48.91%
Agricultural	15	5	33.33%	$7,943,236	$1,300,372	16.37%
Religious/ non profit	77	17	22.08%	$92,163,933	$38,895,219	42.20%
Government	87	28	32.18%	$73,102,831	$7,042,673	9.63%
Education	20	3	15.00%	$17,059,853	$11,613,330	68.07%
Utilities	21	6	28.57%	$703,163	$69,958	9.95%
Other	6	5	83.33%	$1,801,943	$519,514	28.83%
Total	3,435	854	24.86%	$1,097,348,787	$433,256,473	39.48%

Table A-14: Flood Vulnerability for Tavares						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	2,879	1,463	50.82%	$477,834,518	$362,484,614	75.86%
Commercial	263	73	27.76%	$156,871,370	$97,102,932	61.90%
Industrial	28	11	39.29%	$44,146,863	$11,239,085	25.46%
Agricultural	18	16	88.89%	$4,802,482	$2,508,869	52.24%
Religious/ non profit	51	4	7.84%	$113,051,018	$4,710,396	4.17%
Government	89	44	49.44%	$373,592,318	$7,541,458	2.02%
Education	20	6	30.00%	$6,198,111	$2,959,610	47.75%
Utilities	31	6	19.35%	$319,686	$155,172	48.54%
Other	31	28	90.32%	$16,049,173	$15,448,440	96.26%
Total	3,410	1,651	48.42%	$1,192,865,537	$607,461,889	50.92%

Table A-15: Flood Vulnerability for Umatilla						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	868	214	24.65%	$133,494,195	$78,577,860	58.86%
Commercial	108	9	8.33%	$39,611,538	$3,787,558	9.56%
Industrial	12	1	8.33%	$4,262,400	$210,260	4.93%
Agricultural	28	11	39.29%	$2,520,298	$686,002	27.22%
Religious/ non profit	20	2	10.00%	$22,630,397	$14,895,410	65.82%
Government	48	15	31.25%	$9,304,585	$1,319,567	14.18%
Education	16	5	31.25%	$31,402,476	$7,027,858	22.38%
Utilities	5	4	80.00%	$684,444	$7,500	1.10%
Other	8	6	75.00%	$4,243,388	$2,985,194	70.35%
Total	1,113	267	23.99%	$219,489,503	$118,282,031	53.89%

Total Estimated Losses for a 100-year Flood Event for Lake County, Florida

Table A-16: Astatula	
Land Use	**Total Potential Losses**
Residential	$21,108,728
Commercial	$0
Industrial	$2,289,478
Agricultural	$2,905,284
Religious/ non profit	$0
Government	$343,692
Education	$0
Utilities	$0
Other	$592,726
TOTAL	$27,239,907

Table A-17: Clermont	
Land Use	**Total Potential Losses**
Residential	$246,166,278
Commercial	$80,570,564
Industrial	$8,471,580
Agricultural	$2,413,774
Religious/ non profit	$1,199,345
Government	$25,926,125
Education	$44,236,665
Utilities	$462,954
Other	$534,733
TOTAL	$412,006,776

Table A-18: Eustis	
Land Use	**Total Potential Losses**
Residential	$257,322,474
Commercial	$35,041,764
Industrial	$5,889,990
Agricultural	$2,158,680
Religious/ non profit	$28,893,704
Government	$23,873,141
Education	$3,562,011
Utilities	$77,791
Other	$12,093,990
TOTAL	$371,072,225

Table A-19: Fruitland Park	
Land Use	**Total Potential Losses**
Residential	$67,004,825
Commercial	$31,595,092
Industrial	$1,239,280
Agricultural	$2,893,230
Religious/ non profit	$6,654,803
Government	$10,474,607
Education	$1,552,239
Utilities	$0
Other	$396
TOTAL	$121,414,471

Total Estimated Losses for a 100-year Flood Event for Lake County, Florida

Table A-20: Groveland	
Land Use	**Total Potential Losses**
Residential	$184,789,484
Commercial	$50,601,174
Industrial	$46,056,865
Agricultural	$16,148,390
Religious/ non profit	$2,173,359
Government	$10,263,904
Education	$0
Utilities	$34,030
Other	$1,578,429
TOTAL	$311,650,409

Table A-21: Howey-in-the-Hills	
Land Use	**Total Potential Losses**
Residential	$34,453,511
Commercial	$19,168,026
Industrial	$112,928
Agricultural	$1,464,861
Religious/ non profit	$34,800
Government	$2,372,981
Education	$4,960,058
Utilities	$2,690
Other	$213
TOTAL	$64,034,927

Table A-22: Lady Lake	
Land Use	**Total Potential Losses**
Residential	$101,550,477
Commercial	$79,770,828
Industrial	$8,063,330
Agricultural	$15,876
Religious/ non profit	$12,815,700
Government	$3,215,149
Education	$826,200
Utilities	$183,496
Other	$18,695,507
TOTAL	$225,136,563

Table A-23: Lake County (Unincorporated)	
Land Use	**Total Potential Losses**
Residential	$5,722,435,598
Commercial	$396,263,880
Industrial	$187,915,100
Agricultural	$498,825,168
Religious/ non profit	$138,950,990
Government	$672,044,409
Education	$16,411,955
Utilities	$8,604,470
Other	$241,318,387
TOTAL	$9,221,650,635

Total Estimated Losses for a 100-year Flood Event for Lake County, Florida

Table A-24: Leesburg	
Land Use	**Total Potential Losses**
Residential	$456,511,373
Commercial	$295,179,878
Industrial	$84,403,663
Agricultural	$18,898,008
Religious/ non profit	$72,461,187
Government	$93,333,782
Education	$55,020,179
Utilities	$3,414,583
Other	$22,916,459
TOTAL	$1,102,139,112

Table A-25: Mascotte	
Land Use	**Total Potential Losses**
Residential	$46,931,177
Commercial	$3,300,884
Industrial	$807,670
Agricultural	$16,395,784
Religious/ non profit	$5,297,249
Government	$1,913,519
Education	$2,361,418
Utilities	$0
Other	$198,213
TOTAL	$77,205,913

Table A-26: Minneola	
Land Use	**Total Potential Losses**
Residential	$88,771,251
Commercial	$9,457,838
Industrial	$0
Agricultural	$2,235,770
Religious/ non profit	$4,514,598
Government	$5,995,109
Education	$0
Utilities	$114,120
Other	$0
TOTAL	$111,088,686

Table A-27: Montverde	
Land Use	**Total Potential Losses**
Residential	$34,559,733
Commercial	$0
Industrial	$0
Agricultural	$654,060
Religious/ non profit	$9,300
Government	$212,639
Education	$15,260,465
Utilities	$0
Other	$0
TOTAL	$50,696,197

Total Estimated Losses for a 100-year Flood Event for Lake County, Florida

Table A-28: Mount Dora	
Land Use	**Total Potential Losses**
Residential	$319,616,754
Commercial	$44,383,178
Industrial	$9,815,475
Agricultural	$1,300,372
Religious/ non profit	$38,895,219
Government	$7,042,673
Education	$11,613,330
Utilities	$69,958
Other	$519,514
TOTAL	$433,256,473

Table A-29: Tavares	
Land Use	**Total Potential Losses**
Residential	$362,484,614
Commercial	$97,102,932
Industrial	$11,239,085
Agricultural	$2,508,869
Religious/ non profit	$4,710,396
Government	$7,541,458
Education	$2,959,610
Utilities	$155,172
Other	$15,448,440
TOTAL	$607,461,889

Table A-30: Umatilla	
Land Use	**Total Potential Losses**
Residential	$78,577,860
Commercial	$3,787,558
Industrial	$210,260
Agricultural	$686,002
Religious/ non profit	$14,895,410
Government	$1,319,567
Education	$7,027,858
Utilities	$7,500
Other	$2,985,194
TOTAL	$118,282,031

Table A-31: Wind (130 mph) Vulnerability for Astatula, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	999	283	28.33%	$113,529,161	$21,908,979	19.30%
Commercial	16	8	50.00%	$4,001,170	$1,565,018	39.11%
Industrial	7	3	42.86%	$6,802,738	$2,249,893	33.07%
Agricultural	22	5	22.73%	$4,659,050	$901,354	19.35%
Religious/ non profit	6	0	0.00%	$1,035,663	$0	0.00%
Government	4	1	25.00%	$795,051	$91,075	11.46%
Education	1	0	0.00%	$337,500	$0	0.00%
Utilities	15	0	0.00%	$62,754	$0	0.00%
Other	5	1	20.00%	$592,818	$579,054	97.68%
Total	1,075	301	28.00%	$131,815,904	$27,295,373	20.71%

Table A-32: Wind (130 mph) Vulnerability for Clermont, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	11,770	1641	13.94%	$3,012,634,448	$340,209,231	11.29%
Commercial	688	186	27.03%	$1,139,781,764	$156,326,760	13.72%
Industrial	35	17	48.57%	$44,909,010	$9,309,435	20.73%
Agricultural	22	0	0.00%	$4,317,508	$0	0.00%
Religious/ non profit	82	35	42.68%	$127,184,829	$54,148,095	42.57%
Government	152	16	10.53%	$66,391,421	$2,324,259	3.50%
Education	26	6	23.08%	$107,859,636	$6,672,470	6.19%
Utilities	353	2	0.57%	$1,175,261	$1,120,493	95.34%
Other	5	1	20.00%	$534,733	$494,053	92.39%
Total	13,133	1904	14.50%	$4,504,788,609	$656,854,871	14.58%

Table A-33: Wind (130 mph) Vulnerability for Eustis, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	4,287	2839	66.22%	$782,407,478	$495,303,191	63.31%
Commercial	417	276	66.19%	$277,479,236	$190,877,448	68.79%
Industrial	33	24	72.73%	$32,121,363	$23,666,110	73.68%
Agricultural	26	2	7.69%	$3,180,114	$565,684	17.79%
Religious/ non profit	152	52	34.21%	$63,398,177	$59,982,575	94.61%
Government	176	14	7.95%	$53,213,796	$629,334	1.18%
Education	19	3	15.79%	$26,340,854	$17,377,664	65.97%
Utilities	17	1	5.88%	$2,168,575	$921,461	42.49%
Other	19	1	5.26%	$17,158,450	$524,911	3.06%
Total	5,146	3212	62.42%	$1,257,468,041	$864,980,906	68.79%

Table A-34: Wind (130 mph) Vulnerability for Fruitland Park, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	1,848	844	45.67%	$297,733,059	$114,557,318	38.48%
Commercial	180	66	36.67%	$132,264,316	$47,051,044	35.57%
Industrial	20	6	30.00%	$15,144,765	$4,546,603	30.02%
Agricultural	16	0	0.00%	$4,102,364	$0	0.00%
Religious/ non profit	29	9	31.03%	$18,782,687	$9,204,725	49.01%
Government	47	5	10.64%	$17,151,993	$4,417,263	25.75%
Education	6	4	66.67%	$7,500,353	$5,458,790	72.78%
Utilities	32	1	3.13%	$105,644	$144,412	136.70%
Other	3	0	0.00%	$396	$0	0.00%
Total	2,181	935	42.87%	$492,785,576	$232,278,585	47.14%

Table A-35: Wind (130 mph) Vulnerability for Groveland, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	5,194	539	10.38%	$1,243,765,157	$79,334,001	6.38%
Commercial	211	69	32.70%	$271,835,104	$36,539,810	13.44%
Industrial	61	9	14.75%	$205,929,475	$11,757,170	5.71%
Agricultural	98	1	1.02%	$33,009,780	$239,846	0.73%
Religious/ non profit	68	13	19.12%	$28,074,143	$20,319,402	72.38%
Government	91	14	15.38%	$55,300,826	$1,686,262	3.05%
Education	33	0	0.00%	$51,845,776	$3,794,090	7.32%
Utilities	168	1	0.60%	$891,356	$426,575	47.86%
Other	30	1	3.33%	$1,578,429	$1,257,179	79.65%
Total	5,954	647	10.87%	$1,892,230,046	$153,668,073	8.12%

Table A-36: Wind (130 mph) Vulnerability for Howey-in-the-Hills, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	645	340	52.71%	$221,895,326	$79,152,287	35.67%
Commercial	19	14	73.68%	$49,584,172	$14,975,010	30.20%
Industrial	2	1	50.00%	$777,031	$197,885	25.47%
Agricultural	21	0	0.00%	$3,575,484	$0	0.00%
Religious/ non profit	2	1	50.00%	$925,756	$388,247	41.94%
Government	14	4	28.57%	$6,573,160	$817,025	12.43%
Education	14	5	35.71%	$47,284,388	$5,545,384	11.73%
Utilities	1	0	0.00%	$2,690	$00	0.00%
Other	7	0	0.00%	$276	$00	0.00%
Total	725	365	50.34%	$330,618,283.25	$103,017,071.75	31.16%

Table A-37: Wind (130 mph) Vulnerability for Lady Lake, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	6,665	547	8.21%	$1,177,004,984	$75,971,240	6.45%
Commercial	369	61	16.53%	$577,942,178	$33,404,944	5.78%
Industrial	19	6	31.58%	$39,431,258	$6,407,743	16.25%
Agricultural	18	1	5.56%	$3,153,034	$388,596	12.32%
Religious/ non profit	43	8	18.60%	$74,208,518	$4,197,065	5.66%
Government	102	3	2.94%	$35,434,721	$2,293,837	6.47%
Education	2	0	0.00%	$20,247,192	$0	0.00%
Utilities	62	1	1.61%	$660,091	$445,941	67.56%
Other	21	4	19.05%	$30,371,300	$4,356,765	14.35%
Total	7,301	631	8.64%	$1,958,453,275	$148,451,455	7.58%

Table A-38: Wind (130 mph) Vulnerability for Lake County (Unincorporated), Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	54,774	22556	41.18%	$12,142,999,059	$4,195,944,290	34.55%
Commercial	1,161	396	34.11%	$1,447,041,418	$242,434,824	16.75%
Industrial	422	115	27.25%	$651,086,548	$148,820,295	22.86%
Agricultural	4,294	1042	24.27%	$921,904,944	$416,048,968	45.13%
Religious/ non profit	266	152	57.14%	$329,390,387	$73,660,499	22.36%
Government	1,333	93	6.98%	$596,781,304	$92,008,143	15.42%
Education	49	8	16.33%	$173,624,634	$21,404,846	12.33%
Utilities	1,331	22	1.65%	$19,530,604	$11,419,618	58.47%
Other	1,248	75	6.01%	$234,204,988	$121,085,376	51.70%
Total	64,878	24459	37.70%	$16,516,563,885	$5,736,231,320	34.73%

Table A-39: Wind (130 mph) Vulnerability for Leesburg, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	8,640	3509	40.61%	$1,387,820,460	$494,422,265	35.63%
Commercial	1,249	529	42.35%	$1,025,510,662	$454,411,420	44.31%
Industrial	294	100	34.01%	$267,198,200	$116,416,888	43.57%
Agricultural	121	8	6.61%	$16,328,624	$2,535,150	15.53%
Religious/ non profit	256	75	29.30%	$473,625,467	$343,076,946	72.44%
Government	412	35	8.50%	$170,320,835	$21,628,886	12.70%
Education	43	13	30.23%	$101,888,354	$17,026,128	16.71%
Utilities	226	5	2.21%	$6,739,994	$4,160,156	61.72%
Other	50	7	14.00%	$43,454,067	$8,671,492	19.96%
Total	11,291	4281	37.92%	$3,492,886,663	$1,462,349,329	41.87%

Table A-40: Wind (130 mph) Vulnerability for Mascotte, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	2,197	346	15.75%	$324,518,300	$41,475,639	12.78%
Commercial	99	31	31.31%	$22,232,898	$9,771,376	43.95%
Industrial	9	9	100.00%	$5,827,228	$5,827,228	100.00%
Agricultural	107	10	9.35%	$16,556,368	$4,451,288	26.89%
Religious/ non profit	23	6	26.09%	$7,709,649	$2,517,543	32.65%
Government	57	4	7.02%	$10,294,985	$1,740,920	16.91%
Education	2	0	0.00%	$2,361,418	$0	0.00%
Utilities	50	0	0.00%	$56,860	$0	0.00%
Other	12	2	16.67%	$455,304	$175,994	38.65%
Total	2,556	409	16.00%	$389,372,999	$78,547,702	20.17%

Table A-41: Wind (130 mph) Vulnerability for Minneola, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	3,905	319	8.17%	$844,667,625	$53,164,772	6.29%
Commercial	117	33	28.21%	$103,620,280	$16,423,604	15.85%
Industrial	19	1	5.26%	$29,892,633	$815,630	2.73%
Agricultural	38	0	0.00%	$17,794,272	$0	0.00%
Religious/ non profit	13	6	46.15%	$8,903,501	$4,951,226	55.61%
Government	47	6	12.77%	$18,776,981	$1,937,302	10.32%
Education	4	0	0.00%	$3,029,598	$0	0.00%
Utilities	101	0	0.00%	$392,185	$0	0.00%
Other	1	1	100.00%	$395,996	$395,996	100.00%
Total	4,245	366	8.62%	$1,027,473,070	$102,444,659	9.97%

Table A-42: Wind (130 mph) Vulnerability for Montverde, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	780	185	23.72%	$291,563,667	$33,863,750	11.61%
Commercial	12	10	83.33%	$8,716,840	$4,208,926	48.28%
Industrial	2	2	100.00%	$1,886,113	$754,445	40.00%
Agricultural	23	0	0.00%	$1,893,412	$0	0.00%
Religious/ non profit	5	2	40.00%	$873,248	$186,768	21.39%
Government	23	2	8.70%	$6,950,625	$1,430,341	20.58%
Education	8	2	25.00%	$67,170,546	$838,865	1.25%
Utilities	14	1	7.14%	$62,830	$54,428	86.63%
Total	867	204	23.53%	$379,117,280	$42,339,398	11.17%

Table A-43: Wind (130 mph) Vulnerability for Mount Dora, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	2,910	2109	72.47%	$667,697,483	$503,177,906	75.36%
Commercial	273	194	71.06%	$216,807,770	$155,787,414	71.86%
Industrial	26	12	46.15%	$20,068,575	$5,196,200	25.89%
Agricultural	15	4	26.67%	$7,943,236	$2,131,670	26.84%
Religious/ non profit	77	36	46.75%	$92,163,933	$69,137,399	75.02%
Government	87	14	16.09%	$73,102,831	$27,244,483	37.27%
Education	20	9	45.00%	$17,059,853	$3,448,339	20.21%
Utilities	21	1	4.76%	$703,163	$657,575	93.52%
Other	6	1	16.67%	$1,801,943	$1,118,218	62.06%
Total	3,435	2380	69.29%	$1,097,348,787	$768,721,171	70.05%

Table A-44: Wind (130 mph) Vulnerability for Tavares, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	2,879	1945	67.56%	$477,834,518	$303,337,238	63.48%
Commercial	263	137	52.09%	$156,871,370	$86,195,932	54.95%
Industrial	28	13	46.43%	$44,146,863	$16,195,368	36.69%
Agricultural	18	3	16.67%	$4,802,482	$1,426,676	29.71%
Religious/ non profit	51	15	29.41%	$113,051,018	$7,569,474	6.70%
Government	89	13	14.61%	$373,592,318	$11,666,873	3.12%
Education	20	2	10.00%	$6,198,111	$342,772	5.53%
Utilities	31	1	3.23%	$319,686	$279,788	87.52%
Other	31	12	38.71%	$16,049,173	$11,856,957	73.88%
Total	3,410	2141	62.79%	$1,192,865,537	$438,871,077	36.79%

Table A-45: Wind (130 mph) Vulnerability for Umatilla, Florida						
Type of Structure	Number of Structures			Value of Structures		
	No. in Community	No. in Hazard Area	% In Hazard Area	USD in Community	USD in Hazard Area	% In Hazard Area
Residential	868	576	66.36%	$133,494,195	$89,247,023	66.85%
Commercial	108	62	57.41%	$39,611,538	$27,881,952	70.39%
Industrial	12	9	75.00%	$4,262,400	$2,974,933	69.79%
Agricultural	28	5	17.86%	$2,520,298	$1,542,956	61.22%
Religious/ non profit	20	10	50.00%	$22,630,396	$21,107,139	93.27%
Government	48	3	6.25%	$9,304,584	$1,953,311	20.99%
Education	16	0	0.00%	$2,738,259	$0	0.00%
Utilities	5	2	40.00%	$684,444	$275,923	40.31%
Other	8	2	25.00%	$4,243,388	$1,954,159	46.05%
Total	1,113	669	60.11%	$219,489,503	$146,937,395	66.95%

Table A-46: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Astatula								
	High		**Medium**		**Low**		***Total***	
Use	Number of Structures/ Parcels	Total Estimated Value of Property	Number of Structures/ Parcels	Total Estimated Value of Property	Number of Structures/ Parcels	Total Estimated Value of Property	Number of Structures/ Parcels	Total Estimated Value of Property
Residential	201	$14,469,272	82	$7,439,707	10	$2,042,382	293	$23,951,361
Commercial	8	$1,565,018	0	$0	0	$0	8	$1,565,018
Industrial	3	$2,249,893	0	$0	0	$0	3	$2,249,893
Agricultural	4	$659,766	1	$241,588	0	$0	5	$901,354
Religious/ non profit	0	$0	0	$0	0	$0	0	$0
Government	1	$91,075	0	$0	0	$0	1	$91,075
Education	0	$0	0	$0	0	$0	0	$0
Utilities	0	$0	0	$0	0	$0	0	$0
Other	1	$579,054	0	$0	0	$0	1	$579,054
TOTAL	218	$19,614,078	83	$7,681,295	10	$2,042,382	311	$29,337,755

Table A-47: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Clermont								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures/ Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property
Residential	1571	$309,444,840	70	$30,764,391	25	$7,526,564	1,666	$347,735,795
Commercial	168	$131,525,720	18	$24,801,040	14	$52,726,126	200	$209,052,886
Industrial	15	$8,637,323	2	$672,113	1	$7,120,830	18	$16,430,265
Agricultural	0	$0	0	$0	0	$0	0	$0
Religious/ non profit	32	$17,250,015	3	$36,898,080	3	$61,997,088	38	$116,145,183
Government	15	$1,424,972	1	$899,287	0	$0	16	$2,324,259
Education	4	$4,306,977	2	$2,365,493	2	$9,093,958	8	$15,766,427
Utilities	1	$982,006	1	$138,488	1	$0	3	$1,120,493
Other	1	$494,053	0	$0	0	$0	1	$494,053
TOTAL	1807	$560,315,981	97	$96,538,890	46	$138,464,565	1,950	$795,319,436

Table A-48: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Eustis								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures/ Parcels	Total Estimated Value of Property
Residential	2783	$481,246,814	56	$14,056,377	77	$22,109,921	2,916	$517,413,111
Commercial	263	$161,742,126	13	$29,135,322	10	$9,736,784	286	$200,614,232
Industrial	22	$21,983,493	2	$1,682,618	1	$346,325	25	$24,012,435
Agricultural	1	$192,334	1	$373,350	0	$0	2	$565,684
Religious/ non profit	48	$42,265,451	4	$17,717,124	0	$0	52	$59,982,575
Government	14	$629,334	0	$0	0	$0	14	$629,334
Education	2	$16,737,161	1	$640,503	1	$779,315	4	$18,156,978
Utilities	1	$921,461	0	$0	0	$0	1	$921,461
Other	1	$524,911	0	$0	1	$404,473	2	$929,384
TOTAL	3135	$801,375,612	77	$63,605,294	90	$33,376,817	3,302	$898,357,723

Table A-49: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Fruitland Park								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures/ Parcels	Total Estimated Value of Property
Residential	829	$112,002,452	15	$2,554,866	21	$11,965,859	865	$126,523,176
Commercial	56	$34,930,998	10	$12,120,046	7	$16,768,028	73	$63,819,072
Industrial	5	$3,675,838	1	$870,765	1	$775,680	7	$5,322,283
Agricultural	0	$0	0	$0	0	$0	0	$0
Religious/ non profit	8	$144,047	1	$9,060,678	1	$864,282	10	$10,069,007
Government	5	$4,417,263	0	$0	0	$0	5	$4,417,263
Education	2	$3,763,375	2	$1,695,416	1	$120,562	5	$5,579,352
Utilities	1	$144,412	0	$0	0	$0	1	$144,412
Other	0	$0	0	$0	0	$0	0	$0
TOTAL	906	$205,976,815	29	$26,301,771	31	$30,494,410	966	$262,772,995

Table A-50: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Groveland								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures/ Parcels	Total Estimated Value of Property
Residential	507	$69,368,960	32	$9,965,042	20	$4,511,601	559	$83,845,602
Commercial	66	$34,001,286	3	$2,538,524	3	$5,801,544	72	$42,341,354
Industrial	7	$8,339,655	2	$3,417,515	1	$1,724,263	10	$13,481,433
Agricultural	1	$239,846	0	$0	0	$0	1	$239,846
Religious/ non profit	12	$16,408,788	1	$3,910,614	1	$10,180,182	14	$30,499,584
Government	14	$1,686,262	0	$0	0	$0	14	$1,686,262
Education	0	$3,794,090	0	$0	0	$0	0	$3,794,090
Utilities	1	$426,575	0	$0	0	$0	1	$426,575
Other	1	$1,257,179	0	$0	0	$0	1	$1,257,179
TOTAL	609	$133,836,378	38	$19,831,695	25	$22,217,590	672	$175,885,662

Table A-51: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Howey-in-the-Hills								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures/ Parcels	Total Estimated Value of Property
Residential	309	$69,763,917	31	$9,388,370	15	$3,801,224	355	$82,953,510
Commercial	12	$13,638,018	2	$1,336,992	0	$0	14	$14,975,010
Industrial	1	$197,885	0	$0	0	$0	1	$197,885
Agricultural	0	$0.	0	$0	0	$0	0	$0
Religious/ non profit	1	$2,329,482	0	$0	0	$0	1	$2,329,482
Government	4	$817,025	0	$0	0	$0	4	$817,025
Education	5	$5,545,384	0	$0	0	$0	5	$5,545,384
Utilities	0	$0	0	$0	0	$0	0	$0
Other	0	$0	0	$0	0	$0	0	$0
TOTAL	332	$92,291,710	33	$10,725,362	15	$3,801,224	380	$106,818,295

Table A-52: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Lady Lake								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures/ Parcels	Total Estimated Value of Property
Residential	470	$52,132,026	77	$23,839,214	28	$60,144,957	575	$136,116,197
Commercial	54	$27,669,654	7	$5,735,290	9	$12,782,056	70	$46,187,000
Industrial	5	$2,500,343	1	$3,907,400	1	$3,051,508	7	$9,459,250
Agricultural	1	$388,596	0	$0	0	$0	1	$388,596
Religious/ non profit	8	$4,197,065	0	$0	1	$4,195,662	9	$8,392,727
Government	3	$2,293,837	0	$0	2	$7,524,371	5	$9,818,208
Education	0	$0	0	$0	1	$19,420,992	1	$19,420,992
Utilities	1	$445,941	0	$0	0	$0	1	$445,941
Other	4	$4,356,765	0	$0	1	$2,176,327	5	$6,533,092
TOTAL	546	$114,969,551	85	$33,481,904	43	$109,295,873	674	$257,747,328

Table A-53: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Lake County (Unincorporated)

	High		Medium		Low		Total	
Use	Number of Structures/ Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures/ Parcels	Total Estimated Value of Property
Residential	19526	$3,478,949,469	3030	$716,994,821	1340	$483,797,327	23,896	$4,679,741,616
Commercial	370	$214,699,910	26	$27,734,914	15	$28,632,468	411	$271,067,292
Industrial	106	$124,911,055	9	$23,909,240	11	$18,100,400	126	$166,920,695
Agricultural	788	$303,884,726	254	$112,164,242	165	$103,388,468	1,207	$519,437,436
Religious/ non profit	142	$441,962,994	10	$30,526,812	3	$31,264,020	155	$503,753,826
Government	88	$82,919,243	5	$9,088,900	5	$17,340,849	98	$109,348,992
Education	7	$20,515,671	1	$889,175	2	$12,010,100	10	$33,414,946
Utilities	21	$25,694,141	1	$300,632	2	$1,583,573	24	$27,578,345
Other	71	$119,653,651	4	$1,431,725	1	$398,105	76	$121,483,481
TOTAL	21119	$4,813,190,860	3340	$923,040,460	1544	$696,515,309	26,003	$6,432,746,628

Table A-54: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Leesburg								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures/ Parcels	Total Estimated Value of Property
Residential	3457	$483,617,237	52	$10,805,028	47	$16,925,102	3,556	$511,347,366
Commercial	496	$395,947,346	33	$58,464,074	39	$71,754,000	568	$526,165,420
Industrial	90	$102,374,545	10	$14,042,343	4	$3,046,545	104	$119,463,433
Agricultural	7	$2,273,616	1	$261,534	0	$0	8	$2,535,150
Religious/ non profit	70	$332,266,080	5	$10,810,866	5	$32,875,626	80	$375,952,572
Government	32	$15,645,683	3	$5,983,202	3	$9,797,913	38	$31,426,799
Education	11	$16,532,786	2	$493,342	0	$0	13	$17,026,128
Utilities	5	$4,160,156	0	$0	0	$0	5	$4,160,156
Other	7	$8,671,492	0	$0	0	$0	7	$8,671,492
TOTAL	4175	$1,361,488,941	106	$100,860,389	98	$134,399,186	4,379	$1,596,748,515

Table A-55: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Mascotte								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property
Residential	318	$37,634,759	28	$3,840,881	15	$2,911,008	361	$44,386,647
Commercial	27	$8,367,662	4	$1,403,714	2	$2,732,658	33	$12,504,034
Industrial	8	$4,443,228	1	$1,384,000	0	$0	9	$5,827,228
Agricultural	9	$4,056,608	1	$394,680	2	$886,598	12	$5,337,886
Religious/ non profit	6	$2,517,543	0	$0	2	$2,583,342	8	$5,100,885
Government	4	$1,740,920	0	$0	1	$632,435	5	$2,373,354
Education	0	$0	0	$0	0	$0	0	$0
Utilities	0	$0	0	$0	0	$0	0	$0
Other	2	$175,994	0	$0	0	$0	2	$175,994.00
TOTAL	375	$71,524,428	34	$7,023,275	22	$9,746,041	431	$88,293,743

Table A-56: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Minneola								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property
Residential	300	$49,467,702	19	$3,697,070	4	$1,538,429	323	$54,703,200
Commercial	32	$14,798,110	1	$1,625,494	5	$5,324,810	38	$21,748,414
Industrial	0	$0	1	$815,630	3	$12,052,955	4	$12,868,585
Agricultural	0	$0	0	$0	0	$0	0	$0
Religious/ non profit	6	$4,951,226	0	$0	0	$0	6	$4,951,226
Government	6	$1,937,302	0	$0	0	$0	6	$1,937,302
Education	0	$0	0	$0	0	$0	0	$0
Utilities	0	$0	0	$0	0	$0	0	$0
Other	1	$395,996	0	$0	0	$0	1	$395,996
TOTAL	345	$96,306,466	21	$6,138,194	12	$18,916,194	378	$121,360,853

Table A-57: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Montverde								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property
Residential	179	$32,597,660	6	$1,266,090	10	$3,292,787	195	$37,156,536
Commercial	10	$4,208,926	0	$0	0	$0	10	$4,208,926
Industrial	2	$754,445	0	$0	0	$0	2	$754,445
Agricultural	0	$0	0	$0	0	$0	0	$0
Religious/ non profit	2	$186,768	0	$0	0	$0	2	$186,768
Government	1	$490,464	1	$939,877	0	$0	2	$1,430,341
Education	2	$838,865	0	$0	1	$1,107,495	3	$1,946,360
Utilities	1	$54,428	0	$0	0	$0	1	$54,428
Other	197	$40,133,431	7	$2,205,967	11	$4,400,282	215	$46,739,679
TOTAL	394	$79,264,987	14	$4,411,934	22	$8,800,563	430	$92,477,483

Table A-58: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Mount Dora								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property
Residential	2039	$467,990,361	70	$35,187,545	36	$13,783,556	2,145	$516,961,461
Commercial	188	$144,050,832	6	$11,736,582	11	$10,576,558	205	$166,363,972
Industrial	11	$4,841,930	1	$354,270	1	$1,319,215	13	$6,515,415
Agricultural	3	$1,039,844	1	$1,091,826	0	$0	4	$2,131,670
Religious/ non profit	33	$59,481,738	3	$9,655,661	2	$32,416,854	38	$101,554,253
Government	9	$10,285,117	5	$16,959,366	2	$1,001,394	16	$28,245,877
Education	8	$2,227,343	1	$1,220,996	0	$0	9	$3,448,339
Utilities	1	$657,575	0	$0	0	$0	1	$657,575
Other	1	$1,118,218	0	$0	0	$0	1	$1,118,218
TOTAL	2293	$692,514,926	87	$76,206,245	52	$59,097,577	2,432	$827,818,748

Table A-59: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Tavares								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property
Residential	1876	$283,438,019	69	$19,899,219	26	$9,715,727	1,971	$313,052,964
Commercial	130	$82,356,928	7	$3,839,004	10	$27,210,434	147	$113,406,366
Industrial	13	$16,195,368	0	$0	1	$3,478,080	14	$19,673,448
Agricultural	3	$1,426,676	0	$0	0	$0	3	$1,426,676
Religious/ non profit	12	$4,961,595	3	$2,607,879	0	$0	15	$7,569,474
Government	11	$7,916,164	2	$3,750,710	0	$0	13	$11,666,873
Education	2	$342,772	0	$0	0	$0	2	$342,772
Utilities	1	$279,788	0	$0	0	$0	1	$279,788
Other	12	$11,856,957	0	$0	0	$0	12	$11,856,957
TOTAL	2060	$408,774,266	81	$30,096,812	37	$40,404,241	2,178	$479,275,318

Table A-60: Types, Numbers & Values of Structures / Properties at Risk to Cat. 3 (130 mph) Winds Umatilla								
	High		Medium		Low		Total	
Use	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property	Number of Structures / Parcels	Total Estimated Value of Property
Residential	558	$84,453,261	18	$4,793,762	27	$8,308,859	603	$97,555,881
Commercial	62	$27,881,952	0	$0	2	$393,048	64	$28,275,000
Industrial	9	$2,974,933	0	$0	1	$543,575	10	$3,518,508
Agricultural	4	$1,196,240	1	$346,716	0	$0	5	$1,542,956
Religious/ non profit	10	$21,107,139	0	$0	1	$164,339	11	$21,271,478
Government	3	$1,953,311	0	$0	0	$0	3	$1,953,311
Education	0	$0	0	$0	0	$0	0	$0
Utilities	2	$275,923	0	$0	1	$316,648	3	$592,571
Other	2	$1,954,159	0	$0	1	$1,021,465	3	$2,975,624

Total Estimated Losses, Category 3 Hurricane, Lake County, Florida

Table A-61: Astatula

Land Use	Total Potential Losses
Residential	$15,082,403
Commercial	$1,173,764
Industrial	$1,687,420
Agricultural	$615,619
Religious/ non profit	$0
Government	$68,306
Education	$0
Utilities	$0
Other	$434,291
TOTAL	$19,061,802

Table A-62: Clermont

Land Use	Total Potential Losses
Residential	$249,347,466
Commercial	$124,226,342
Industrial	$8,594,256
Agricultural	$0
Religious/ non profit	$46,885,823
Government	$1,518,373
Education	$6,686,468
Utilities	$805,748
Other	$370,540
TOTAL	$503,122,572

Table A-63: Eustis

Land Use	Total Potential Losses
Residential	$373,490,779
Commercial	$138,308,452
Industrial	$17,415,509
Agricultural	$330,926
Religious/ non profit	$40,557,650
Government	$472,001
Education	$13,067,951
Utilities	$691,095
Other	$494,802
TOTAL	$641,178,560

Table A-64: Fruitland Park

Land Use	Total Potential Losses
Residential	$88,270,736
Commercial	$36,450,279
Industrial	$3,386,181
Agricultural	$0
Religious/ non profit	$4,854,445
Government	$3,312,947
Education	$3,700,379
Utilities	$108,309
Other	$0
TOTAL	$175,257,099

Table A-65: Groveland	
Land Use	**Total Potential Losses**
Residential	$58,137,141
Commercial	$28,220,613
Industrial	$8,394,564
Agricultural	$179,885
Religious/ non profit	$16,806,944
Government	$1,264,697
Education	$2,845,567
Utilities	$319,931
Other	$942,884
TOTAL	$115,847,528

Table A-66: Howey-in-the-Hills	
Land Use	**Total Potential Losses**
Residential	$57,967,428
Commercial	$10,897,010
Industrial	$148,414
Agricultural	$0
Religious/ non profit	$1,747,112
Government	$612,768
Education	$4,159,038
Utilities	$0
Other	$0
TOTAL	$75,531,769

Table A-67: Lady Lake	
Land Use	**Total Potential Losses**
Residential	$66,054,866
Commercial	$26,815,400
Industrial	$4,591,834
Agricultural	$291,447
Religious/ non profit	$4,196,714
Government	$3,601,470
Education	$4,855,248
Utilities	$334,456
Other	$3,811,656
TOTAL	$130,292,083

Table A-68: Lake County (Unincorp.)	
Land Use	**Total Potential Losses**
Residential	$3,088,658,844
Commercial	$182,050,507
Industrial	$110,163,011
Agricultural	$309,842,783
Religious/ non profit	$354,551,657
Government	$71,069,095
Education	$18,833,866
Utilities	$19,816,814
Other	$90,555,627
TOTAL	$4,245,542,202

Table A-69: Leesburg	
Land Use	**Total Potential Losses**
Residential	$372,346,717
Commercial	$344,131,047
Industrial	$84,563,716
Agricultural	$1,835,979
Religious/ non profit	$262,823,900
Government	$17,175,342
Education	$12,646,261
Utilities	$3,120,117
Other	$6,503,619
TOTAL	$1,105,146,696

Table A-70: Mascotte	
Land Use	**Total Potential Losses**
Residential	$30,874,26
Commercial	$7,660,768
Industrial	$4,024,421
Agricultural	$3,461,446
Religious/ non profit	$2,533,993
Government	$1,463,798
Education	$0
Utilities	$0
Other	$131,996
TOTAL	$59,591,468

Table A-71: Minneola	
Land Use	**Total Potential Losses**
Residential	$39,333,918
Commercial	$13,242,532
Industrial	$3,421,054
Agricultural	$0
Religious/ non profit	$3,713,420
Government	$1,452,976
Education	$0
Utilities	$0
Other	$296,997
TOTAL	$80,027,994

Table A-72: Montverde	
Land Use	**Total Potential Losses**
Residential	$25,904,486
Commercial	$3,156,695
Industrial	$565,834
Agricultural	$0
Religious/ non profit	$140,076
Government	$837,786
Education	$906,023
Utilities	$40,821
Other	$32,303,127
TOTAL	$63,854,847

Table A-73: Mount Dora	
Land Use	**Total Potential Losses**
Residential	$372,032,432
Commercial	$116,550,555
Industrial	$4,138,386
Agricultural	$1,325,796
Religious/ non profit	$57,543,347
Government	$16,443,869
Education	$2,281,005
Utilities	$493,181
Other	$838,664
TOTAL	$572,263,711

Table A-74: Tavares	
Land Use	**Total Potential Losses**
Residential	$224,957,0550
Commercial	$70,489,807
Industrial	$13,016,046
Agricultural	$1,070,007
Religious/ non profit	$5,025,136
Government	$7,812,478
Education	$257,079
Utilities	$209,841
Other	$8,892,718
TOTAL	$331,730,165.00

Table A-75: Umatilla	
Land Use	**Total Potential Losses**
Residential	$67,814,041
Commercial	$21,009,726
Industrial	$2,367,093
Agricultural	$1,070,538
Religious/ non profit	$15,871,439
Government	$1,464,983
Education	$0
Utilities	$286,104
Other	$1,720,986
TOTAL	$111,604,910

Table A-76: Population at risk for Florida Division of Forestry (FDOF) Fire Risk Level of Concern (LOC) Astatula

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	0	0	0	0	0	0	0
Level 2	0	0	0	0	0	0	0
Level 3	0	0	0	0	0	0	0
Level 4	0	0	0	0	0	0	0
Level 5 (medium)	1093	131	188	434	82	0	73
Level 6	0	0	0	0	0	0	0
Level 7	36	0	4	14	0	0	0
Level 8	0	0	0	0	0	0	0
Level 9 (high)	20	2	5	1	2	0	0

Table A-77: Structures at risk for FDOF Fire Risk LOC Astatula							
Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	247	0	93	129	3	17	5
Level 2	36	10	20	0	0	5	1
Level 3	65	18	32	10	1	3	1
Level 4	0	0	0	0	0	0	0
Level 5 (medium)	46	13	21	0	2	5	5
Level 6	0	0	0	0	0	0	0
Level 7	258	93	129	3	17	5	11
Level 8	26	20	0	0	5	1	0
Level 9 (high)	47	32	10	1	3	1	0

Table A-78: Value of Structures by Dept. of Revenue (DOR) Use for FDOF Fire Risk LOC
Astatula

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 40.84 MI	$ 0.00	$ 16.40 MI	$ 12.86 MI	$ 68.38 TH	$ 11.31 MI	$ 196.02 TH
Level 2	$ 4.90 MI	$ 2.33 MI	$ 2.38 MI	$ 0.00	$ 0.00	$ 165.43 TH	$ 28.59 TH
Level 3	$ 7.55 MI	$ 2.50 MI	$ 3.46 MI	$ 1.05 MI	$ 130.46 TH	$ 367.36 TH	$ 51.94 TH
Level 4	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Level 5 (medium)	$ 7.41 MI	$ 2.47 MI	$ 1.84 MI	$ 0.00	$ 1.11 MI	$ 1.69 MI	$ 299.75 TH
Level 6	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Level 7	$ 42.36 MI	$ 16.40 MI	$ 12.86 MI	$ 68.38 TH	$ 11.31 MI	$ 196.02 TH	$ 1.52 MI
Level 8	$ 2.57 MI	$ 2.38 MI	$ 0.00	$ 0.00	$ 165.43 TH	$ 28.59 TH	$ 0.00
Level 9 (high)	$ 5.05 MI	$ 3.46 MI	$ 1.05 MI	$ 130.46 TH	$ 367.36 TH	$ 51.94 TH	$ 0.00

Table A-79: Population at risk for FDOF Fire Risk LOC Clermont

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	1082	399	89	339	183	44	70
Level 2	0	0	0	0	0	0	0
Level 3	1284	191	193	223	54	0	36
Level 4	1034	88	163	349	48	0	45
Level 5 (medium)	0	0	0	0	0	0	0
Level 6	3497	385	657	996	224	44	177
Level 7	1593	41	831	445	23	0	18
Level 8	0	0	0	0	0	0	0
Level 9 (high)	67	20	8	11	0	0	11

Table A-80: Structures at risk for FDOF Fire Risk LOC Clermont

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	737	69	558	22	24	59	5
Level 2	57	23	12	2	11	1	8
Level 3	111	73	8	16	10	1	3
Level 4	16	14	0	1	1	0	0
Level 5 (medium)	362	290	1	40	24	7	0
Level 6	833	595	9	103	76	25	25
Level 7	687	558	22	24	59	5	19
Level 8	35	12	2	11	1	8	1
Level 9 (high)	38	8	16	10	1	3	0

Table A-81: Value of Structures by DOR Use for FDOF Fire Risk LOC Clermont

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 277.84 MI	$ 19.33 MI	$ 200.87 MI	$ 5.89 MI	$ 5.45 MI	$ 42.00 MI	$ 4.29 MI
Level 2	$ 18.56 MI	$ 6.70 MI	$ 2.64 MI	$ 112.92 TH	$ 3.34 MI	$ 697.41 TH	$ 5.07 MI
Level 3	$ 30.99 MI	$ 19.66 MI	$ 3.15 MI	$ 4.48 MI	$ 2.55 MI	$ 138.99 TH	$ 1.02 MI
Level 4	$ 5.01 MI	$ 4.19 MI	$ 0.00	$ 397.33 TH	$ 431.11 TH	$ 0.00	$ 0.00
Level 5 (medium)	$ 98.13 MI	$ 77.07 MI	$ 41.91 TH	$ 8.25 MI	$ 10.87 MI	$ 1.90 MI	$ 0.00
Level 6	$ 276.68 MI	$ 183.00 MI	$ 486.02 TH	$ 27.77 MI	$ 39.95 MI	$ 20.95 MI	$ 4.52 MI
Level 7	$ 260.44 MI	$ 200.87 MI	$ 5.89 MI	$ 5.45 MI	$ 42.00 MI	$ 4.29 MI	$ 1.92 MI
Level 8	$ 11.89 MI	$ 2.64 MI	$ 112.92 TH	$ 3.34 MI	$ 697.41 TH	$ 5.07 MI	$ 25.72 TH
Level 9 (high)	$ 11.33 MI	$ 3.15 MI	$ 4.48 MI	$ 2.55 MI	$ 138.99 TH	$ 1.02 MI	$ 0.00

Table A-82: Population at risk for FDOF Fire Risk LOC Eustis

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	0	0	0	0	0	0	0
Level 2	21	0	6	6	0	0	0
Level 3	0	0	0	0	0	0	0
Level 4	0	0	0	0	0	0	0
Level 5 (medium)	0	0	0	0	0	0	0
Level 6	2660	429	580	1303	365	0	184
Level 7	4868	2188	968	2540	862	0	354
Level 8	60	0	30	46	0	0	0
Level 9 (high)	0	0	0	0	0	0	0

Table A-83: Structures at risk for FDOF Fire Risk LOC
Eustis

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	1046	91	738	70	77	40	30
Level 2	454	226	164	26	25	13	0
Level 3	370	279	50	8	22	7	4
Level 4	63	52	2	1	6	2	0
Level 5 (medium)	718	574	20	53	49	14	8
Level 6	1195	924	21	91	109	41	9
Level 7	972	738	70	77	40	30	17
Level 8	229	164	26	25	13	0	1
Level 9 (high)	91	50	8	22	7	4	0

Table A-84: Value of Structures by DOR Use for FDOF Fire Risk LOC
Eustis

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 256.37 MI	$ 23.90 MI	$ 172.45 MI	$ 5.28 MI	$ 19.20 MI	$ 17.01 MI	$ 18.53 MI
Level 2	$ 115.11 MI	$ 64.49 MI	$ 33.31 MI	$ 6.25 MI	$ 9.33 MI	$ 1.72 MI	$ 0.00
Level 3	$ 120.28 MI	$ 68.05 MI	$ 7.86 MI	$ 1.20 MI	$ 35.55 MI	$ 6.90 MI	$ 718.14 TH
Level 4	$ 39.00 MI	$ 17.21 MI	$ 173.96 TH	$ 434.97 TH	$ 6.56 MI	$ 14.62 MI	$ 0.00
Level 5 (medium)	$ 197.18 MI	$ 146.29 MI	$ 1.48 MI	$ 23.79 MI	$ 21.43 MI	$ 3.62 MI	$ 568.35 TH
Level 6	$ 363.17 MI	$ 224.22 MI	$ 1.86 MI	$ 13.53 MI	$ 87.39 MI	$ 33.35 MI	$ 2.82 MI
Level 7	$ 235.07 MI	$ 172.45 MI	$ 5.28 MI	$ 19.20 MI	$ 17.01 MI	$ 18.53 MI	$ 2.60 MI
Level 8	$ 50.64 MI	$ 33.31 MI	$ 6.25 MI	$ 9.33 MI	$ 1.72 MI	$ 0.00	$ 17.01 TH
Level 9 (high)	$ 52.22 MI	$ 7.86 MI	$ 1.20 MI	$ 35.55 MI	$ 6.90 MI	$ 718.14 TH	$ 0.00

Table A-85: Population at risk for FDOF Fire Risk LOC Fruitland Park

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	0	0	0	0	0	0	0
Level 2	0	0	0	0	0	0	0
Level 3	0	0	0	0	0	0	0
Level 4	0	0	0	0	0	0	0
Level 5 (medium)	0	0	0	0	0	0	0
Level 6	23	0	0	0	0	0	0
Level 7	350	43	26	197	9	146	25
Level 8	1361	140	191	439	123	0	95
Level 9 (high)	0	0	0	0	0	0	0

Table A-86: Structures at risk for FDOF Fire Risk LOC Fruitland Park							
Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	135	0	110	14	0	11	0
Level 2	438	67	250	52	26	33	10
Level 3	245	182	28	16	8	5	6
Level 4	89	75	3	0	11	0	0
Level 5 (medium)	58	52	4	1	0	0	1
Level 6	95	68	6	2	3	8	8
Level 7	136	110	14	0	11	0	1
Level 8	374	250	52	26	33	10	3
Level 9 (high)	63	28	16	8	5	6	0

Table A-87: Value of Structures by DOR Use for FDOF Fire Risk LOC Fruitland Park							
Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 38.06 MI	$ 0.00	$ 22.62 MI	$ 1.19 MI	$ 0.00	$ 14.25 MI	$ 0.00
Level 2	$ 93.59 MI	$ 14.15 MI	$ 48.16 MI	$ 4.17 MI	$ 6.48 MI	$ 9.54 MI	$ 11.08 MI
Level 3	$ 52.46 MI	$ 36.32 MI	$ 3.25 MI	$ 1.77 MI	$ 5.37 MI	$ 4.49 MI	$ 1.26 MI
Level 4	$ 19.28 MI	$ 15.07 MI	$ 252.45 TH	$ 0.00	$ 3.96 MI	$ 0.00	$ 0.00
Level 5 (medium)	$ 10.18 MI	$ 9.35 MI	$ 452.36 TH	$ 240.09 TH	$ 0.00	$ 0.00	$ 139.42 TH
Level 6	$ 16.27 MI	$ 12.03 MI	$ 505.25 TH	$ 41.49 TH	$ 537.79 TH	$ 1.65 MI	$ 1.50 MI
Level 7	$ 38.24 MI	$ 22.62 MI	$ 1.19 MI	$ 0.00	$ 14.25 MI	$ 0.00	$ 175.37 TH
Level 8	$ 80.81 MI	$ 48.16 MI	$ 4.17 MI	$ 6.48 MI	$ 9.54 MI	$ 11.08 MI	$ 1.37 MI
Level 9 (high)	$ 16.14 MI	$ 3.25 MI	$ 1.77 MI	$ 5.37 MI	$ 4.49 MI	$ 1.26 MI	$ 0.00

Table A-88: Population at risk for FDOF Fire Risk LOC Groveland

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	0	0	0	0	0	0	0
Level 2	267	54	16	127	73	0	20
Level 3	0	0	0	0	0	0	0
Level 4	0	0	0	0	0	0	0
Level 5 (medium)	0	0	0	0	0	0	0
Level 6	0	0	0	0	0	0	0
Level 7	1583	470	189	665	228	0	129
Level 8	0	0	0	0	0	0	0
Level 9 (high)	0	0	0	0	0	0	0

Table A-89: Structures at risk for FDOF Fire Risk LOC Groveland

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	401	0	303	13	25	42	18
Level 2	135	63	43	11	6	8	4
Level 3	22	17	2	2	1	0	0
Level 4	15	11	0	1	1	2	0
Level 5 (medium)	9	4	0	0	3	2	0
Level 6	8	5	0	1	2	0	0
Level 7	446	303	13	25	42	18	45
Level 8	74	43	11	6	8	4	2
Level 9 (high)	5	2	2	1	0	0	0

Table A-90: Value of Structures by DOR Use for FDOF Fire Risk LOC Groveland

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 81.11 MI	$ 0.00	$ 59.23 MI	$ 1.30 MI	$ 4.04 MI	$ 13.55 MI	$ 2.99 MI
Level 2	$ 23.16 MI	$ 9.11 MI	$ 11.05 MI	$ 683.02 TH	$ 893.00 TH	$ 1.27 MI	$ 155.34 TH
Level 3	$ 3.34 MI	$ 2.40 MI	$ 702.41 TH	$ 156.28 TH	$ 87.15 TH	$ 0.00	$ 0.00
Level 4	$ 3.03 MI	$ 1.39 MI	$ 0.00	$ 237.79 TH	$ 96.63 TH	$ 1.31 MI	$ 0.00
Level 5 (medium)	$ 2.07 MI	$ 922.02 TH	$ 0.00	$ 0.00	$ 1.03 MI	$ 115.40 TH	$ 0.00
Level 6	$ 8.52 MI	$ 1.21 MI	$ 0.00	$ 55.99 TH	$ 7.26 MI	$ 0.00	$ 0.00
Level 7	$ 137.09 MI	$ 59.23 MI	$ 1.30 MI	$ 4.04 MI	$ 13.55 MI	$ 2.99 MI	$ 55.98 MI
Level 8	$ 14.22 MI	$ 11.05 MI	$ 683.02 TH	$ 893.00 TH	$ 1.27 MI	$ 155.34 TH	$ 170.17 TH
Level 9 (high)	$ 945.84 TH	$ 702.41 TH	$ 156.28 TH	$ 87.15 TH	$ 0.00	$ 0.00	$ 0.00

Table A-91: Population at risk for FDOF Fire Risk LOC Howey-in-the-Hills

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	0	0	0	0	0	0	0
Level 2	0	0	0	0	0	0	0
Level 3	0	0	0	0	0	0	0
Level 4	0	0	0	0	0	0	0
Level 5 (medium)	0	0	0	0	0	0	0
Level 6	0	0	0	0	0	0	0
Level 7	1002	40	227	371	57	0	38
Level 8	0	0	0	0	0	0	0
Level 9 (high)	0	0	0	0	0	0	0

Table A-92: Structures at risk for FDOF Fire Risk LOC Howey-in-the-Hills

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	253	7	180	7	25	24	10
Level 2	49	41	2	2	1	0	3
Level 3	47	29	2	2	5	1	8
Level 4	6	6	0	0	0	0	0
Level 5 (medium)	49	38	0	3	3	1	4
Level 6	3	0	0	1	0	1	1
Level 7	267	180	7	25	24	10	21
Level 8	8	2	2	1	0	3	0
Level 9 (high)	20	2	2	5	1	8	2

Table A-93: Value of Structures by DOR Use for FDOF Fire Risk LOC
Howey-in-the-Hills

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 91.46 MI	$ 3.09 MI	$ 53.88 MI	$ 792.94 TH	$ 10.91 MI	$ 15.82 MI	$ 6.96 MI
Level 2	$ 15.65 MI	$ 13.77 MI	$ 169.81 TH	$ 240.71 TH	$ 959.09 TH	$ 0.00	$ 506.87 TH
Level 3	$ 15.39 MI	$ 10.10 MI	$ 742.24 TH	$ 971.05 TH	$ 1.39 MI	$ 296.56 TH	$ 1.89 MI
Level 4	$ 2.43 MI	$ 2.43 MI	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Level 5 (medium)	$ 17.23 MI	$ 13.90 MI	$ 0.00	$ 1.60 MI	$ 776.60 TH	$ 3.81 TH	$ 947.46 TH
Level 6	$ 540.65 TH	$ 0.00	$ 0.00	$ 533.17 TH	$ 0.00	$ 5.57 TH	$ 1.90 TH
Level 7	$ 90.21 MI	$ 53.88 MI	$ 792.94 TH	$ 10.91 MI	$ 15.82 MI	$ 6.96 MI	$ 1.85 MI
Level 8	$ 1.88 MI	$ 169.81 TH	$ 240.71 TH	$ 959.09 TH	$ 0.00	$ 506.87 TH	$ 0.00
Level 9 (high)	$ 5.38 MI	$ 742.24 TH	$ 971.05 TH	$ 1.39 MI	$ 296.56 TH	$ 1.89 MI	$ 84.35 TH

Table A-94: Population at risk for FDOF Fire Risk LOC
Lady Lake

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	0	0	0	0	0	0	0
Level 2	1742	288	162	833	414	0	146
Level 3	0	0	0	0	0	0	0
Level 4	683	99	306	386	146	0	44
Level 5 (medium)	0	0	0	0	0	0	0
Level 6	92	0	83	26	0	0	7
Level 7	64	0	0	0	0	0	0
Level 8	0	0	0	0	0	0	0
Level 9 (high)	0	0	0	0	0	0	0

Table A-95: Structures at risk for FDOF Fire Risk LOC
Lady Lake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	1840	3	746	941	34	95	21
Level 2	189	45	121	15	3	5	0
Level 3	154	41	87	8	5	3	10
Level 4	124	38	78	3	5	0	0
Level 5 (medium)	94	31	52	1	6	0	4
Level 6	0	0	0	0	0	0	0
Level 7	1850	746	941	34	95	21	13
Level 8	144	121	15	3	5	0	0
Level 9 (high)	113	87	8	5	3	10	0

Table A-96: Value of Structures by DOR Use for FDOF Fire Risk LOC
Lady Lake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 503.40 MI	$ 323.36 TH	$ 211.40 MI	$ 138.89 MI	$ 17.42 MI	$ 111.86 MI	$ 23.51 MI
Level 2	$ 34.64 MI	$ 13.64 MI	$ 16.44 MI	$ 2.74 MI	$ 300.44 TH	$ 1.52 MI	$ 0.00
Level 3	$ 60.08 MI	$ 9.79 MI	$ 13.22 MI	$ 1.57 MI	$ 1.01 MI	$ 29.82 MI	$ 4.67 MI
Level 4	$ 27.06 MI	$ 10.51 MI	$ 13.67 MI	$ 351.78 TH	$ 2.53 MI	$ 0.00	$ 0.00
Level 5 (medium)	$ 15.57 MI	$ 6.95 MI	$ 6.77 MI	$ 177.87 TH	$ 1.09 MI	$ 0.00	$ 579.89 TH
Level 6	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Level 7	$ 504.87 MI	$ 211.40 MI	$ 138.89 MI	$ 17.42 MI	$ 111.86 MI	$ 23.51 MI	$ 1.79 MI
Level 8	$ 21.00 MI	$ 16.44 MI	$ 2.74 MI	$ 300.44 TH	$ 1.52 MI	$ 0.00	$ 0.00
Level 9 (high)	$ 50.29 MI	$ 13.22 MI	$ 1.57 MI	$ 1.01 MI	$ 29.82 MI	$ 4.67 MI	$ 0.00

Table A-97: Population at risk for FDOF Fire Risk LOC
Lake County (unincorporated)

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	0	0	0	0	0	0	0
Level 2	18372	1165	5239	7078	1456	7	663
Level 3	9971	915	1079	3426	1031	123	467
Level 4	3748	348	789	1893	379	0	180
Level 5 (medium)	15177	958	3012	5871	962	53	603
Level 6	10107	1172	3127	3722	764	23	422
Level 7	17562	1160	5253	7606	1293	183	775
Level 8	13358	990	3720	6010	1031	256	489
Level 9 (high)	6446	980	913	2465	368	7	249

Table A-98: Structures at risk for FDOF Fire Risk LOC
Lake County (unincorporated)

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	11843	224	7322	2978	546	499	274
Level 2	9690	2788	3903	1560	502	294	643
Level 3	7171	2131	3041	878	428	227	466
Level 4	1229	607	392	21	27	63	119
Level 5 (medium)	5740	3027	1145	137	267	163	1001
Level 6	3764	1862	1027	54	67	71	683
Level 7	12771	7322	2978	546	499	274	1152
Level 8	7178	3903	1560	502	294	643	276
Level 9 (high)	5180	3041	878	428	227	466	140

Table A-99: Value of Structures by DOR Use for FDOF Fire Risk LOC
Lake County (unincorporated)

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 3.31 BI	$ 94.00 MI	$ 2.40 BI	$ 331.62 MI	$ 102.91 MI	$ 245.68 MI	$ 138.53 MI
Level 2	$ 2.38 BI	$ 847.84 MI	$ 885.08 MI	$ 157.09 MI	$ 138.77 MI	$ 122.34 MI	$ 231.48 MI
Level 3	$ 2.10 BI	$ 670.06 MI	$ 714.86 MI	$ 98.45 MI	$ 277.36 MI	$ 191.69 MI	$ 150.98 MI
Level 4	$ 265.42 MI	$ 177.87 MI	$ 35.57 MI	$ 2.81 MI	$ 8.11 MI	$ 7.63 MI	$ 33.43 MI
Level 5 (medium)	$ 1.82 BI	$ 1.16 BI	$ 119.47 MI	$ 34.12 MI	$ 152.73 MI	$ 86.55 MI	$ 264.78 MI
Level 6	$ 1.05 BI	$ 621.96 MI	$ 105.69 MI	$ 111.65 MI	$ 24.93 MI	$ 14.94 MI	$ 169.67 MI
Level 7	$ 3.49 BI	$ 2.40 BI	$ 331.62 MI	$ 102.91 MI	$ 245.68 MI	$ 138.53 MI	$ 279.38 MI
Level 8	$ 1.59 BI	$ 885.08 MI	$ 157.09 MI	$ 138.77 MI	$ 122.34 MI	$ 231.48 MI	$ 51.43 MI
Level 9 (high)	$ 1.47 BI	$ 714.86 MI	$ 98.45 MI	$ 277.36 MI	$ 191.69 MI	$ 150.98 MI	$ 34.69 MI

Table A-100: Population at risk for FDOF Fire Risk LOC Leesburg

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	1317	121	803	692	73	0	45
Level 2	195	20	51	10	0	0	9
Level 3	4624	2423	827	2430	1485	43	575
Level 4	1505	386	448	738	208	87	142
Level 5 (medium)	1241	99	553	595	108	0	47
Level 6	2121	146	598	831	114	0	99
Level 7	3929	1473	706	1962	813	0	402
Level 8	651	349	82	197	166	27	68
Level 9 (high)	0	0	0	0	0	0	0

Table A-101: Structures at risk for FDOF Fire Risk LOC Leesburg

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	1660	333	855	202	152	90	28
Level 2	1122	438	234	180	165	69	36
Level 3	825	475	88	110	105	36	11
Level 4	221	119	13	55	22	11	1
Level 5 (medium)	387	297	8	33	30	10	9
Level 6	1171	715	36	169	201	40	10
Level 7	1340	855	202	152	90	28	13
Level 8	686	234	180	165	69	36	2
Level 9 (high)	352	88	110	105	36	11	2

Table A-102: Value of Structures by DOR Use for FDOF Fire Risk LOC Leesburg

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 383.56 MI	$ 72.04 MI	$ 177.75 MI	$ 28.84 MI	$ 47.58 MI	$ 39.08 MI	$ 18.27 MI
Level 2	$ 323.77 MI	$ 94.90 MI	$ 32.49 MI	$ 43.41 MI	$ 76.92 MI	$ 60.62 MI	$ 15.43 MI
Level 3	$ 218.29 MI	$ 97.97 MI	$ 11.13 MI	$ 21.29 MI	$ 47.30 MI	$ 38.30 MI	$ 2.31 MI
Level 4	$ 43.44 MI	$ 19.40 MI	$ 4.06 MI	$ 10.26 MI	$ 4.09 MI	$ 5.57 MI	$ 66.71 TH
Level 5 (medium)	$ 115.67 MI	$ 86.35 MI	$ 939.52 TH	$ 9.22 MI	$ 11.41 MI	$ 5.70 MI	$ 2.04 MI
Level 6	$ 650.35 MI	$ 162.69 MI	$ 4.02 MI	$ 25.82 MI	$ 269.21 MI	$ 186.45 MI	$ 2.16 MI
Level 7	$ 313.18 MI	$ 177.75 MI	$ 28.84 MI	$ 47.58 MI	$ 39.08 MI	$ 18.27 MI	$ 1.66 MI
Level 8	$ 229.12 MI	$ 32.49 MI	$ 43.41 MI	$ 76.92 MI	$ 60.62 MI	$ 15.43 MI	$ 253.91 TH
Level 9 (high)	$ 120.52 MI	$ 11.13 MI	$ 21.29 MI	$ 47.30 MI	$ 38.30 MI	$ 2.31 MI	$ 193.16 TH

Table A-103: Population at risk for FDOF Fire Risk LOC Mascotte

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	0	0	0	0	0	0	0
Level 2	0	0	0	0	0	0	0
Level 3	56	0	16	40	4	0	8
Level 4	0	0	0	0	0	0	0
Level 5 (medium)	0	0	0	0	0	0	0
Level 6	0	0	0	0	0	0	0
Level 7	371	39	13	78	28	0	23
Level 8	822	239	67	421	123	0	59
Level 9 (high)	0	0	0	0	0	0	0

Table A-104: Structures at risk for FDOF Fire Risk LOC Mascotte

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	306	0	195	62	15	29	5
Level 2	197	9	154	19	6	9	0
Level 3	63	15	33	12	1	2	0
Level 4	29	27	1	0	1	0	0
Level 5 (medium)	1	0	1	0	0	0	0
Level 6	9	7	2	0	0	0	0
Level 7	314	195	62	15	29	5	8
Level 8	191	154	19	6	9	0	3
Level 9 (high)	58	33	12	1	2	0	10

Table A-105: Value of Structures by DOR Use for FDOF Fire Risk LOC Mascotte

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 47.18 MI	$ 0.00	$ 36.00 MI	$ 3.59 MI	$ 2.03 MI	$ 4.11 MI	$ 1.46 MI
Level 2	$ 39.19 MI	$ 1.05 MI	$ 34.67 MI	$ 1.26 MI	$ 653.27 TH	$ 1.57 MI	$ 0.00
Level 3	$ 8.88 MI	$ 2.81 MI	$ 4.53 MI	$ 1.01 MI	$ 180.87 TH	$ 346.30 TH	$ 0.00
Level 4	$ 5.43 MI	$ 5.30 MI	$ 61.36 TH	$ 0.00	$ 66.09 TH	$ 0.00	$ 0.00
Level 5 (medium)	$ 95.10 TH	$ 0.00	$ 95.10 TH	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Level 6	$ 1.69 MI	$ 1.50 MI	$ 188.35 TH	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Level 7	$ 48.26 MI	$ 36.00 MI	$ 3.59 MI	$ 2.03 MI	$ 4.11 MI	$ 1.46 MI	$ 1.08 MI
Level 8	$ 38.41 MI	$ 34.67 MI	$ 1.26 MI	$ 653.27 TH	$ 1.57 MI	$ 0.00	$ 262.77 TH
Level 9 (high)	$ 6.82 MI	$ 4.53 MI	$ 1.01 MI	$ 180.87 TH	$ 346.30 TH	$ 0.00	$ 748.63 TH

Table A-106: Population at risk for FDOF Fire Risk LOC Minneola

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	0	0	0	0	0	0	0
Level 2	0	0	0	0	0	0	0
Level 3	0	0	0	0	0	0	0
Level 4	0	0	0	0	0	0	0
Level 5 (medium)	0	0	0	0	0	0	0
Level 6	0	0	0	0	0	0	0
Level 7	0	0	0	0	0	0	0
Level 8	0	0	0	0	0	0	0
Level 9 (high)	3581	504	279	1049	157	0	158

Table A-107: Structures at risk for FDOF Fire Risk LOC Minneola

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	156	4	127	0	18	7	0
Level 2	272	3	204	3	19	16	27
Level 3	322	46	214	15	27	13	7
Level 4	4	4	0	0	0	0	0
Level 5 (medium)	117	100	2	7	6	2	0
Level 6	182	150	2	18	11	1	0
Level 7	152	127	0	18	7	0	0
Level 8	270	204	3	19	16	27	1
Level 9 (high)	282	214	15	27	13	7	6

Table A-108: Value of Structures by DOR Use for FDOF Fire Risk LOC
Minneola

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 41.90 MI	$ 1.58 MI	$ 33.39 MI	$ 0.00	$ 4.55 MI	$ 2.38 MI	$ 0.00
Level 2	$ 72.53 MI	$ 494.58 TH	$ 57.65 MI	$ 580.15 TH	$ 4.29 MI	$ 2.07 MI	$ 7.44 MI
Level 3	$ 186.70 MI	$ 14.68 MI	$ 56.69 MI	$ 2.95 MI	$ 104.36 MI	$ 5.75 MI	$ 2.27 MI
Level 4	$ 2.30 MI	$ 2.30 MI	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Level 5 (medium)	$ 34.49 MI	$ 30.46 MI	$ 138.51 TH	$ 1.67 MI	$ 1.72 MI	$ 508.16 TH	$ 0.00
Level 6	$ 49.40 MI	$ 40.73 MI	$ 114.40 TH	$ 4.68 MI	$ 3.76 MI	$ 121.16 TH	$ 0.00
Level 7	$ 40.32 MI	$ 33.39 MI	$ 0.00	$ 4.55 MI	$ 2.38 MI	$ 0.00	$ 0.00
Level 8	$ 72.24 MI	$ 57.65 MI	$ 580.15 TH	$ 4.29 MI	$ 2.07 MI	$ 7.44 MI	$ 207.46 TH
Level 9 (high)	$ 172.71 MI	$ 56.69 MI	$ 2.95 MI	$ 104.36 MI	$ 5.75 MI	$ 2.27 MI	$ 683.26 TH

Table A-109: Population at risk for FDOF Fire Risk LOC Montverde

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	0	0	0	0	0	0	0
Level 2	0	0	0	0	0	0	0
Level 3	0	0	0	0	0	0	0
Level 4	0	0	0	0	0	0	0
Level 5 (medium)	0	0	0	0	0	0	0
Level 6	202	0	41	89	6	0	12
Level 7	692	16	92	261	41	0	31
Level 8	0	0	0	0	0	0	0
Level 9 (high)	0	0	0	0	0	0	0

Table A-110: Structures at risk for FDOF Fire Risk LOC Montverde							
Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	100	5	65	12	4	0	14
Level 2	91	14	74	0	0	1	2
Level 3	6	6	0	0	0	0	0
Level 4	16	7	1	0	0	0	8
Level 5 (medium)	113	29	67	4	7	4	2
Level 6	120	38	71	5	3	1	2
Level 7	108	65	12	4	0	14	13
Level 8	79	74	0	0	1	2	2
Level 9 (high)	0	0	0	0	0	0	0

Table A-111: Value of Structures by DOR Use for FDOF Fire Risk LOC Montverde

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 25.53 MI	$ 800.10 TH	$ 17.33 MI	$ 3.24 MI	$ 594.83 TH	$ 0.00	$ 3.56 MI
Level 2	$ 24.30 MI	$ 2.36 MI	$ 21.63 MI	$ 0.00	$ 0.00	$ 236.33 TH	$ 72.95 TH
Level 3	$ 2.67 MI	$ 2.67 MI	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Level 4	$ 2.77 MI	$ 1.93 MI	$ 201.40 TH	$ 0.00	$ 0.00	$ 0.00	$ 639.91 TH
Level 5 (medium)	$ 19.31 MI	$ 7.08 MI	$ 7.56 MI	$ 51.60 TH	$ 2.40 MI	$ 1.42 MI	$ 800.57 TH
Level 6	$ 18.77 MI	$ 9.46 MI	$ 8.29 MI	$ 31.95 TH	$ 938.22 TH	$ 24.35 TH	$ 28.64 TH
Level 7	$ 32.70 MI	$ 17.33 MI	$ 3.24 MI	$ 594.83 TH	$ 0.00	$ 3.56 MI	$ 7.98 MI
Level 8	$ 22.01 MI	$ 21.63 MI	$ 0.00	$ 0.00	$ 236.33 TH	$ 72.95 TH	$ 67.24 TH
Level 9 (high)	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00

Table A-112: Population at risk for FDOF Fire Risk LOC Mount Dora

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	1727	57	455	401	41	0	69
Level 2	0	0	0	0	0	0	0
Level 3	1506	689	539	632	410	0	46
Level 4	0	0	0	0	0	0	0
Level 5 (medium)	0	0	0	0	0	0	0
Level 6	2336	534	521	1009	366	0	166
Level 7	1203	236	340	572	295	0	100
Level 8	0	0	0	0	0	0	0
Level 9 (high)	949	64	384	137	46	0	10

Table A-113: Structures at risk for FDOF Fire Risk LOC

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	742	353	219	87	60	19	4
Level 2	419	206	117	45	32	11	8
Level 3	569	417	38	66	37	9	2
Level 4	93	77	1	8	4	3	0
Level 5 (medium)	446	323	4	51	57	11	0
Level 6	910	641	3	152	68	38	8
Level 7	393	219	87	60	19	4	4
Level 8	219	117	45	32	11	8	6
Level 9 (high)	152	38	66	37	9	2	0

Table A-114: Value of Structures by DOR Use for FDOF Fire Risk LOC

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 256.09 MI	$ 122.66 MI	$ 74.20 MI	$ 20.74 MI	$ 25.52 MI	$ 11.16 MI	$ 1.80 MI
Level 2	$ 185.05 MI	$ 76.31 MI	$ 64.20 MI	$ 8.92 MI	$ 16.30 MI	$ 12.93 MI	$ 6.39 MI
Level 3	$ 209.14 MI	$ 143.72 MI	$ 5.59 MI	$ 17.54 MI	$ 39.09 MI	$ 2.86 MI	$ 340.07 TH
Level 4	$ 58.94 MI	$ 51.43 MI	$ 27.68 TH	$ 1.35 MI	$ 5.74 MI	$ 387.45 TH	$ 0.00
Level 5 (medium)	$ 151.63 MI	$ 99.08 MI	$ 457.11 TH	$ 10.62 MI	$ 29.67 MI	$ 11.80 MI	$ 0.00
Level 6	$ 224.35 MI	$ 137.06 MI	$ 187.71 TH	$ 41.16 MI	$ 28.70 MI	$ 15.52 MI	$ 1.73 MI
Level 7	$ 133.68 MI	$ 74.20 MI	$ 20.74 MI	$ 25.52 MI	$ 11.16 MI	$ 1.80 MI	$ 246.30 TH
Level 8	$ 110.68 MI	$ 64.20 MI	$ 8.92 MI	$ 16.30 MI	$ 12.93 MI	$ 6.39 MI	$ 1.93 MI
Level 9 (high)	$ 65.42 MI	$ 5.59 MI	$ 17.54 MI	$ 39.09 MI	$ 2.86 MI	$ 340.07 TH	$ 0.00

Table A-115: Population at risk for FDOF Fire Risk LOC Tavares

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	0	0	0	0	0	0	0
Level 2	566	34	188	208	28	0	32
Level 3	124	0	110	242	16	0	0
Level 4	0	0	0	0	0	0	0
Level 5 (medium)	125	94	12	40	0	0	0
Level 6	0	0	0	0	0	0	0
Level 7	590	187	153	292	123	15	57
Level 8	936	149	494	675	57	0	53
Level 9 (high)	1185	276	388	304	96	0	33

Table A-116: Structures at risk for FDOF Fire Risk LOC Tavares

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	1559	0	664	391	302	64	138
Level 2	419	92	220	63	32	6	6
Level 3	182	83	47	32	13	5	2
Level 4	102	24	69	5	2	2	0
Level 5 (medium)	221	131	19	24	36	4	7
Level 6	75	24	3	41	5	1	1
Level 7	1585	664	391	302	64	138	26
Level 8	329	220	63	32	6	6	2
Level 9 (high)	99	47	32	13	5	2	0

Table A-117: Value of Structures by DOR Use for FDOF Fire Risk LOC Tavares							
Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 649.50 MI	$ 0.00	$ 148.62 MI	$ 41.69 MI	$ 52.19 MI	$ 41.04 MI	$ 365.96 MI
Level 2	$ 94.20 MI	$ 26.66 MI	$ 37.93 MI	$ 9.40 MI	$ 16.37 MI	$ 2.85 MI	$ 999.17 TH
Level 3	$ 48.41 MI	$ 28.70 MI	$ 9.54 MI	$ 4.41 MI	$ 3.93 MI	$ 1.43 MI	$ 391.52 TH
Level 4	$ 21.92 MI	$ 6.14 MI	$ 13.38 MI	$ 458.65 TH	$ 359.97 TH	$ 1.58 MI	$ 0.00
Level 5 (medium)	$ 63.75 MI	$ 38.38 MI	$ 2.04 MI	$ 5.69 MI	$ 15.56 MI	$ 1.28 MI	$ 805.18 TH
Level 6	$ 20.36 MI	$ 7.01 MI	$ 641.33 TH	$ 8.12 MI	$ 3.54 MI	$ 1.05 MI	$ 4.62 TH
Level 7	$ 652.66 MI	$ 148.62 MI	$ 41.69 MI	$ 52.19 MI	$ 41.04 MI	$ 365.96 MI	$ 3.16 MI
Level 8	$ 67.72 MI	$ 37.93 MI	$ 9.40 MI	$ 16.37 MI	$ 2.85 MI	$ 999.17 TH	$ 180.73 TH
Level 9 (high)	$ 19.70 MI	$ 9.54 MI	$ 4.41 MI	$ 3.93 MI	$ 1.43 MI	$ 391.52 TH	$ 0.00

Table A-118: Population at risk for FDOF Fire Risk LOC Umatilla

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1 (low)	0	0	0	0	0	0	0
Level 2	0	0	0	0	0	0	0
Level 3	1131	92	157	477	157	0	66
Level 4	0	0	0	0	0	0	0
Level 5 (medium)	11	0	11	0	4	12	0
Level 6	0	0	0	0	0	0	0
Level 7	787	70	186	516	76	12	53
Level 8	0	0	0	0	0	0	0
Level 9 (high)	89	0	11	41	14	0	10

Table A-119: Structures at risk for FDOF Fire Risk LOC Umatilla							
Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	421	0	338	36	16	18	13
Level 2	45	31	5	3	4	1	1
Level 3	109	54	44	2	1	5	3
Level 4	9	5	0	1	3	0	0
Level 5 (medium)	69	56	3	1	4	2	3
Level 6	12	7	1	1	1	2	0
Level 7	445	338	36	16	18	13	24
Level 8	14	5	3	4	1	1	0
Level 9 (high)	57	44	2	1	5	3	2

Table A-120: Value of Structures by DOR Use for FDOF Fire Risk LOC Umatilla							
Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1 (low)	$ 99.13 MI	$ 0	$ 73.13 MI	$ 4.60 MI	$ 2.90 MI	$ 14.54 MI	$ 3.96 MI
Level 2	$ 16.52 MI	$ 5.62 MI	$ 1.40 MI	$ 429.25 TH	$ 1.05 MI	$ 7.99 MI	$ 23.31 TH
Level 3	$ 35.21 MI	$ 10.03 MI	$ 9.14 MI	$ 1.10 MI	$ 289.03 TH	$ 14.13 MI	$ 524.50 TH
Level 4	$ 2.45 MI	$ 1.45 MI	$ 0	$ 162.71 TH	$ 840.68 TH	$ 0	$0
Level 5 (medium)	$ 15.89 MI	$ 11.19 MI	$ 639.07 TH	$ 44.26 TH	$ 1.46 MI	$ 1.96 MI	$ 585.00 TH
Level 6	$ 1.32 MI	$ 677.27 TH	$ 166.10 TH	$ 7.57 TH	$ 361.45 TH	$ 104.64 TH	$ 0.00
Level 7	$ 104.59 MI	$ 73.13 MI	$ 4.60 MI	$ 2.90 MI	$ 14.54 MI	$ 3.96 MI	$ 5.46 MI
Level 8	$ 10.89 MI	$ 1.40 MI	$ 429.25 TH	$ 1.05 MI	$ 7.99 MI	$ 23.31 TH	$ 0
Level 9 (high)	$ 25.23 MI	$ 9.14 MI	$ 1.10 MI	$ 289.03 TH	$ 14.13 MI	$ 524.50 TH	$ 51.45 TH

Table A-121: Population at risk for Sinkholes, Astatula

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	1268	144	206	491	101	0	76
High	0	0	0	0	0	0	0
Very High	0	0	0	0	0	0	0
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Table A-122: Structures at risk for Sinkholes, Astatula

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	0	0	0	0	0	0	0
Medium	539	168	298	6	23	18	26
High	0	0	0	0	0	0	0
Very High	0	0	0	0	0	0	0
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Table A-123: Value of Structures by DOR for Sinkholes, Astatula

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Medium	$ 76.62 MI	$ 28.77 MI	$ 29.67 MI	$ 125.52 TH	$ 13.12 MI	$ 2.40 MI	$ 2.52 MI
High	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Very High	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Extreme	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Adjacent	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00

Table A-124: Population at risk for Sinkholes, Groveland							
Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	524	194	51	357	126	0	47
High	128	17	7	47	5	0	15
Very High	1648	498	203	720	300	0	134
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Table A-125: Structures at risk for Sinkholes, Groveland							
Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	0	0	0	0	0	0	0
Medium	185	142	10	9	11	6	7
High	427	307	10	28	31	11	40
Very High	184	122	3	12	28	12	7
Extreme	63	37	2	6	8	7	3
Adjacent	22	17	0	0	1	3	1

Table A-126: Value of Structures by DOR for Sinkhole Risk, Groveland

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Medium	$ 29.27 MI	$ 25.45 MI	$ 640.46 TH	$ 356.29 TH	$ 1.65 MI	$ 447.36 TH	$ 731.72 TH
High	$ 95.85 MI	$ 63.98 MI	$ 1.31 MI	$ 3.98 MI	$ 18.11 MI	$ 1.99 MI	$ 6.48 MI
Very High	$ 82.30 MI	$ 19.77 MI	$ 213.64 TH	$ 1.41 MI	$ 8.94 MI	$ 3.57 MI	$ 48.39 MI
Extreme	$ 13.08 MI	$ 6.97 MI	$ 97.53 TH	$ 404.24 TH	$ 1.57 MI	$ 3.82 MI	$ 220.84 TH
Adjacent	$ 5.64 MI	$ 3.61 MI	$ 0.00	$ 0.00	$ 243.26 TH	$ 676.59 TH	$ 1.11 MI

Table A-127: Population at risk for Sinkholes, Howey-in-the-Hills

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	1002	40	227	371	57	0	38
High	0	0	0	0	0	0	0
Very High	0	0	0	0	0	0	0
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Table A-128: Structures at risk for Sinkholes, Howey-in-the-Hills

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	0	0	0	0	0	0	0
Medium	391	277	8	32	33	9	32
High	67	50	2	2	2	1	10
Very High	6	4	0	0	0	0	2
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Table A-129: Value of Structures by DOR for Sinkhole Risk, Howey-in-the-Hills

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Medium	$ 137.41 MI	$ 91.35 MI	$ 925.73 TH	$ 14.72 MI	$ 18.63 MI	$ 7.25 MI	$ 4.54 MI
High	$ 14.72 MI	$ 13.37 MI	$ 207.12 TH	$ 7.00 TH	$ 381.94 TH	$ 3.81 TH	$ 746.26 TH
Very High	$ 738.13 TH	$ 668.28 TH	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 69.85 TH
Extreme	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Adjacent	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00

Table A-130: Population at risk for Sinkholes, Mascotte

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	1492	595	68	378	264	0	81
High	799	228	69	429	123	0	62
Very High	0	0	0	0	0	0	0
Extreme	371	39	13	78	28	0	23
Adjacent	0	0	0	0	0	0	0

Table A-131: Structures at risk for Sinkholes, Mascotte

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	0	0	0	0	0	0	0
Medium	412	270	76	16	35	7	8
High	167	104	35	8	12	1	7
Very High	107	104	2	1	0	0	0
Extreme	32	23	4	0	0	0	5
Adjacent	1	0	0	0	0	0	1

Table A-132: Value of Structures by DOR for Sinkhole Risk, Mascotte

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Medium	$ 64.13 MI	$ 49.74 MI	$ 4.26 MI	$ 2.14 MI	$ 4.79 MI	$ 1.91 MI	$ 1.29 MI
High	$ 26.96 MI	$ 21.26 MI	$ 2.86 MI	$ 756.61 TH	$ 1.24 MI	$ 379.60 TH	$ 460.03 TH
Very High	$ 26.23 MI	$ 25.80 MI	$ 247.48 TH	$ 180.87 TH	$ 0.00	$ 0.00	$ 0.00
Extreme	$ 4.34 MI	$ 3.67 MI	$ 330.91 TH	$ 0.00	$ 0.00	$ 0.00	$ 332.96 TH
Adjacent	$ 5.72 TH	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 5.72 TH

Table A-133: Population at risk for Sinkholes, Minneola

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	3516	504	279	1009	157	0	158
High	65	0	0	40	0	0	0
Very High	1481	106	197	362	149	0	70
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Table A-134: Structures at risk for Sinkholes, Minneola

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	0	0	0	0	0	0	0
Medium	823	710	5	57	37	6	8
High	366	281	4	33	14	33	1
Very High	256	218	5	15	16	1	1
Extreme	84	67	0	10	7	0	0
Adjacent	5	4	0	0	1	0	0

Table A-135: Value of Structures by DOR for Sinkhole Risk, Minneola

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Medium	$ 255.97 MI	$ 225.12 MI	$ 341.46 TH	$ 14.65 MI	$ 13.50 MI	$ 1.39 MI	$ 965.75 TH
High	$ 102.06 MI	$ 78.47 MI	$ 391.26 TH	$ 8.23 MI	$ 4.98 MI	$ 9.71 MI	$ 280.12 TH
Very High	$ 158.81 MI	$ 53.66 MI	$ 473.47 TH	$ 3.86 MI	$ 100.76 MI	$ 4.15 TH	$ 58.83 TH
Extreme	$ 24.36 MI	$ 20.29 MI	$ 0.00	$ 2.18 MI	$ 1.89 MI	$ 0.00	$ 0.00
Adjacent	$ 895.90 TH	$ 855.64 TH	$ 0.00	$ 0.00	$ 40.26 TH	$ 0.00	$ 0.00

Table A-136: Population at risk for Sinkholes, Montverde

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	894	16	133	350	47	0	43
High	0	0	0	0	0	0	0
Very High	0	0	0	0	0	0	0
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Table A-137: Structures at risk for Sinkholes, Montverde

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	0	0	0	0	0	0	0
Medium	625	305	220	19	12	24	45
High	0	0	0	0	0	0	0
Very High	0	0	0	0	0	0	0
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Table A-138: Value of Structures by DOR for Sinkhole Risk, Montverde

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Medium	$ 143.09 MI	$ 87.58 MI	$ 27.71 MI	$ 471.05 TH	$ 3.83 MI	$ 12.79 MI	$ 10.70 MI
High	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Very High	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Extreme	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Adjacent	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00

Table A-139: Population at risk for Sinkholes, Tavares

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	7343	889	3114	4123	716	15	405
High	1277	99	289	524	134	0	100
Very High	0	0	0	0	0	0	0
Extreme	1185	276	388	304	96	0	33
Adjacent	0	0	0	0	0	0	0

Table A-140: Structures at risk for Sinkholes, Tavares

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	0	0	0	0	0	0	0
Medium	2233	825	947	313	73	32	43
High	833	491	108	131	76	20	7
Very High	662	266	119	100	94	75	8
Extreme	343	137	26	56	55	65	4
Adjacent	20	13	0	2	5	0	0

Table A-141: Value of Structures by DOR for Sinkhole Risk, Tavares

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Medium	$ 529.77 MI	$ 243.21 MI	$ 139.18 MI	$ 59.40 MI	$ 49.67 MI	$ 34.01 MI	$ 4.30 MI
High	$ 176.40 MI	$ 102.52 MI	$ 8.86 MI	$ 20.06 MI	$ 27.00 MI	$ 17.42 MI	$ 543.17 TH
Very High	$ 373.74 MI	$ 55.89 MI	$ 9.19 MI	$ 28.17 MI	$ 37.67 MI	$ 241.99 MI	$ 819.18 TH
Extreme	$ 192.99 MI	$ 28.19 MI	$ 1.97 MI	$ 7.37 MI	$ 25.43 MI	$ 129.32 MI	$ 725.03 TH
Adjacent	$ 3.81 MI	$ 2.46 MI	$ 0.00	$ 93.77 TH	$ 1.25 MI	$ 0.00	$ 0.00

Appendix VIII – Adoption of Local Mitigation Strategies

As the LMS is endorsed by the participating jurisdictions copies of their resolutions adopting the document will be located beyond this page.