Lake County, Florida

Local Mitigation Strategy: Multi-Jurisdictional Plan

2016-2021

LAKE COUNTY
FLORIDA

Administered by:
Lake County Public Safety Department
Emergency Management Division
425 West Alfred Street, Tavares, FL
Tavares, Florida 32778

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Summary of Changes:

The Summary of Changes will list the routine updates that will be made to the LMS Plan once it has been accepted. Changes made to the 2010 plan will be archived by Lake County Emergency Management. This plan is a living document and can be changed at any time by the LMS Working Group. Continual citizen participation and input by all interest parties is encouraged.

Change	Comments/Purpose	Date	Pages
Plan Revision	Plan was revamped and revised in entirety.	February 2016	All

Executive Summary

Lake County is vulnerable to a variety of natural, technological, and human-caused hazards which threaten the health and wellbeing of the community, affect economic health, and pose harm to the environment. Lake County Emergency Management has convened a group of individuals representing the county, the municipalities, and other interested parties to comprise the members of the Lake County Local Mitigation Strategy Working Group (LMS Working Group) to monitor and update this continual planning process.

This document is the result of a multi-jurisdictional approach to mitigation planning. Lake County along with its municipalities formally adopted the existing Lake County Local Mitigation Strategy (2010) and once this revision is approved, this updated document will be presented for adoption via a new resolution.

The LMS Working Group conducted research to identify the hazards threatening Lake County in ordered to estimate risk, impacts, and potential consequences relating to public, responder safety, continuity of operations, continuity of government, property, facilities, infrastructure, environment, economic issues, and public confidence in the county. The natural hazards in the LMS are mirrored in the Comprehensive Emergency Management Plan (CEMP) for continuity and to facilitate an all-hazards approach to planning.

Proposed projects and programs intended to reduce impacts of future natural disasters are called mitigation projects. Mitigation projects are included in the project list and continue to be developed and added to the list by the LMS Working Group as new hazard research is available; risk increases; and as resources and opportunities become available. Implementing the LMS will help make Lake County more resistant to the effects of major disasters.

The LMS will continue to be updated and expanded in the future to address changing hazards, reflect the experiences of future disasters, and changes in the participating jurisdictions. The update process and future versions of the LMS will be used to inform the public and encourage other interested parties to participate more in making Lake County resilient.

General

Introduction:

Mitigation is any action taken to permanently reduce or eliminate the risk to people and their property from the effects of hazards. 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 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. The LMS Working Group has been established to prepare the community to be more resistant and resilient to the effects of future disasters.

Purpose:

The purpose of the LMS is to provide an on-going process that will encourage hazard mitigation efforts as part of the ongoing planning efforts of Lake County. The LMS encourages evaluation of natural hazards to evaluate vulnerabilities and develop goals, objectives, plan, programs, and projects to lessen the effects of those hazards and prioritize implementation of projects to further these goals.

Planning Process:

The LMS Working Group is made up of representatives from Lake County governmental agencies, incorporated municipalities, organizations and associations representing key business industry, community interest groups, other governmental entities, and non-profit or faith based groups. Interested citizens are always welcome and encouraged to become involved in the process. The Lake County LMS Working Group by-laws are located in Appendix II of this document and were updated in this planning process.

The LMS Working Group encourages involvement in the mitigation planning process by each jurisdiction in Lake County. Jurisdictions are encouraged to identify others that should be participating on the LMS Working Group. Annual meetings were held in December of each year for the purpose of preparing the annual update to be submitted. The update kick-off meeting

was held on March 12, 2015 with Lake County Emergency Management representatives followed by a meeting on June 18, 2015 with the LMS Working Group. The LMS Working Group was noticed through email distribution with follow-up phone calls from the LMS Coordinator. The formal public meetings were held on July 30, 2015 and August 24, 2015 with the LMS Working Group noticed via email distribution, website notice, and public notification by a notice in the Orlando Sentinel in the Lake County Section for at least ten (10) days. Further efforts by the Chair and Vice-Chair to encourage participation and attention at meetings continued after July 30th in preparation for the August 24th meeting prior to submission to the Florida Division of Emergency Management.

Participating Organizations:

Lake County encourages participation from all of its jurisdictions and enables any entity within the jurisdictions or unincorporated county to be involved in the planning effort. Those involved in the process include: Astatula, Clermont, Eustis, Fruitland Park, Groveland, Howey-in-the-Hills, Lady Lake, Lake County, Leesburg, Mascotte, Minneola, Montverde, Mount Dora, Tavares, Umatilla, and The Villages.

This is the inclusive list of all jurisdictions that must approve the LMS as a multi-jurisdictional plan. Each jurisdiction is responsible for actual implementation of the plan within their boundaries and ensuring that their projects meets the needs of the communities. Participation will be identified by attendance at meetings, both in person and virtual, and active involvement in the process. These are the same jurisdictions that were involved in the 2010 plan. The desire of this plan is to foster further participation from all municipalities and to meet on a more consistent basis in the future.

Participation in the planning process at meetings included the following entities:

BESH Engineering
City of Clermont
City of Eustis
City of Leesburg
City of Mount Dora
City of Tavares
City of Umatilla
Florida Department of Health in Lake County
Lake County Emergency Management
Lake County Public Works Department
Lake County Schools
Lake County Stormwater Division
Lake Emergency Medical Services
Town of Montverde
Villages Community Development District
Withlacoochee Forest Center

The LMS Working Group has had participation from all remaining jurisdictions due to contact with each entity by members of the Emergency Management Division to obtain updated information for the LMS Update. In the 2010 plan, the regional planning council was involved however they did not participate in this revision as the position was not filled. Email meeting notices are sent to any and all interested parties both within and outside of Lake County to encourage participation.

Public Participation:

The LMS Working Group has benefited from the assistance and support of its many members and support staff and 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 LMS Plan, such as through the Lake County website and municipal meetings where the plan will be formally adopted by resolution within each Lake County community. A copy of the existing Local Mitigation Strategy for Lake County resides on its website available to the public 24/7 at the location listed below. This webpage also provides other mitigation information to the public along with a contact link back to the Emergency Management Division.

https://www.lakecountyfl.gov/departments/public_safety/emergency_management/local_mitigation_strategy.aspx

The LMS Working Group welcomes public input and encourages participation through legal notices of upcoming public meetings. Future meetings which may be conducted utilized web conferencing will also include a gathering at the Emergency Operations Center for interested parties to attend, listen, and participate in the planning process. Once the updated plan is posted on the website, opportunity for public comment and input will be available prior to adoption.

Once the plan is adopted, it will remain on the website, available for public comment and input in an ongoing process. In addition to this planning process, many of the jurisdictions maintain their own efforts to inform the public about potential hazards, hazard mitigation, and this planning process. Lake County and the LMS Working Group will continue efforts to develop a more robust planning process and encourage more participation and involvement from the jurisdictions, interested parties, and the public.

Update Process:

During the 2015 Lake County LMS Update, the LMS Working Group took the following actions:

- In 2011, 2012, 2013, and 2014 annual meetings of the LMS Working Groups were noticed to the public and held with attendance and meeting minutes provided to document the process.
- In March 2015, Lake County Emergency Management hired a consultant to assist in the update process.
- The plan was reviewed and rewritten to be compliant with the *2014 Florida Local Mitigation Strategy Crosswalk* and the *Disaster Mitigation Act of 2000*.
- The General Section include the Introduction, purpose, and planning process and was revised to reflect the current approach.
- The Risk Assessment Section was reviewed for applicable hazards and to be consistent with the Lake County Comprehensive Emergency Management Plan (CEMP).
- Mitigation Goals Section includes the goals, projects list, National Flood Insurance (NFIP) and Community Rating System (CRS) and was updated to reflect the current list, current NFIP and CRS information.
- Plan Maintenance Section include monitoring and evaluation; the update process; and process for project implementation and was updated to reflect the current approach.
- LMS Working Group By-Laws Appendix contains the policies of the LMS Working Group and was updated to include the current practices.

The Draft Plan was provided to the LMS Working Group for their review and comment. Another meeting will be conducted to review the Final Draft and approve all changes. The LMS Working Group will continue to solicit input from anyone who may have an interest in the process and include any additional parties as needed as required by Florida Administrative Code 27P-22.

Risk Assessment:

Hazards:

In this section the potential hazards that may affect the residents and visitors to Lake County are reviewed. Each jurisdiction will be addressed individually however we begin with a general overview at the county level of each of the hazards. This plan is in line with FEMA's guidance by focusing entirely on natural hazards specifically:

- Drought: A period of dry weather, especially a long one that is injurious to crops.
- Flooding: A great flowing or overflowing of water, especially over land not usually submerged.
- Hail: Showery precipitation in the form of irregular pellets or balls of ice, falling from a cumulonimbus cloud.
- Heat: A hot condition of the atmosphere or physical environment; hot season or weather.
- Tropical Cyclone Events: Violent, tropical, cyclonic storms of the western North Atlantic, having wind speeds of or in excess of 74.
- Thunderstorms/Wind/Lightning: A transient storm of lightning and thunder, usually with rain and gusty winds, sometimes with hail or snow, produced by cumulonimbus clouds/ Air in natural motion, as that moving horizontally at any velocity along the earth's surface/ A brilliant electric spark discharge in the atmosphere, occurring within a thundercloud, between clouds, or between a cloud and the ground.
- 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.
- 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.
- Wildland fire: Any large fire that spreads rapidly and is hard to extinguish.
- Erosion: The process by which the surface of the earth is worn away by the action of water, glaciers, winds, waves, etc.
- Winter storm/Freeze: 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/In meteorology a widespread occurrence of temperatures below 32°F (0°C) persisting for at least several days.

- 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)

Some hazards are not listed due to the geographic location and characteristics of the planning area, and are not relevant to Lake County and the participating jurisdictions, i.e. 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.

Probability Summary:

Each hazard is described is ranked based on relative risk using probability and severity as the identified measures.

Probability based on historical information and takes into account the likelihood that Lake County will see an impact by the hazard within a given period of time.

- 0 = none: No previous occurrence and considered no threat
- 1=low: Some potential every 16 years or more
- 2=moderate: Potential occurrence every 3 to 15 years
- 3=high: Potential to exist every 1 to 2 years

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. 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. It only takes one!

The table on the following page indicates summary probabilities for the hazards in this plan.

Summary Probabilities for Hazards												
	Drought	Flooding	Hail	Excessive Heat	Tropical Cyclone Events	Thunderstorm Lightning/Wind	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	M	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	M	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, The	M	M	M	M	M	H	M	M	M	L	M	L

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, 2006 to present with some relief the rainy months in 2013 and 2014. 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 statewide droughts, recent population growth has accelerated the depletion of water supplies. The KBDI has a range from 0 for no drought to 800 being the most severe drought. Lake County has experienced mostly moderate drought conditions over the last five years. Heavy rains during the rainy season can reduce the drought index substantially, however dry spells can increase the number in a relatively short time period. It is important to note that during prolonged cold spells when conditions are often windy, it will make conditions dry very quickly. Fires can be triggered from careless activities during extremely dry periods and water consumption may have to be curtailed if consumptions exceeds rainfall and replenishment of the water table. All areas of Lake County are subject to the effects of drought conditions. Since Lake County has a large number of lakes, drought effects of lowered water levels may impact tourism for those that participate in activities on the water. Resident

populations would not be unduly affected other than an inconvenience. Agricultural concerns such as the horticulture, animal services, citrus, and vegetable crops could be affected by a long-term drought which could have a negative economic effect. Critical facilities and infrastructure would likely be unaffected. However no other significant drought events have occurred in Lake County other than what is reflected here. The following table summarized the mean KBDI for Lake County since the last plan update.

Keetch-Byram Drought Index (KBDI) for Lake County, Florida 2011 to 2015[1]	
Date	**KBDI**
June 5, 2011	559
December 5, 2011	437
June 5, 2012	367
December 5, 2012	499
June 5, 2013	99
December 5, 2013	454
June 5, 2014	344
December 5, 2014	81
June 5, 2015	449

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.

[1] http://flame.fl-dof.com/fire_weather/KBDI/archive/kbdi-report.html

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's 100-year floodplain area lies in A, ANI, AO, or AH flood zones, with about 21% 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 participating 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. Historic significant events are noted in the 2010 plan. There have been no significant flooding events in Lake County in the last five years. However, worth noting is a rainmaker that happened in 2008 for the purpose of this plan.

- 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 from 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.

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. A river gauge had 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. However, at the time of this writing, it appears that the gauge is out of service.

In summary, 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 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. Flooding can impact residential areas with their local roadways and lift stations that may be impacted if they become surrounded with water. The Astor area has been particularly

susceptible and damage is limited to individual homes. Areas along the St. Johns River can be impacted however are limited to individual homes that may become isolated. Emerald Lakes in Clermont has an ongoing flooding issue that is currently mitigated by the efforts of the subdivision. However if their efforts were to fail there is a wastewater facility that would be inundated and would result in the need to evacuate the subdivision. Most of the county's businesses and critical facilities are not located in hazardous areas and would likely not suffer impacts that would affect the general population.

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. The locations were 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. A couple of previous occurrences that produced substantial damage include:

- 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.

Since 2002, there has been hail within Lake County, however, research did not reveal that any of these storm events were in the severe category. Since 2010 there have been ten documented hail storm events in Lake County with hail ranging in size from .75 to 1.75 inches in diameter. None of these hail storms resulted in property damage or crop damage or any significance. Locations and dates of hail storms are listed in the table that follows. Should hail occur, it could cause damage to car dealerships and the agricultural enterprises which include greenhouses, horticulture, foliage, and citrus crops. Damage to car dealerships has occurred in the past and could happen again in the future. This could result in an economic effect to the County. Tourism, critical facilities, and infrastructure would likely not be impacted. Other than injuries to individuals that may get caught out in the hail storm, populations would not affected.

Hail Storm Damage in Lake County Florida 2010-Present[2]			
Location	**Date**	**Size**	**Damages**
Lake Minnehaha	6/15/2011	1.00	-0-
Lake Louisa	4/20/2012	1.50	-0-
Astor Park	4/20/2012	1.75	-0-
Howey-in-the-Hills	7/09/2012	0.75	-0-
South Clermont	3/24/2013	1.00	-0-
Sylvan Shores	4/30/2013	1.00	-0-
Lake Dora	4/30/2013	0.88	-0-
South Clermont	5/19/2013	0.88	-0-
Mount Dora	2/12/2014	1.00	-0-
Groveland	6/10/2014	1.00	-0-

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.

[2] http://www.ncdc.noaa.gov/stormevents

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. 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 90's 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 produce 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 90's and 101 degrees. Wildfires became extreme in certain parts of Central Florida (National Weather Service, Melbourne). This time was known as the '98 Florida Firestorm. The table below shows the heat threat levels from the National Weather Service

Excessive Heat Threat Chart[3]	
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 115-119 degrees (F) or greater.
Moderate	"A Moderate Threat to Life and Property from Excessive Heat" Highest heat index 110-114 degrees (F) or greater.
Low	"A Low Threat to Life and Property from Excessive Heat" Highest heat index 105-109 degrees (F) or greater.
Very Low	"A Very Low Threat to Life and Property from Excessive Heat" Highest heat index around 105 degrees (F) or greater for July and August or…between 102-104 degrees (F) for June through September or…between 99-103 degrees (F) for May through October
Non-Threatening	"No Discernable Threat to Life and Property from Excessive Heat" Warm season weather conditions are non-threatening

[3] http://www.srh.noaa.gov/mlb/ghwo/heat.php

According to the U.S. Census Bureau, as of 2010, 25.70%[4] 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. No other significant heat events have occurred other than what is reflected here. Although unlikely, a significant heat wave could damage crops creating an economic effect, the homeless and elderly who may not be able to find a way to cool themselves, and Lake County may need to open shelters for this population. Tourism would not necessarily be impacted as hot weather is expected in Florida. Critical facilities and infrastructure would not likely be impacted.

Tropical Cyclone Events:

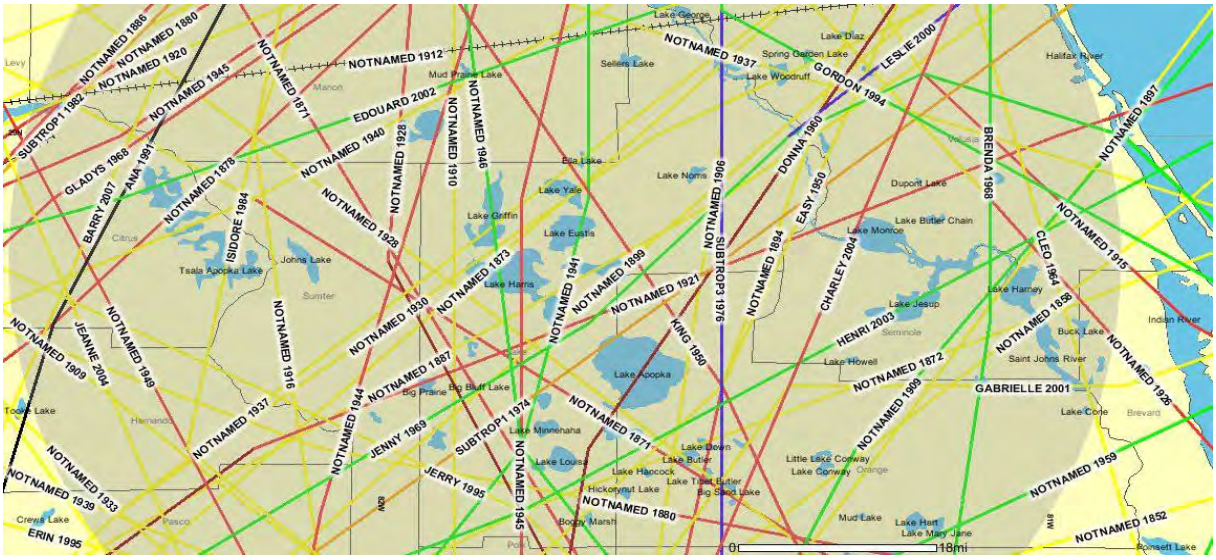
Hurricanes and tropical storms have long affected Florida because of its location. As a narrow peninsula between two warm bodies of water, Florida is regularly affected by hurricanes. The greatest threats to Lake County posed by a hurricane are wind damage and inland flooding. Wind damage from the storm 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.

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. 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 location. The entire population of Lake County, tourism, agriculture, critical facilities, and infrastructure could be affected by a tropical

[4] http://quickfacts.census.gov/qfd/states/12/12069.html

cyclone depending on the severity of the storm and the path it takes. 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. High wind speeds can cause damage to structures with the most significant threat to mobile homes and other older substandard or unreinforced properties. The total mobile home population in Lake County is estimated at 49,776[5] accounting for nearly 16% of the total county population. This population has to have a safe place to go during possible tornadic activity. While everyone can be impacted, the elderly, those with lower income, and the homeless would be most affected. Tornadoes can cause other cascading events like utility outages, economic loss, and transportation issues along with the hardships that result from the disruption of normal life.

[6]Hurricane Paths in Lake County and Central Florida, 1851-2010



Between 1900 and 2007, in Florida, 334 hurricanes occurred. The total number of major hurricanes, Category 3 or above, between 1851 and 2005, reached 37, resulting in incalculable damages and loss of life. Flooding that occurred from Tropical Storm Fay is discussed in the flooding hazard section and no other significant tropical cyclone hazards have occurred since. The following storms are a few of the more notable events that have impacted Lake County, based on available information:

[5] Lake County CEMP November 2014
[6] NOAA Coastal Services Center

- 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.
- 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[7]).

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. These areas 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.

[7] 2010 Lake County LMS

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 tropical cyclone events in the future, which may potentially be stronger than any others that have previously impacted Lake County. No hurricanes have impacted the State of Florida since 2005.

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). 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.

Saffir-Simpson Scale and Typical Damage[8]		
Scale	**Wind Speed**	**Typical Damage**
Category 1	75-95 mph	Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
Category 2	96-110 mph	Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
Category 3	111-129 mph	Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
Category 4	130-156 mph	Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months
Category 5	>157 mph	A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

[8] http://www.nhc.noaa.gov/aboutsshws.php

Thunderstorms/Wind/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. The Central Florida region between Tampa and Orlando has been dubbed the "Lightning Capital" of the United States. Here, warm, rising air pulls in sea breezes from the Atlantic Ocean and the Gulf of Mexico. On average, much of Lake County receives 6.0 to 7.5 flashes per square km, a relatively high flash density during storms. With regard to a scale for lightning, there is no scale for (such as weak vs. strong).

It is 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[9] that impacted the State of Florida were ignited by lightning strikes.

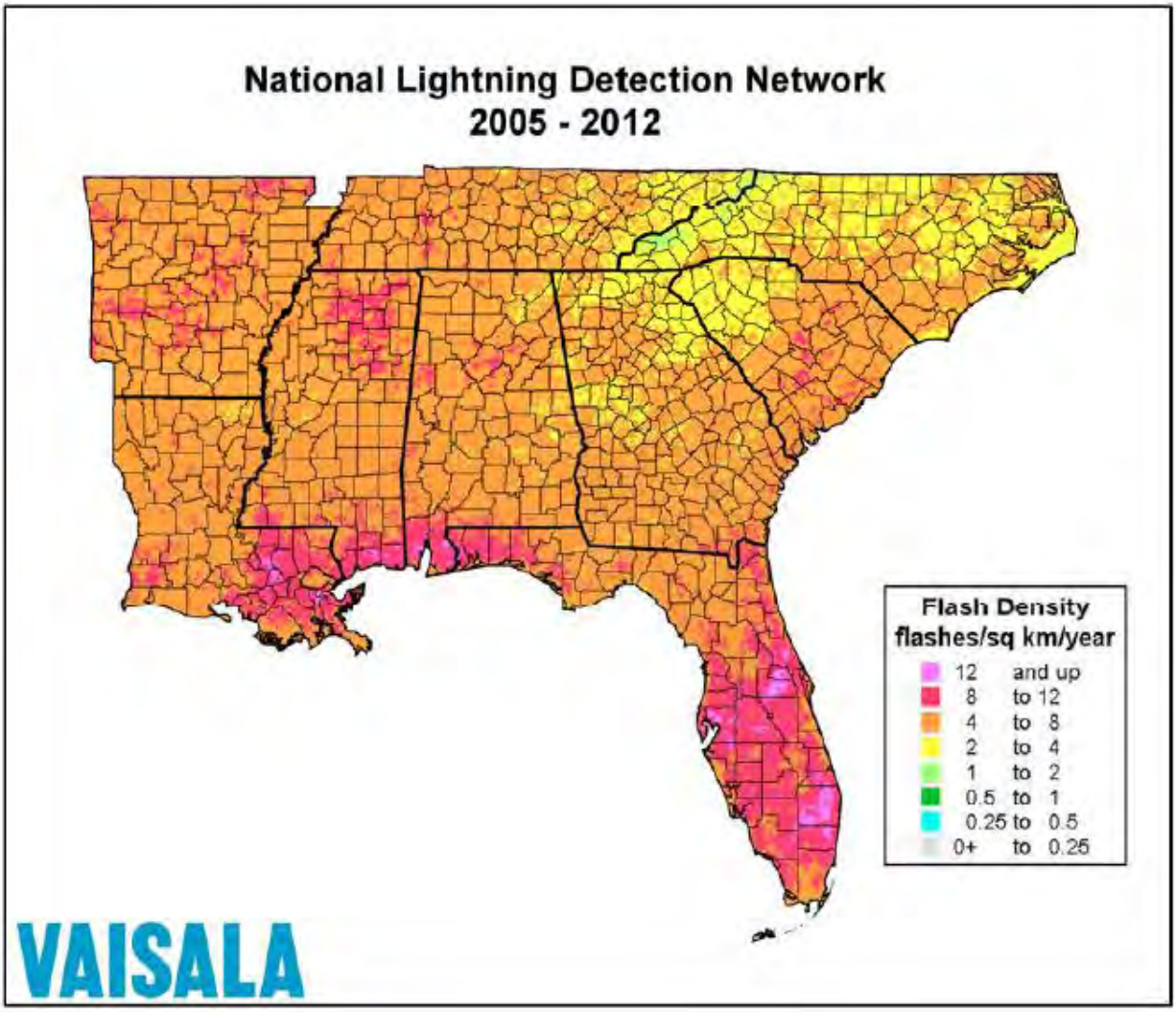
Due to Lake County's location in Central Florida, there are a large number of lightning strikes- and loss of life can primarily be prevented by proper public education. Damage to buildings can also be prevented by lightning rod systems and surge protectors to reduce the risk of fires. All areas of Lake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

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 included a man who was struck and killed in June 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. Since 2010, twenty[10] people have died in Florida from lightning strikes, an average of 3+ people per year, although none in Lake County, while some 25+ people are injured on average in the United States. Lake County could expect 4-12 lightning flashes per square kilometer per year.

[9] U.S. Fire Administration, 2004
[10] http://www.lightningsafety.noaa.gov/victims.shtml

As of this update there have been no other documented cases of death or injuries from lightning in Lake County. A graphic indicating lightning flash density follows.

[11]



Generally speaking, all of Lake County is subject to the effects of Thunderstorms, Wind, or Lightning. It is anticipated since Lake County has experienced lightning storms before, it will likely occur again. Wind events in recent history have averaged from 40 to 70 knots and it is likely that those will occur again as well. 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 thunderstorms and wind events will be felt even more than in the past and substantial damage can be experienced by residents. With severe thunderstorms and lightning, segments of the population could be negatively affected.

[11] Lightning data from Vaisala.com provided in a media release dated 6/2013

Agriculture concerns could suffer damage and economic losses. Individuals in open areas such as golf courses and parks are at risk as well as those that may be participating in boating or other water activities on the numerous lakes and streams in Lake County. Critical facilities and infrastructure would be possibly impacted in a devastating storm but not in what has occurred normally. Since 2010, there have been 13 thunderstorm/wind events that have impacted Lake County. Details of these impacts are listed in the following table.

Thunderstorm/Wind Events in Lake County 2010-2015[12]			
Location	**Date**	**Magnitude**	**Property Damage**
Mascotte	1/25/2011	61 kts EG	$500K
Ferndale	1/25/2011	56 kts EG	$20K
Mascotte	3/30/2011	50 kts EG	-0-
Grand Island	3/30/2011	50 kts EG	-0-
Leesburg Airport	3/30/2011	54 kts EG	-0-
Tavares	3/30/2011	50 kts EG	-0-
Astor Park	4/20/2012	52 kts EG	$.5K
Groveland	5/15/2012	50 kts EG	$.4K
Lady Lake	8/10/2012	50 kts EG	-0-
South Clermont	3/24/2013	56 kts EG	-0-
Lake Louisa	3/24/2013	70 kts EG	$250K
Lake Louisa	3/24/2013	65 kts EG	-0-
Mt. Dora	6/11/2013	Heavy Rain	$10K
Lake Griffin	7/4/2013	50 kts EG	-0-
Minneola	4/30/2014	43 kts EG	$2K
Tavares	6/10/2014	48 kts EG	$1K

Sinkholes/Subsidence:

Topographically, Florida is part of a large Karst formation that comprises a section of the southeastern portion of the United States. Karst refers to the rock “foundation” that is slowly eaten through by chemical weathering eventually leading to subsidence or sinkholes. In Florida,

[12] http://ncdc.noaa.gov/stormevents

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 is ranked as number 10 on a list of the top sinkhole prone counties in Florida[13] and 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.

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. 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.

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.

[13] http://www.riskmeter.com/RiskMeter/RiskMeter-Announces-Top-Ten-Sinkhole-Prone-Counties.htm

- 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 in Clermont to relocate after a neighbor's house was condemned.
- June 2011: A sinkhole swallowed part of a Leesburg store building on East Main Street caused by wet weather after a dry spell causing the ground to become too heavy and collapse.
- August 2013: A sinkhole opened up in Clermont at the Summer Bay Resort causing a building to slowly sink and prompting the evacuation of three buildings.
- August 2015: A sinkhole opened up in Groveland which resulted in a boil water notice for some and no water for those closest to the location of the sinkhole including one school.

Depending on the location of the sinkhole, residents' homes, tourists in transient housing, critical facilities, infrastructure, and agricultural concerns could suffer negative effects. Economic effects could vary again depending on the size and location of the sinkhole.

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.

The Fujita Scale (now the Enhanced Fujita Scale) is used to determine the intensity of tornadoes. 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. The Fujita Scale levels are listed in the table on the next page.

Measuring the Intensity of Tornadoes (Extent[14])			
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

Historic significant events are noted in the 2010 plan. There have been few significant tornado events in Lake County in the last five years. However, worth noting is a storm that happened in 2007 for the purpose of this plan.

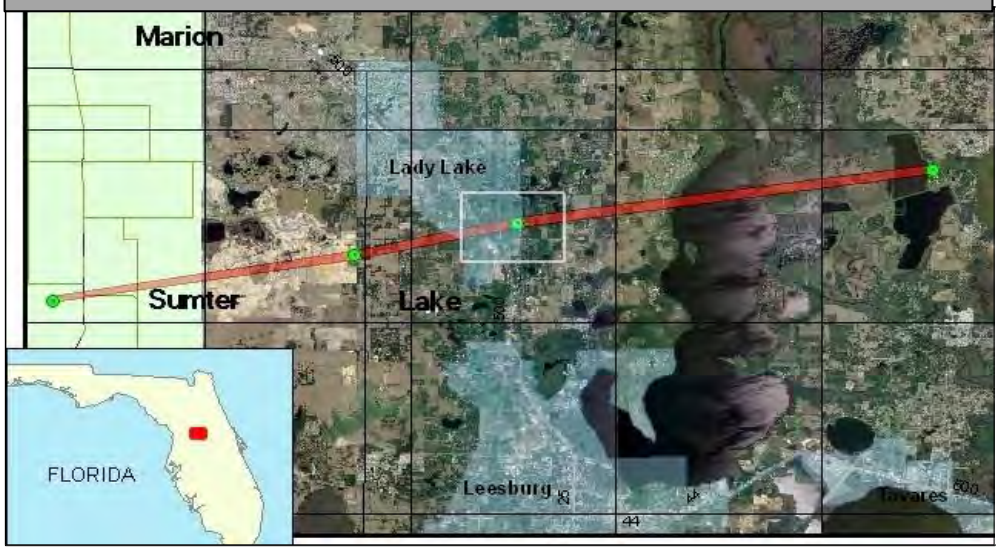
- The Groundhog Day Tornado Outbreak, February 2, 2007: On the morning of February 2, 2007, a powerful storm system moved across Lake County from the west producing three tornadoes, two of which had large impacts on the County and resulted in a Presidential Disaster Declaration. The first tornado touched down in Sumter County, near Wildwood, and moved toward the Villages and Lady Lake. This tornado registered as an

[14] http://www.srh.noaa.gov/oun/?n=efscale
The EF scale still is a set of wind estimates (not measurements) based on damage.

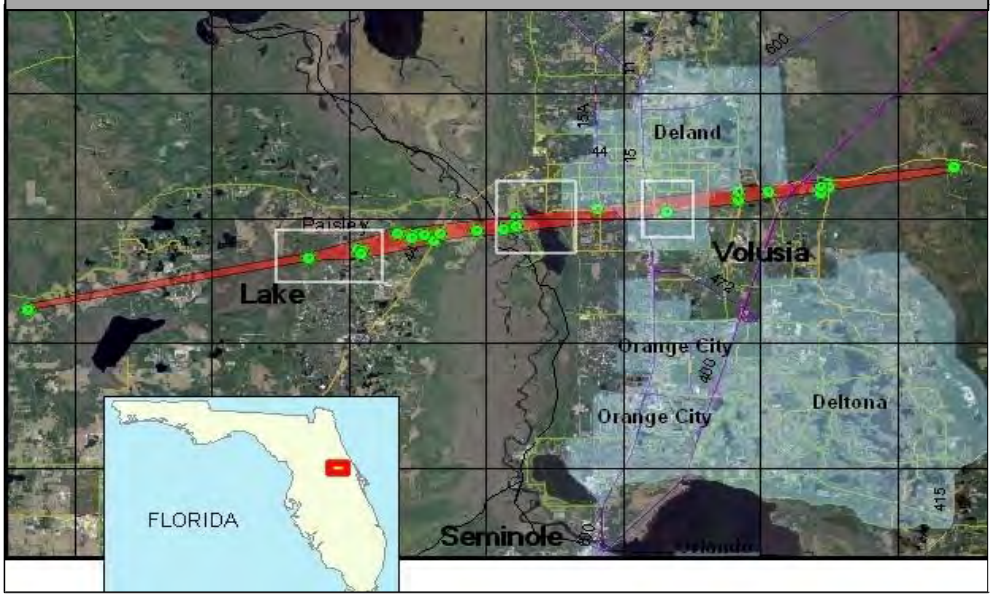
EF3 on the Enhanced Fujita Scale and created a swath of destruction along its 17-mile path, killing eight.

The second tornado touched down near County Road 42 in northern Lake County in between Altoona and Paisley. This tornado was 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. Storm path graphics follow.

February 2, 2007, EF3 Tornado Path, Lady Lake, Florida



February 2, 2007, EF3 Tornado Path, Paisley, Florida



This was the worst natural disaster in the county's history and officials were determined not to let it happen again. In February 2011, Lake County launched a new warning system that calls residents directly when there is a public safety emergency. Alert Lake was the new emergency notification system and for tornado warnings (or other significant incidents i.e. natural disasters, warning from law enforcement, chemical spill, flooding, or other emergencies), it automatically calls people on a phone number that is registered. For those who have landlines in their homes, the 911 database is utilized. For those that do not have a house phone but want to know about severe weather when on the go, the Alert Lake system can also send messages straight to a cell phone.

Due to the unpredictable nature of tornadoes, all of Lake County is vulnerable to their impacts. High wind speeds can cause damage to structures with the most significant threat to mobile homes and other older substandard or unreinforced properties. The total mobile home population in Lake County is estimated at 49,776[15] accounting for nearly 16% of the total county population. This population has to have a safe place to go during possible tornadic activity. While everyone can be impacted, the elderly, those with lower income, and the homeless would be most affected. Tornadoes can cause other cascading events like utility outages, economic loss, and transportation issues along with the hardships that result from the disruption of normal life.

The table below lists the incidences of tornadoes in Lake County since 2010.

Tornado/Funnel Cloud Events in Lake County 2010-2015[16]			
Location	**Date**	**Magnitude**	**Property Damage**
Dona Vista	9/12/2010		-0-
Grand Island	8/5/2011	EF0	$25K
Lady Lake	9/24/2011		-0-
Lake Louisa	6/24/2012	EF0	-0-
Eustis Airport	6/25/2012		-0-
Tropical Shores	4/30/2013		-0-
Mt. Plymouth	2/23/2014		-0-

[15] Lake County CEMP November 2014
[16] http://ncdc.noaa.gov/stormevents

Wildland Fire:

Forest fires pose a serious threat while playing an important role in Florida's ecology. 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. The "La Nina" weather effect occasionally causes an extended drought period.

Controlled burns reduce the amount of fuel that might build up over years of not having a fire. The Florida and US Divisions of Forestry have incorporated controlled, naturally occurring, and prescribed burns into their forest management plans. Uncontrolled wildfires 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.

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 personnel to fight the fires and smoke coverage which can affect visibility as well as air quality. These effects can be most severe for the elderly with compromised respiratory systems and the homeless who may not have a place to get away from the smoke. The homeless population is Lake County since 2007 had a high count of 1,019 and a low of 282 according to the Department of Children and Families Council on Homeless 2013 Report. This number is based on a 24 hour count on one day and has an average of 582[17].

All of Lake County may be impacted by wildfires during the especially months with minimal rainfall. Carelessness can lead to wildfires during dry or windy conditions and when burning restrictions are not followed. Even with prescribed burns, Lake County remains at risk for brush fires in unincorporated areas and at the wildland/urban interface areas. Since 2010, the only published account of a burn ban was ordered in Lake County from February to June 2012.

[17] http://www.dcf.state.fl.us/programs/homelessness/docs/2013CouncilReport.pdf

The following highlight a few of the more notable forest fires in Lake County, which are briefly summarized.

- 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 Deerhaven Wildfire became out of control after 25 mph wind gusts made it difficult to contain. The primary jurisdiction affected was unincorporated Lake County.
- 2012 Groveland Fires: January had a 300 acre fire on County Road 33 which was difficult to contain due to swamp conditions before rain helped firefighters contain the blaze. February had a fire in Clermont that shut down Thompson Place near CR 561 as the fire continued to burn in swampy area. April had a fire north of State Road 50 near Timber Lake Village which had to be contained before reaching a nearby swamp which could have resulted in a muck fire that lasted for weeks.

- April 2012 Sorrento: An illegal burn in a yard spread quickly and threatened homes.

Wildfires in Lake County primarily affect wooded areas with low population density and do not typically pose a danger to highly populated areas. However, wildfires can still impact all jurisdictions in Lake County. Structures, critical facilities, infrastructure, and housing for vulnerable populations have some exposure to impact by wildfires. An exact dollar loss cannot be determined due to the fact impact is undefined. There have been no significant wildfires other than those reflected here.

Erosion:

Erosion occurs when land is worn away 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 stormwater runoff. Special rules are also in place for development in the basin that require additional stormwater treatment and established protection zones along the waterways to preserve wetlands, uplands and water quality and reduce erosion and groundwater drawdown.

Since 2010, there has been one incident of erosion in Clermont. In April 2013, rainfall of 3 to 4 inches in a short period of time, associated with a strong thunderstorm, caused a steep 30 foot section of ground adjacent to State Road 50 in Clermont to slide into a home. The mudslide destroyed a home on Sunnyside Drive. Mud several feet high entered the home. The drainage system in the area was designed several decades ago and could not handle the excessive rain

rate. Property damage was estimated at $75,000. There have been no other documented incidents in Lake County. This hazard will be considered for exclusion in the next update due to its limited impact and probability for Lake County. Erosion impacts would be fairly limited in scope as impacts to populations, tourism, agriculture, economic interest, critical facilities and infrastructure have not be realized in the past.

Winter Storm/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 although the entire county could be impacted. 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. However the elderly may be impacted as well as young children and since it is anticipated that the elderly population will continue to increase, there is a chance that this population could see some impact from winter storms and freezes. 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. Critical facilities, infrastructure, and tourism would likely not be affected by winter storms and freezes.

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 individuals being out of work. Since 2010, two freeze and one wind chill events occurred in Lake County and none have occurred since. These are outlined in the table below.

Freeze and Wind Chill Events Lake County 2010-2015			
Location	**Date**	**Type**	**Crop Damage**
Lake	12/14/2010	Frost/Freeze	-0-
Lake	12/14/2010	Cold/Wind Chill	-0-
Lake	12/27/2010	Frost/Freeze	$1.830M

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, especially wind chill. Of the cold weather hazards that can be expected, the most likely for Lake County are the crop-killing freezes. Lake County is not normally subject to the types of winter storms experienced in the panhandle that can include snow precipitation and accumulation; typical effects are from wind, wind chill, and freezes.

Dam or Levee Failure:

According to the Florida Department of Environmental Protection, there are four dams within Lake County. 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.

Dams in Lake County, Florida			
ID	**Name**	**Coordinates**	**Hazard Rating**
GNIS 285216	Lake Apopka Lock and Dam	28-7228093 -81.6846338	Low
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[18]:

- "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. Most of the areas impacted would be residential homes with local roadways and lift stations may be impacted causing issues. Specific areas of concern include the following however the impact is limited and isolated in focus:

- Timber Village/Groveland – Residential mobile home community of approximately 50 homes that may become flooded or have limited access.
- Isolated homes along levees that number less than five homes.
- Pasture flooding in an isolated area with no structures involved.
- Homes at the end of Indigo Road which will have limited access and number approximately 15.
- Plantation Golf Course has 3 to 4 holes that would be underway. This was known when the property was developed and golfers can bypass the area to finish playing. The golf course is responsible for repairing any damages.

How Bad Could It Get?

Estimations regarding how bad it could be in the future are based on available information from historical events and other data from the region and the state. Understanding how bad it could

[18] Lake County LMS 2010

be allows officials to better understand worst case scenarios. The table below is a first step in documenting how bad the effects of each hazard could be in the future, including the potential loss of life from each hazard.

How Bad Could It Get?		
Hazard	**Effects**	**Answers**
Dam/ Levee Failure	How deep on the ground could flooding be? How many acres affected?	A flooding event due to a dam/levee failure could result in water greater than six inches in depth within the impacted area. Depths would be greatest closest to the breach and likely lessen the greater the distance from the breach.
Drought	How severe on drought index.	Drought within Lake County could reach moderate to severe levels (400 to 800) out of a potential score of 800 on the KBDI Index.
Erosion	How many feet are lost per year?	Less than 1/4 inch of shore or riverfront are lost per year, on average. Erosion debris flow varies.
Extreme Heat	What is the maximum temperature to expect?	The maximum temperature in Florida would be approximately 109 degrees. In some instances, particularly within landlocked counties like Lake County, the temperature could be above 100 degrees due to the lack of a sea breeze.
Flooding	How deep on the ground could flooding be?	Most flooding within Lake County due to ponding of water in low lying areas could result in depths of around six inches. The rising waters of the St. Johns River could result in water that is 3 to 5 feet deep on the roads adjacent to the river, based on past flooding events.
Hail	How big could the hail be?	On average, Lake County has seen hail from .75 to 1.75 inches in diameter. In the future Lake County could receive the same size diameter hail and even greater sizes which can occur from extremely high cloud tops that develop.
Sinkholes	How deep and what diameter could a sinkhole be?	Sinkholes can have a diameter of greater than 200 feet. Sinkholes can be shallow or develop depths that are greater than 100 feet, creating extremely dangerous situations, swallowing entire structures.
Thunderstorms /Wind/Lightning	How much rainfall can be expected? How high can associated winds get? Can lightning start a fire?	Lake County is very susceptible to thunderstorms, high winds, and lightning which may cause fires in the future during dry periods, more so within unincorporated Lake County within forested areas. Lake County is part of lightning capital of the US and could expect 4-12 lightning flashes /sq km per year..
Tornadoes	What category on the Enhanced Fujita Scale could impact the jurisdictions?	A tornado with the greatest intensity of EF5, with winds of greater than 200 MPH, although rare, could occur in Lake County. The maximum that has occurred has been EF3 in February, 2007.
Tropical Cycle	What category on the Saffir Simpson Scale could impact the jurisdictions?	It is not impossible for a Category 5 hurricane, with winds of 155 MPH, to impact Lake County, however, due to inland location the predominant number of storms would be Category 4 or less.
Wildfires	How big or how many acres could be expected to burn?	Due to the amount of forested areas within Lake County and historic activity, wildfires could reach the size of thousands of acres (the greatest has been approximately 4,000 acres in 2000).
Winter Storm Freeze	How cold could it get? What is the worst winter weather precipitation Lake County could get?	Temperatures in Lake County can be as low as single digits, but rarely below zero. Also, light freezing rain has been reported. Frozen precipitation in small amounts, although not commonplace, is possible within Lake County.

Vulnerability:

Per 44 CFR 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.

In the 2010 LMS Plan, flooding was ranked as the number one hazard, high winds ranked as the number two hazard, and wildfires were ranked third. At this time there has been no change to the ranking.

Assessing Vulnerabilities:

Repetitive Loss Properties:

The Flood Mitigation Assistance (FMA) Grant Program was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 to reduce or eliminate claims under the National Flood Insurance Program (NFIP). The FMA Grant program was change in FY 2013 by the Flood Insurance Reform Act of 2012 (Public Law 112-114). The primary objective of the Repetitive Loss Properties Strategy is to eliminate or reduce the damage to property and the disruption of life caused by repeated flooding of the same properties. A specific target group of repetitive loss properties is identified and serviced separately from other NFIP policies by the Special Direct Facility (SDF). The target group included every NFIP-insurance policy that since 1978 and regardless of an ownership change during that period has experienced:

- Insurance property with 2 flood claims where the repairs equaled or exceeded 25% of the market value of the structure at the time of the flood event.
- Insured property with flood history of 4 or more separate claims of $5K each with cumulative total exceeding $20,000 or at least 2 claim payments where the cumulative amount of 2 claims exceeds the market value of the structure.

Although the FMA Grant Program is federally funded, and administered through a partnership with the Florida Division of Emergency Management (FDEM), local and Native American Tribal governments, and the Federal Emergency Management Agency. Authority and responsibility for developing and maintaining a State Mitigation Plan, assisting local and Native America Tribal

governments in developing and maintaining Flood Mitigation Plans, reviewing FMA Grant sub-applications, recommending cost effective sub-applications to FEMA and providing pass-through grant funds to awarded FMA Grant projects from eligible sub-applicants resides with FDEM. They also are responsible for ensuring the projects funded are completed and all reporting requirements are met.

As of 2015 LMS plan update, there are four (4) repetitive loss properties in Lake County (Astor), and all are residential and are located in unincorporated Lake County. There are no documented repetitive loss properties in the municipalities participating in this plan. The Lake County Department of Public Works continues efforts to work with these property owner(s) to find possible solutions to the flooding problems. Total payments made for all repetitive flood loss properties in the past has been $218,802. Lake County and the 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, and the Pre-Disaster Mitigation 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. Since, 2010, the Repetitive Flood Claims Program and the Severe Repetitive Loss Program were eliminated.

There are also other programs offered, 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 US Army Corps of Engineers; US Department of Agriculture; US Department of Commerce; US Department of Homeland Security; and the US 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.

Land Use Trends and Potential Loss:

Land use especially within hazard-prone areas has an impact on vulnerability as some uses may be more prone to disaster related damages than others. Residential and industrial development are examples of this. Individual jurisdictions have the most significant and legal authority over land use policy and can make an analysis of potential land use projects to determine if a mitigation strategy is necessary. Local current land uses and potential for new development reports along with future land use and general development trends are indicative of how future development will impact the LMS for Lake County. Careful consideration of potential risk from various hazards can help guide thoughtful land use to minimize vulnerabilities in the future. When necessary to further local effort, modifications to plans, ordinances, codes and similar policies can be proposed as initiatives for consideration into the LMS.

Critical Facilities and Structures:

Lake County maintains an inventory of critical facilities, infrastructure and structures that are located within hazard area. This list includes but is not limited to emergency services facilities, medical facilities, government facilities, schools, emergency/evacuation shelters, fire and police stations, emergency operation center, facilities used by special needs populations, and any other facilities identified by Emergency Management. This list is updated annually.

The LMS Working Group has identified goals and objectives to guide the development of this plan. These goals and objectives provide focus for the activities of the LMS Working Group toward mitigation efforts that will meet the needs of the jurisdictions.

The goals selected by the LMS Working Group are related to the broad mitigation needs and capabilities of the communities involved, rather than addressing a specific hazard type or category. Therefore, these mitigation goals and objectives are multi-hazard and are the mitigation related capabilities that are important to Lake County. These will be present in each participating jurisdiction in the future as the goals are achieved.

Mitigation Actions:

Each goal is following by several objectives that provide more specific steps to be taken by the LMS Working Group and the jurisdictions to achieve the broad-based, long-range direction for planning. Objectives define the steps that are actionable for implementation by the LMS Working Group and associated community partners.

The objectives are intended to guide selection and implementation of mitigation projects that are included in the project list. The closer the goals and objectives are to reaching a more resilient, disaster community, completion of those projects will further improve the community and achieve the goals of the mitigation planning process.

Since the 2010 plan, Lake County has completed four projects and one was terminated. This list is included in Appendix I. 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 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 is one mitigation project currently underway as of the plan update that is 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.

Mitigation Goals and Objectives:

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

Objective 1.1: Data and information needed for defining hazards, risk areas, and vulnerabilities will be readily available.

Objective 1.2: Emergency services organizations will have the capability to detect emergency situations and promptly initiate emergency response operations.

Objective 1.3: The capability to effectively utilize available data and information related to mitigation planning and program development will be available.

Objective 1.4: The effectiveness of mitigation initiatives implemented in the community will be measured and documented.

Objective 1.5: There will be a program to derive mitigation "lessons learned" from each significant disaster event occurring in or near the community.

Objective 1.6: Up-to-date technical skills in mitigation planning and programming will be available for the community.

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

Objective 2.1: A business continuity and recovery program will be established and implemented in the community.

Objective 2.2: Local agencies and organizations will establish specific interagency agreements for the development and implementation of mitigation-related projects and programs.

Objective 2.3: Local elected governing bodies will promulgate the local mitigation plan and support community mitigation programming.

Objective 2.4: Outreach programs to gain participation in mitigation programs by business, industry, institutions, and community groups will be developed and implemented.

Objective 2.5: The community will be periodically updated regarding local efforts in mitigation planning and programming.

Objective 2.6: The community's public and private sector organizations will partner to promote hazard mitigation programming throughout the community.

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

Objective 3.1: Designated evacuation routes will be maintained and improved wherever possible to remain open before, during, and after disaster event.

Objective 3.2: Designated evacuation shelters will be retrofitted or relocated to ensure their operability during and after disaster events.

Objective 3.3: Local emergency services facilities will be retrofitted or relocated to withstand the structural impacts of disasters.

Objective 3.4: Response capabilities will be available to protect visitors, special needs individuals, and the homeless from a disaster's health and safety impacts.

Objective 3.5: Shelters or structures for vehicles and equipment needed for emergency services operation will be retrofitted or relocated to withstand disaster impacts.

Objective 3.6: Utility and communications systems supporting emergency services operations will be retrofitted or relocated to withstand the impacts of disasters.

Objective 3.7: Vehicle access routes to key health care facilities will be protected from blockage as a result of a disaster.

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

Objective 4.1: Buildings and facilities used for the routine operations of government will be retrofitted or relocated to withstand the impacts of disasters.

Objective 4.2: Community redevelopment plans will be prepared to guide decision-making and resource allocation by local government in the aftermath of a disaster.

Objective 4.3: Important local government records and documents will be protected from the impacts of disasters.

Objective 4.4: Plans and programs will be available to assist local government employees in retrofitting or relocating their homes to ensure their availability during a disaster.

Objective 4.5: Plans will be developed, and resources identified, to facilitate reestablishing local government operations after a disaster

Objective 4.6: Redundant equipment, facilities, and/or supplies will be obtained to facilitate reestablishing local government operations after a disaster

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

Objective 5.1: Adequate systems for notifying the public at risk and providing emergency instruction during a disaster will be available in all identified hazard areas.

Objective 5.2: Effective structural measures will be developed to protect residential areas from the physical impacts of disasters.

Objective 5.3: 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.

Objective 5.4: Public and private medical and healthcare facilities in the community will be retrofitted or relocated to withstand the impacts of disasters.

Objective 5.5: Residential structures will be removed or relocated from defined hazard areas.

Objective 5.6: Residential structures will be retrofitted to withstand the physical impacts of disasters.

Objective 5.7: Safety devices on transportation networks will not fail because of a disaster.

Objective 5.8: Structures, facilities, and systems serving visitors to the community will be prepared to meet their immediate health and safety needs.

Objective 5.9: There will be adequate resources, equipment, and supplies to meet victims' health and safety needs after a disaster.

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

Objective 6.1: All reconstruction or rehabilitation of local government facilities will incorporate techniques to minimize the physical or operational vulnerability to disasters.

Objective 6.2: Land use policies, plans, and regulations will discourage or prohibit inappropriate location of structures or infrastructure components in areas of higher risk.

Objective 6.3: Local governments will ensure that hazard mitigation needs and programs are given appropriate emphasis in resource allocation and decision-making.

Objective 6.4: Local governments will establish and enforce building and land development codes that are effective in addressing the hazards threatening the community.

Objective 6.5: Local governments will protect high hazard natural areas from new or continuing development.

Objective 6.6: Local jurisdictions will participate fully in the National Flood Insurance Program and the associated Community Rating System.

Objective 6.7: 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.

Objective 6.8: Reconstruction and rehabilitation of structures and utilities in the community will incorporate appropriate hazard mitigation techniques.

Objective 6.9: Regulations will be established and enforced to ensure that public and private property maintenance is consistent with minimizing vulnerabilities to disaster.

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

Objective 7.1: Economic incentive programs for the general public, businesses, and industry to implement structural and non-structural mitigation measures will be established.

Objective 7.2: Local government will support key employers in the community in the implementation of mitigation measures for their facilities and systems.

Objective 7.3: Programs for removal, relocation, or retrofitting of vulnerable structures and utilities in hazard areas will be established and implemented.

Objective 7.4: The vulnerability to disasters of schools, libraries, museums, and other institutions important to the daily lives of the community will be minimized.

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

Objective 8.1: Components of the infrastructure needed by the community's businesses and industries will be protected from the impacts of disaster.

Objective 8.2: Local government emergency response and disaster recovery plans will appropriately consider the needs of key employers in the community.

Objective 8.3: Local government will encourage community businesses and industries to make their facilities and operations disaster resistant.

Objective 8.4: Local government will establish programs, facilities, and resources to support business resumption activities by impacted local businesses and industry.

Objective 8.5: Local government will implement programs to address public perceptions of community condition and functioning in the aftermath of a disaster.

Objective 8.6: Local government will strive to diversify the employment base of the community.

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

Objective 9.1: Local governments will encourage hazard mitigation programming by private sector organizations owning or operating key community utilities.

Objective 9.2: Routine maintenance of the community's infrastructure will be done to minimize the potential for system failure because of or during a disaster.

Objective 9.3: Sources of energy normally used by the community will not be unwarrantedly vulnerable to the impacts of a disaster.

Objective 9.4: The telecommunications systems and facilities serving the community will not be unwarrantedly vulnerable to the impacts of a disaster.

Objective 9.5: Transportation facilities and systems serving the community will be constructed and/or retrofitted to minimize the potential for disruption during a disaster.

Objective 9.6: Water and sewer services in the community will not fail because of a disaster.

Goal 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.

Objective 10.1: All interested individuals will be encouraged to participate in hazard mitigation planning and training activities.

Objective 10.2: Education programs in risk communication and hazard mitigation will be established and implemented.

Objective 10.3: Managers of public facilities will be knowledgeable in hazard mitigation techniques and the components of the community's mitigation plan.

Objective 10.4: Technical training in mitigation planning and programming will be given to appropriate local government employees.

Objective 10.5: The owners and operators of businesses and industries in the community will be knowledgeable in appropriate hazard mitigation techniques.

Objective 10.6: The public living or working in defined hazard areas will be aware of that fact, understand their vulnerability, and know appropriate mitigation techniques.

Objective 10.7: The public will have facilitated access to information needed to understand their vulnerability to disasters and effective mitigation techniques.

Addressing Known Risks and Vulnerabilities:

Proposed mitigations projects, in addition to meeting the long-range intent of the goals and objectives, are used to address known problem areas in the community. These can include

hardening and retrofitting or existing critical facilities as well as addressing stormwater issue in known problem areas. These may not projects can be used to address problems that do not necessarily affect an entire neighborhood but can cause unsafe conditions or damage properties.

National Florida Insurance Program (NFIP) and Community Rating System (CRS):

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. Flood insurance policy information is listed on the next page.

The Lake County Emergency Management Division and the LMS 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.

The Community Rating System (CRS) is a voluntary program for NFIP-participating. The goals of the CRS are to reduce flood losses, facilitate accurate insurance rating, and to promote the awareness of flood insurance. The CRS has been developed to provide incentives in the way of premium discounts for communities to go beyond the minimum floodplain management requirements to develop extra measures to provide protection from flooding. At this update, only Lake County is participating in the CRS and has a rating of 7 as of May 1, 2014.

Flood Insurance in Lake County			
Community Name	**Policies In-force**	**Insurance In-force**	**Written Premium In-force**
Astatula	6	$917,500	$2,816
Clermont	230	$57,826,500	$100,103
Eustis	100	$58,530,400	$47,361
Fruitland Park	22	$5,084,200	$11,072
Groveland	106	$27,272,200	$51,448
Howey-in-the-Hills	14	$3,313,000	$4,547
Lady Lake	148	$33,037,800	$70,980
Lake County	2,669	$625,104,700	$1,244,111
Leesburg	281	$72,123,800	$160,814
Mascotte	14	$2,999,400	$7,336
Minneola	58	$13,169,100	$32,734
Montverde	23	$7,038,400	$13,663
Mount Dora	207	$58,774,600	$85,701
Tavares	139	$30,909,500	$62,833
Umatilla	11	$2,041,200	$3,987

Implementation:

Prioritization of Projects

Prior to the 2010 plan, a program called Mitigation 20/20 was used to rank Lake County's mitigation projects. In preparation for the 2010 update, it was decided to use a different method to rank future projects and the LMS Working Group agreed that it would be acceptable use the STAPLEE method to prioritize the mitigation projects. The STAPLEE model is still the accepted method for rating projects on the project list.

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

All projects up until the 2010 plan update have used the old rating criteria. All new projects submitted for consideration to the LMS Working Group since the 2010 update were scored using the 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.

A table outlining the STAPLEE method is on the next page.

Using the STAPLEE method to prioritize projects:		
Dimension	**Criteria**	**Description**
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? 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. What does the community think about the project? Do they think it is a fair use of resources?
	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 Local Authority	Does the municipality have the legal authority to undertake the project?
	Potential Legal Action	Will the project potentially cause legal action?
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 and Water	What are the long term effects 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?

Projects will be submitted to the LMS Working Group for consideration and must include a cost-benefit analysis and a scoring form. Projects can be submitted to the group at any time and action will be taken at the next LMS Working Group meeting. At any time, the LMS Working Group may choose to review the project list and update the prioritization ranking. Environmental factors may dictate that some projects need to be considered due to current conditions that require a project to be moved up on the list for available funding. Other factors may lead to this review include declared disasters, funding availability, new or revised policy development, plan revision cycles, legal or fiscal restraints, and life safety priorities.

Mitigation Project Priority List:

The project priority list is located in Appendix I of this plan and also includes completed and deleted project lists.

Responsible for Mitigation Actions:

The implementation and completion of approved mitigation projects will be administered by the jurisdiction, agency, or organization that proposed the project. On an annual basis, the Lake County Emergency Management Division, in coordination with the LMS Working Group, will check the status of the mitigation initiatives to ensure that efforts have been made to complete any projects on the LMS project list. This approach is utilized as only the jurisdiction, agency, or organization that proposed the project has the authority or responsibility for implementation. During the plan implementation process, the LMS Working Group monitors the status of projects, assigns priorities, and will take other action for support and coordination.

Cost-Benefit Analysis:

When a project is submitted to the LMS Working Group, it must be accompanied by a cost-benefit analysis (CBA) for consideration. Projects not including a CBA will be returned to the proposer for completion of the appropriate information prior to resubmission. A copy of a form that has been accepted for documenting the CBA has been included in the appendix to this plan behind the project lists. This form can be utilized by the proposer to document what the costs are associated with a proposed project and estimate the value that will be received as a benefit resulting from completion of the project. The cost benefit analysis results will be factored into the prioritization process to determine the project ranking.

Actions Completed:

Any project that has been funded and completed will be added to the Completed Project List regardless of the source of funding. Lake County Emergency Management maintains all project lists for Lake County. The project list can change as funding, requirements, etc. change and/or are updated. For deleted projects, an explanation is included to document the action.

Plan Maintenance:

LMS Monitoring and Evaluation:

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. The LMS Plan is housed in the Lake County Emergency Management Division. 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 tracks the projects as they are completed in the county to monitor progress. The Lake County LMS Working Group will make attempts to complete projects within five years (before the next plan update) as funding becomes available.

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. Meetings can and will be scheduled following after times of natural disaster events and other times as deemed appropriate by the LMS Working Group Chair. Criteria used to evaluate the LMS Document and activities should include and are not limited the following situations:

- Change in requirements as any governmental level
- Changes in development trends and land use
- Completion of existing mitigation projects and introduction of new goals
- Changes in policy, procedure, or code
- Changes in building codes and practices
- Review of legislative actions that could affect funding of mitigation efforts
- Changes in Flood Insurance Rate Maps, National Flood Insurance Program, etc.

These meetings will be organized by the Lake County Emergency Management Division. This meeting will result in the preparation of the Annual LMS Progress Report that will be submitted to the state and satisfy the annual CRS program requirement as well. The Lake County Emergency Management Division will maintain an up-to-date list of all active working group members will be utilized as a distribution list for notification.

Since the last revision of the LMS there has not been any significant changes to development in Lake County that would impact the hazards identified within this plan. As of this writing, there are

no anticipated development changes or trends that would impact these hazards in the future. This of course is subject to change in the future and will be a topic to be considered at future LMS meetings.

At each LMS meeting, 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.

The LMS Working Group will use the following criteria, among others, as a starting point for monitoring 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

LMS Updates:

An important key of the planning process is to begin thinking about the steps to update the plan prior to the next review date, which is in 2020. Revisions to the plan should be well underway in 2019, with Lake County providing drafts to state staff for preliminary comments ahead of time. This will ensure that the plan remains in active status and does not lapse for any period of time between plan review periods. Based on experience, it is easy to underestimate the time that it takes to complete the plan update.

In addition to the ongoing maintenance of the plan and LMS activities, the staff of the Emergency Management Division assigned to handle mitigation activities will be responsible for the Five Year Update. The expectation is that continual review and refinements of the LMS Plan between plan updates will allow future updates to go smoothly. The update of the plan will

take place by reading the document, identifying items to be fixed and utilizing a computer to make edits to the LMS document. This will occur as changes need to be made, instead of doing all of the changes at once for the five-year update. The Emergency Management Division will continue to update the plan and be the responsible organization for this activity. This will be accomplished through continual review of the plan by LMS Working Group and support staff, as well as input from the general public.

Notice of upcoming meetings will be posted for at least ten days prior to the date of the meeting and available by the following means:

- Lake County LMS Website notice
- Email distribution list maintained by Lake County Emergency Management
- Notice published in the Orlando Sentinel in the Lake County Section

Updates will be identified through the input of anyone with sound ideas to improve the plan from Lake County staff, LMS Working Group members and from the general public. Staff from the Emergency Management Division assigned LMS responsibilities will update the electronic version of LMS document. The LMS Working Group will review the plan proposed to be submitted for the next update, guide changes as necessary and have final approval of the updated plan to be forwarded to state and federal counterparts for review and ultimate approval.

Implementation through Existing Plans and Programs:

While some jurisdictions have taken steps towards integrating mitigation actions into their plans, some have not explicitly addressed these matters within 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 can ensure that the common elements are understood and documented within the various plans within Lake County. Through 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.

Some of the county-wide plans identified include the Lake County Comprehensive Use Plan (2012), the Community Wildfire Protection Plan (2012), Lake County Code of Ordinances

Chapter VI – Resource Protection Standards, 6.01.02: Wetlands Impact and Mitigation, and the Lake-Sumter Metropolitan Planning Organization (MPO) Transportation Plan. Below is a listing of other plans, etc. that exist in the municipalities that further the goals and objectives of the LMS.

Astatula	• Policy 1-1.1.3: Firewise (Wildfire) • Policy 1-1.2.1: Wetlands development (Flooding) • Policies 1-1.2.2/5-1.8.2: Floodplain (Flooding) • Policies 1-1.2.4/5-1.2.13: Land development (Sinkholes) • Policies 401.11.1/4-2.1.1/4-2.3.2: Wells/City Connection (Sinkholes/Drought) • Policy 5-1.1.4: Construction (Erosion)
Clermont	• Policies 2-1/2-2: Land Use Density (Flooding) • Policies 2-16/3-5: Land Use Wetlands/Floodplain (Flooding) • Policy 2-2: Public Facilities Septic (Flooding)
Eustis	• Policies 1.4.1/2.1.1/2.1.2: Conservation (Flooding) • Policy 1.2.2: Land Use (Flooding)
Fruitland Park	• Policy 1-2.2: Floodplain (Flooding) • Policy 1-2.4: Setbacks (Sinkholes) • Policies 1-1.2/3-1.4: Open Space
Groveland	• Obj 7.8 Conservation (Flooding/Sinkholes) • Obj 7.2/7.10/7.13: Conservation Development (Flooding)
Howey in the Hills	• Policy 1-2.2.2: Floodplain (Flooding) • Policy 1-1.2.4: Sinkhole filling (Sinkholes) • Policies 4-2.3.1/5-1.7.1: Storm Water/Erosion (Flooding/Erosion) • Policies 5-1.8.1/8-1.2.1: Floodplains Development (Flooding)
Lady Lake	• FLU 1-9.3/2-4.4/3-2.2: Density/Development (Flooding/Erosion) • Goal Pub 6/Policy CIP 102.2/Policy Con 1-11.1: Floodplain (Flooding)
Leesburg	• Policies 1.1.1/1.3.2: Drainage/Elevation (Flooding) • Policy 1.3.3: Floodplain Conservation (Flooding) • Polices 1.2.1.9/1.3.3/Obj 1.4: Conservation (Flooding) • Policies 1.1.6/1.2.19/1.6.4/Obj. 1.7: Conservation (Erosion) • Policy 1.1.5: Land Use Conservation (Flooding/Drought)
Mascotte	• Policies 2.1.12/3.10.7/3.11.9/3.11.13/3.11.14: Land Use (Flooding) • Policies 1.2.9/Obj 1.6: Drainage (Flooding) • Policy 1.2.9: Chemicals (Flooding)
Minneola	• Section 98-12: Required easements and dedications. Drainage and Wetlands (Flooding)
Montverde	• Policies 101.24/5-1.2.13: Development (Sinkholes) • Policy 4-1.4.4: Septic (Flooding) • Policy 5-1.1.13: Development (Erosion)
Mount Dora	• Policies 2f/5f/7e: Floodplain Conservation (Flooding) • Policies 5e/2.2m: Land Use/Water (Sinkholes)
Tavares	• Policies 1-1.1.3/1-1.2.15/1-1.9.1: Floodplain Development (Flooding) • Policies 4-1.2.5/4-4.1./5-1.8.1: Floodplain/Sinkholes (Flooding) • Policies 5-1.2.10/5-1.8.6: Open Space (Sinkholes) • Policy 5-1.2.8: Shoreline (Erosion)

Umatilla	• Policies 5-1.83/5-1.81: Floodplain Preservation (Flooding/Sinkholes) • Policy 1-1.2.2: Development (Flooding)

The Villages although listed as a municipality is actually a special taxing district and does not have any plans, ordinances, etc. of their own as they follow the Lake County Building Codes and related policies, Fire Safety Codes, and Florida Building Codes as they may apply.

The municipalities utilize the approved LMS in connection with their own plans and procedures to further mitigation efforts working closely with the county to continue making all of Lake County resilient to the hazards identified.

While the majority of the planning efforts are aimed at flooding mitigation it is recognized that all natural hazards should be considered when revising plans and policies especially concerning land use, floodplain management, stormwater, development, etc. The LMS is adopted by all municipalities in Lake County and individual municipal and county-wide plans take mitigation efforts into consideration when making revisions.

Through upcoming meetings that will be taking place with jurisdictions to adopt the Lake County LMS, further integration of the LMS with their respective planning mechanisms will be discussed and encouraged to promote further continuity. Staff from the various organizations responsible for these individual plans will continue communicating with each other to further the process of better integrating these plans and improving overall dialogue about mitigation.

Authorities and References:

Code of Federal Regulations Title 44 201.6. *Local Mitigation Plans.* http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=44:1.0.1.4.53

FEMA (2011, Oct 1). *Local Mitigation Plan Review Guidance,* www.fema.gov: http://www.fema.gov/media-library-data/20130726-1809-25045-7498/plan_review_guide_final_9_30_11.pdf

Florida Administrative Code 27P-22. Hazard *Mitigation Grant Program, https://www.flrules.org/gateway/ChapterHome.asp?Chapter=27P-22*

Florida Statutes. *Chapter 252 Emergency Management. http://www.leg.state.fl.us/STATUTES/index.cfm?App_mode=Display_Index&Title_Request=XVII#TitleXVII*

FEMA. *The Stafford Act.* http://www.fema.gov/media-library-data/1383153669955-21f970b19e8eaa67087b7da9f4af706e/stafford_act_booklet_042213_508e.pdf

Appendix I: Project Lists

Municipalities	Ranking	Date	ID	Initiative Name	Estimate $	Organization	Hazards	Potential Funding Sources	Status	Desired Completion Date
Astatula										
	88	01-Aug-10	LA-0107	Fire Hydrant Repairs / Upgrade	$250,000.00	Town of Astatula	Wildfire	Regular Budget or Grant(s)	Open	<2 Years
Clermont										
	89	29-Jul-09	LA-0099	Center Lake Flood Control Project	$3,500,000.00	City of Clermont	Flood	Regular Budget or Grant(s)	Open	>2 Years
	18	31-Jan-05	LA-0054	Retrofit Storm Water System in Bloxam	$1,600,000.00	City of Clermont	Flood	Regular Budget or Grant(s)	Completed	>2 Years
	17	20-Aug-04	LA-0001	Emerald Lake MH Park Purchase/Relocation	$15,000,000.00	City of Clermont	Flood	Regular Budget or Grant(s)	Open	>2 Years
Eustis										
	33	17-Dec-04	LA-0051	Storm Water System Retrofit-Ardice Ave Pond & Land	$140,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Open	<2 Years
	33	17-Dec-04	LA-0056	Storm Water System Retrofit-Cardinal St. Pond	$50,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	<2 Years
	33	17-Dec-04	LA-0058	Storm Water System Retrofit-Center St. Storm Sewer at Atwater Ave.	$20,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Open	<2 Years
	33	17-Dec-04	LA-0059	Storm Water System Retrofit-Edgewater Dr. Stormwater Pond	$50,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Open	<2 Years
	33	17-Dec-04	LA-0061	Storm Water System Retrofit-Eustis St. and Gottsche Ave. Storm Sewer and Pond	$200,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	<2 Years
	33	17-Dec-04	LA-0062	Frosty Way Storm Culvert and Pond	$80,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	<2 Years
	33	17-Dec-04	LA-0063	Getford Ave. Storm Sewer, Swale, and Pond	$190,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	<2 Years
	33	17-Dec-04	LA-0064	Storm Water System Retrofit-Getford Ave. Drainage Swales	$30,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	<2 Years
	33	17-Dec-04	LA-0068	Storm Water System Retrofit-Lakewood Ave. at Edgewater	$90,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Open	<2 Years
	33	17-Dec-04	LA-0069	Storm Water System Retrofit-Northshore Dr. Stormwater Pond	$90,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	<2 Years
	33	17-Dec-04	LA-0070	Storm Water System Retrofit-Northshore Dr. Storm Sewer and Pond	$50,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	<2 Years
	33	17-Dec-04	LA-0071	Storm Water System Retrofit-Oaklynn Ln. Storm Sewer	$40,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Open	<2 Years
	33	17-Dec-04	LA-0073	Storm Water System Retrofit-Storm Sewer Across Bay St. from Eustis St.	$125,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	<2 Years
	33	17-Dec-04	LA-0075	Storm Water System Retrofit-Wall St. and Harlem Ave. Pond	$100,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	<2 Years
	33	17-Dec-04	LA-0076	Storm Water System Retrofit-Westmoreland Ave. Swale	$25,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Open	<2 Years
	33	17-Dec-04	LA-0077	Storm Water System Retrofit-Woodwater Ave. Swale and Sewer	$40,000.00	City of Eustis	Flood	Regular Budget or Grant(s)	Open	<2 Years
	32	17-Dec-04	LA-0050	Harden Addition (Safe Room) to PW Bldg	$156,000.00	City of Eustis	High Wind	Regular Budget or Grant(s)	Open	<2 Years
	30	17-Dec-04	LA-0049	Harden Rm at Water Tower for Public Safety Radio System	$23,000.00	City of Eustis	High Wind	Regular Budget or Grant(s)	Terminated	<2 Years
	30	17-Dec-04	LA-0072	Storm Water System Retrofit-Park Ave. and Northshore Dr. Pond	$455,200.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	<2 Years
	29	17-Dec-04	LA-0048	Alternative Citywide Wireless Comm System	$23,431.00	City of Eustis	Multi***	Regular Budget or Grant(s)	Terminated	>2 Years
	28	05-Nov-04	LA-0002	Critical Facility Storm Evaluation	$34,500.00	City of Eustis	High Wind	Regular Budget or Grant(s)	Open	>2 Years
	28	17-Dec-04	LA-0060	Storm Water System Retrofit-Eustis St. and Gottsche Ave. Pond	$782,095.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	>2 Years
	27	17-Dec-04	LA-0057	Storm Water System Retrofit-Center St. & Howard Ln. Pond & Trench	$1,120,855.00	City of Eustis	Flood	Regular Budget or Grant(s)	Open	>2 Years
	27	17-Dec-04	LA-0065	Storm Water System Retrofit-Grove St. and Bates Ave. Pond	$1,191,475.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	>2 Years
	27	17-Dec-04	LA-0066	Storm Water System Retrofit-Key Ave. and Donnelly St. Pond	$1,161,345.00	City of Eustis	Flood	Regular Budget or Grant(s)	Open	>2 Years
	27	17-Dec-04	LA-0067	Storm Water System Retrofit-Lakeshore Dr. and Morin St. Pond	$1,109,722.00	City of Eustis	Flood	Regular Budget or Grant(s)	Completed	>2 Years
	27	17-Dec-04	LA-0074	Storm Water System Retrofit-Sub-Basin Line	$1,460,786.00	City of Eustis	Flood	Regular Budget or Grant(s)	Open	>2 Years
	22	17-Dec-04	LA-0047	Fire Department Substation	$253,000.00	City of Eustis	Multi***	Regular Budget or Grant(s)	Open	>2 Years
Fruitland Park										
	25	05-Nov-04	LA-0003	Emergency Back up Power Supply at Government Buildings	$100,000.00	City of Fruitland Park	High Wind	Regular Budget or Grant(s)	Open	>2 Years
Groveland										
	30	04-Nov-04	LA-0005	Purchase of Two Portable Trash Pumps	$40,000.00	City of Groveland	Flood	Regular Budget or Grant(s)	Open	<2 Years
	30	19-Jan-05	LA-0040	Harden City Hall	$50,000.00	City of Groveland	High Wind	Regular Budget or Grant(s)	Open	<2 Years
	29	04-Nov-04	LA-0004	Stand-by Generator at City Hall	$30,000.00	City of Groveland	High Wind	Regular Budget or Grant(s)	Open	>2 Years
	29	04-Nov-04	LA-0009	Stationary Power Generators	$243,000.00	City of Groveland	Flood	Regular Budget or Grant(s)	Open	>2 Years
	28	29-Apr-04	LA-0010	Portable Power Generation for Lift Stations	$40,000.00	City of Groveland	Flood	Regular Budget or Grant(s)	Open	>2 Years
	27	29-Apr-04	LA-0011	Emergency Power Generation for Police Station	$50,000.00	City of Groveland	Multi***	Regular Budget or Grant(s)	Open	>2 Years
	26	19-Jan-05	LA-0042	Harden, Flood Control Public Safety Complex	$40,000.00	City of Groveland	High Wind	Regular Budget or Grant(s)	Open	>2 Years
	24	04-Nov-04	LA-0006	Canal Cleaning and Maintenance	$100,000.00	City of Groveland	Flood	Regular Budget or Grant(s)	Open	>2 Years
	21	04-Nov-04	LA-0007	Installation of Sewer West Side	$1,000,000.00	City of Groveland	Flood	Regular Budget or Grant(s)	Open	>2 Years
	19	04-Nov-04	LA-0008	Retrofit Storm Water System West Side	$2,000,000.00	City of Groveland	Flood	Regular Budget or Grant(s)	Open	>2 Years

Howey-in-the-Hills

101	29-Jul-09	LA-0100	Central Avenue Property Acquisition	$100,000.00	Town of Howey-in-the-Hills	Flood	Regular Budget or Grant(s)	Open	<2 Years
98	29-Jul-09	LA-0089	Police Department Hurricane Hardening /Telephone System Upgrade	$55,000.00	Town of Howey-in-the-Hills	High Wind	Regular Budget or Grant(s)	Open	<2 Years
98	29-Jul-09	LA-0096	Town Hall Hurricane Hardening / Uninterruptible Power Supply	$60,000.00	Town of Howey-in-the-Hills	High Wind	Regular Budget or Grant(s)	Open	<2 Years
96	29-Jul-09	LA-0088	Lightning Rod System and Surge Protectors for all Howey Government Buildings	$100,000.00	Town of Howey-in-the-Hills	Lightning	Regular Budget or Grant(s)	Open	<2 Years
96	29-Jul-09	LA-0101	Equipment to Mitigate Hazards (such as Erosion, Flooding and Fire Controls)	$75,000.00	Town of Howey-in-the-Hills	Erosion	Regular Budget or Grant(s)	Open	<2 Years
95	29-Jul-09	LA-0090	Public Works Uninterruptible Power Supply for SCADA Water System	$15,000.00	Town of Howey-in-the-Hills	Flood	Regular Budget or Grant(s)	Open	<2 Years
92	29-Jul-09	LA-0091	Secondary Fuel Supply	$28,000.00	Town of Howey-in-the-Hills	Multi***	Regular Budget or Grant(s)	Open	<2 Years
91	29-Jul-09	LA-0098	Town Storage Hurricane Hardening	$12,000.00	Town of Howey-in-the-Hills	High Wind	Regular Budget or Grant(s)	Open	<2 Years
91	29-Jul-09	LA-0106	Ground Storage Tank / High Service Pumps	$480,000.00	Town of Howey-in-the-Hills	Drought	Regular Budget or Grant(s)	Open	<2 Years
90	29-Jul-09	LA-0097	Town Library Hurricane Hardening/ Uninterruptable Power Supply	$49,000.00	Town of Howey-in-the-Hills	High Wind	Regular Budget or Grant(s)	Open	<2 Years
28	05-Nov-04	LA-0012	Generator for Well 2 and SCADA System	$200,000.00	Town of Howey-in-the-Hills	Flood	Regular Budget or Grant(s)	Completed	>2 Years
26	17-Aug-04	LA-0013	Warning Alert and GPS Equipment/ Generator	$139,962.00	Town of Howey-in-the-Hills	Multi***	Regular Budget or Grant(s)	Terminated	>2 Years

Lady Lake

74	01-Aug-10	LA-0113	Drainage Project - West Lady Lake Boulevard	$750,000.00	Town of Lady Lake	Flood	Regular Budget or Grant(s)	Open	>2 Years
27	20-Aug-04	LA-0014	Well Site Security System	$35,000.00	Town of Lady Lake	Drought	Regular Budget or Grant(s)	Completed	>2 Years

Lake County (Unincorporated)

97	24-Jul-09	LA-0103	Emergency Shelter-First Baptist Church of Astor, Family Life Center	$800,000.00	Astor Area Chamber of Commerce	High Wind	Regular Budget or Grant(s)	Open	<2 Years
95	24-Jun-09	LA-0092	Stormwater Management- James Street, Lisa Street, and Trespass Trail	$649,000.00	Astor Area Chamber of Commerce	Flood	Regular Budget or Grant(s)	Open	<2 Years
94	24-Jun-09	LA-0093	Stormwater Management-Bass and Indigo Roads	$1,106,000.00	Astor Area Chamber of Commerce	Flood	Regular Budget or Grant(s)	Open	<2 Years
93	24-Jun-09	LA-0094	Stormwater Management-Ward Street	$4,010,000.00	Astor Area Chamber of Commerce	Flood	Regular Budget or Grant(s)	Open	<2 Years
85	07-Aug-09	LA-0095	Tornado Shelter Program for Mobile Home Residents	$150,000.00	Lake County Emergency Management	High Wind	Regular Budget or Grant(s)	Open	>2 Years
35	23-Oct-04	LA-0016	Emergency Notification System	$100,000.00	Lake County Emergency Management	Multi***	Regular Budget or Grant(s)	Completed	<2 Years
33	24-Oct-04	LA-0015	Weather Monitoring System	$20,400.00	Lake County Emergency Management	High Wind	Regular Budget or Grant(s)	Completed	<2 Years
33	22-Oct-04	LA-0020	Generators for Fire Stations	$120,000.00	Lake County Emergency Management	High Wind	Regular Budget or Grant(s)	Open	<2 Years
32	06-Nov-04	LA-0035	Storm Shielding and Emergency Power Backup for Fire Stations	$460,000.00	Lake County Fire Rescue	High Wind	Regular Budget or Grant(s)	Completed	<2 Years
31	25-Aug-04	LA-0023	Emergency Shelter Guide	$5,000.00	Lake County Emergency Management	Multi***	Regular Budget or Grant(s)	Terminated	<2 Years
31	20-Jan-05	LA-0039	Harden Facility for Special Needs Shelter	$250,000.00	LifeStream Behavioral Center	High Wind	Regular Budget or Grant(s)	Open	<2 Years
30	23-Oct-04	LA-0017	County Admin / EOC Facility	$1,200,000.00	Lake County Emergency Management	Multi***	Regular Budget or Grant(s)	Terminated	<2 Years
29	24-Oct-04	LA-0024	Health Department Facility Development	$8,000,000.00	Lake County Health Department	High Wind	Regular Budget or Grant(s)	Completed	>2 Years
26	22-Oct-04	LA-0021	Generators for Emergency Shelters	$45,000.00	Lake County Emergency Management	Multi***	Regular Budget or Grant(s)	Open	>2 Years
26	20-Jan-05	LA-0045	Special Needs Shelter/ Harden Facility	$185,000.00	Sunrise ARC Inc	High Wind	Regular Budget or Grant(s)	Open	>2 Years
22	22-Oct-04	LA-0018	Harden Lake County EOC	$200,000.00	Lake County Facilities Maintenance	High Wind	Regular Budget or Grant(s)	Terminated	>2 Years
21	06-Nov-04	LA-0031	Emergency Power Generator at Lake Technical Institute, Eustis	$35,000.00	Lake Technical Institute	High Wind	Regular Budget or Grant(s)	Open	>2 Years
21	06-Nov-04	LA-0034	Astor Topography Mapping	$250,000.00	Lake County Public Works	Flood	Regular Budget or Grant(s)	Completed	>2 Years
20	06-Nov-04	LA-0033	Emergency Power Generator at Lake Technical Institute, Tavares	$25,000.00	Lake Technical Institute	High Wind	Regular Budget or Grant(s)	Open	>2 Years
17	06-Nov-04	LA-0032	Lake Claire Home Flooding	$250,000.00	Lake County Public Works	Flood	Regular Budget or Grant(s)	Completed	>2 Years
17	28-Jan-05	LA-0052	Harden Four Schools for Hurricane Shelters	$600,000.00	Lake County School Board	High Wind	Regular Budget or Grant(s)	Open	>2 Years
17	06-Apr-06	LA-0079	Dead River Estate Land Purchase	$1,780,000.00	Lake County Growth Management	Flood	Regular Budget or Grant(s)	Completed	>2 Years
17	06-Apr-06	LA-0080	Ricketson Property Purchase	$3,030,000.00	Lake County Growth Management	Flood	Regular Budget or Grant(s)	Open	>2 Years
17	06-Apr-06	LA-0081	Wekiva River Property Purchase	$2,550,000.00	Lake County Growth Management	Flood	Regular Budget or Grant(s)	Open	>2 Years
17	24-Apr-06	LA-0082	Northeast Community Park Purchase	$985,000.00	Lake County Growth Management	Flood	Regular Budget or Grant(s)	Completed	>2 Years

Lake County (Unincorporated)/All Municipalities

99	30-Jul-09	LA-0102	Develop a Community Wildfire Protection Plan (CWPP) for Lake County	$1.00	Division of Forestry	Wildfire	Regular Budget or Grant(s)	Completed	< 1 Year
99	01-Aug-10	LA-0115	Annual Fuel Reduction and Fire Line Project(s)	$12,000.00	Division of Forestry	Wildfire	Regular Budget or Grant(s)	Open	>2 Years
82	01-Aug-10	LA-0109	Designated Emergency Special Needs Shelter	$500,000.00	Lake County Emergency Management	Multi***	Regular Budget or Grant(s)	Terminated	>2 Years
30	20-Dec-07	LA-0083	800 MHz Radio System Hardening	$48,003.00	Lake County Emergency Management	Multi***	Regular Budget or Grant(s)	Completed	<2 Years
N/A	05-Nov-15	LA-0117	Countywide All-Hazards Public Outreach	$0.00	Lake County Emergency Management	Multi***	N/A	Open	Ongoing

Leesburg

29	17-Mar-05	LA-0055	Harden PW Admin for Field Operations Center	$185,000.00	City of Leesburg	High Wind	Regular Budget or Grant(s)	Open	>2 Years
28	19-Jan-05	LA-0041	Harden Community Center	$165,000.00	City of Leesburg	High Wind	Regular Budget or Grant(s)	Completed	>2 Years
25	20-Jan-05	LA-0043	Harden City Hall	$75,000.00	City of Leesburg	High Wind	Regular Budget or Grant(s)	Open	>2 Years
23	11-Aug-04	LA-0025	SCADA Systems for Lift Stations	$900,000.00	City of Leesburg	Flood	Regular Budget or Grant(s)	Open	>2 Years
22	20-Jan-05	LA-0044	Harden HQ - Fire Station #1	$275,000.00	City of Leesburg	High Wind	Regular Budget or Grant(s)	Open	>2 Years
22	26-Jan-05	LA-0046	Harden HQ - Fire Station #2	$275,000.00	City of Leesburg	High Wind	Regular Budget or Grant(s)	Open	>2 Years
17	06-Nov-04	LA-0036	Lift Station Generator Systems	$280,000.00	City of Leesburg	Flood	Regular Budget or Grant(s)	Open	>2 Years
17	06-Nov-04	LA-0037	Portable Generator Special Needs Shelter	$50,000.00	City of Leesburg	Multi***	Regular Budget or Grant(s)	Open	>2 Years
17	06-Nov-04	LA-0038	Reverse "911" System	$50,000.00	City of Leesburg	Multi***	Regular Budget or Grant(s)	Terminated	>2 Years

Mascotte

71	13-Dec-10	LA-0116	Tuscanooga-50 Stormwater Reservoir	$1,640,000.00	City of Mascotte	Flood	Regular Budget or Grant(s)	Open	>2 Years
24	30-Jul-04	LA-0026	Public Information Program	$6,000.00	City of Mascotte	Multi***	Regular Budget or Grant(s)	Open	>2 Years

Minneola

82	01-Aug-10	LA-0111	Harden Minneola City Hall	$250,000.00	City of Minneola	High Wind	Regular Budget or Grant(s)	Open	>2 Years
80	01-Aug-10	LA-0110	Harden Minneola Fire Station	$250,000.00	City of Minneola	High Wind	Regular Budget or Grant(s)	Open	>2 Years
80	01-Aug-10	LA-0112	Harden Minneola Water Treatment Facility	$500,000.00	City of Minneola	High Wind	Regular Budget or Grant(s)	Open	>2 Years
21	08-Sep-04	LA-0027	Retrofit Storm Water System	$3,580,000.00	City of Minneola	Flood	Regular Budget or Grant(s)	Open	>2 Years

Montverde

28	26-Aug-04	LA-0028	"911" System Enhancement	$500.00	Town of Montverde	Multi***	Regular Budget or Grant(s)	Open	>2 Years
17	28-Jan-05	LA-0053	Expand Fire Dept Station	$100,000.00	Town of Montverde	Multi***	Regular Budget or Grant(s)	Open	>2 Years

Mount Dora

72	01-Aug-10	LA-0114	Third Avenue & McDonald Street Stormwater Project	$500,000.00	City of Mount Dora	Flood	Regular Budget or Grant(s)	Open	>2 Years
30	07-Apr-05	LA-0078	Hardening of the Public Safety Building	$250,000.00	City of Mount Dora	High Wind	Regular Budget or Grant(s)	Completed	<2 Years
24	16-Aug-04	LA-0029	Fire Department Substation	$625,000.00	City of Mount Dora	Multi***	Regular Budget or Grant(s)	Completed	>2 Years

Tavares

80	01-Aug-10	LA-0108	Lift Station Continuity Project	$513,500.00	City of Tavares	Flood	Regular Budget or Grant(s)	Open	>2 Years

Umatilla

22	17-Aug-04	LA-0030	El Nino Stormwater Project	$1,400,000.00	City of Umatilla	Flood	Regular Budget or Grant(s)	Completed	>2 Years
19	06-Apr-09	LA-0086	Cadwell Park Drainage Improvements	$36,370.00	City of Umatilla	Flood	Regular Budget or Grant(s)	Completed	>2 Years
19	15-Jan-10	LA-0087	City Hall / Community Building Hardening Project, Phase 1	$367,400.00	City of Umatilla	High Wind	Regular Budget or Grant(s)	Completed	>2 Years
18	06-Apr-09	LA-0084	Alleyway Project	$212,125.00	City of Umatilla	Flood	Regular Budget or Grant(s)	Completed	>2 Years
16	06-Apr-09	LA-0085	Orange Avenue Stormwater Improvements	$782,125.00	City of Umatilla	Flood	Regular Budget or Grant(s)	Open	>2 Years

Villages CDD

91	26-Jul-09	LA-0105	Fire Station No. 43 Hardening and Uninterruptable Power Supply	$73,143.00	The Villages Public Safety Department	High Wind	Regular Budget or Grant(s)	Open	<2 Years
89	26-Jul-09	LA-0104	Fire Station No. 43 Hardening	$18,356.00	The Villages Public Safety Department	High Wind	Regular Budget or Grant(s)	Open	>2 Years

Lake County LMS
Cost Benefit Analysis Summary

Request Information:			
Priority (High/Med/Low):		Submitter's Name:	
Project Name:		Responsible Agency:	
		Dates:	
Hazard Mitigated:		LMS Goal:	
Funding Source:		Timeline:	
Project Description:			

Benefits and Impacts:

Feasibility:

Alternatives:

Cost and Benefit Summary:				
Project Costs:	Implementation Cost:	$		All values in this section are rounded to 2 significant digits
	Implementation Cost:	$		
	Total Implementation Cost:	$		
	Ongoing Cost:	$		
	Maintenance/Materials:	$		
	Total Ongoing Cost:	$		
			$	Total Cost:
Project Benefit:	Estimated Benefit			
	Market Benefit:			
			$	Total Benefit:
		Net (Cost) – Benefit:	$	
		Benefit Cost Ratio:		

Appendix II: LMS Working Group By-Laws and Membership

ARTICLE I. PURPOSES OF THE WORKING GROUP

The purpose of the Lake County Local Mitigation Strategy (LMS) 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, technological, and societal 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 Lake County LMS 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 Lake County LMS Working Group shall consist of the Working Group and other subcommittees which may from time to time be created as needed by the Lake County Working Group. The Working Group shall have a Chair, and a Vice-Chair. Any member is eligible for election to one of these positions. The Lake County Emergency Management Division will perform administrative functions for the Working Group as required by State of Florida Emergency Management Scope of Work.

A. The Lake County LMS Working Group

The LMS Chair will preside at each meeting of the Working Group, as well as establish temporary subcommittees and assign personnel to them. The Vice-Chair will fulfill the duties and responsibilities of the chair in their absence.

The Lake County LMS Working Group will consist of the designated representatives from the following:

- One representative or designee from the government of Lake County and;
- One representative or designee of each participating incorporated municipality and;

- Representatives from organizations and associations representing key business industry, and community interest groups of Lake County and;
- Representatives from other governmental entities and;
- Representatives of non-profit organizations and/or faith based institutions and;

Members of the Lake County LMS Working Group will be coordinated by the Chair or Vice-Chair to serve as the official representative and spokesperson for the jurisdiction or organization regarding the activities and decisions of the Lake County LMS Working Group. Each jurisdiction or organization shall also appoint an alternate to their primary representative. The alternate shall have full voting rights in the absence of the primary representative. Each municipality and Lake County will hold one vote in taking actions on behalf of their entities as long as they remain a member in good standing. To maintain good standing, members of the Lake County LMS Working Group must not have more than two (2) consecutive absences at scheduled meetings. At this time, their vote will be withheld from the representative until they attend two (2) consecutive meetings. Their voting rights will be reinstated at the third (3) consecutive meeting. Mitigating or extenuating circumstances will be addressed by the Chair or Vice-Chair as appropriate on behalf of the Lake County LMS Working Group. Two consecutive absences can also occur in failure to vote by electronic (email or web-hosted service) voting procedures that may be utilized from time to time in place of formal meetings.

B. Committees

The Lake County LMS Working Group shall establish subcommittees at any time for any special purposes. The membership of the committees shall be appointed by the Chair or Vice-Chair of the Lake County LMS Working Group, who shall also designate the subcommittee Chair. Membership shall be unlimited and is open to all interested jurisdictions, organizations and individuals.

C. Program Staff

The Lake County Emergency Management Division, a division within the Public Safety Department, will serve as the program staff for the Lake County Working Group, and assist in the coordination and support of the Lake County LMS Working Group activities.

ARTICLE IV. OFFICERS

Any member in good standing of the Lake County LMS Working Group is eligible for election as an officer. The Lake County LMS Working Group will have a Chair and Vice-Chair elected by a majority vote of a quorum of the members present. Each shall serve a term of one year and be eligible for re-election for an unlimited number of terms. A quorum shall consist of designated representative or alternate from at least five (5) of the participating jurisdictions in good standing.

The Chair of the Lake County LMS Working Group will preside at each meeting of the Lake County Working Group. The Vice-Chair will fulfill the duties and responsibilities of the Chair in their absence. Administrative functions will be handled by the Lake County Emergency Management Division in accordance with Federal and State regulations.

ARTICLE V. RESPONSIBILITIES

A. The Lake County LMS Working Group

All responsibilities of the LMS Working Group shall be specified by Chapter 27P-22.004 and 27P-22.005, Florida Administrative Code (FAC). These rules are authorized under Florida Statute 252. The Lake County LMS Working Group will be responsible for all actions and decisions made formally in the name of the Lake County LMS Working Group.

B. Subcommittees

The responsibilities of subcommittees will be defined at the time they are established by the Chair of the Lake County LMS Working Group, or the voting members in good standing.

ARTICLE VI. ACTIONS BY THE WORKING GROUP

A. Authority for Actions

Only the Working Group has the authority to take final actions. Actions by subcommittees or program staff are not considered final until affirmed by action of the Lake County LMS Working Group.

B. Meetings, Voting and Quorum

Meetings of the Lake County LMS Working Group and its subcommittees will be conducted in accord with Robert's Rules of Order, when deemed necessary by Chair of the meeting. Regular meetings of the LMS Working Group will be scheduled at least annually with a minimum of 10 working days' notice. Committees will meet as deemed necessary by the Chair or Vice-Chair. Meetings can be held via a conferencing mechanism provided a means of recording attendance and voting can be done.

All final actions and decisions in the name of the Lake County LMS Working Group will be by affirmative vote of a quorum of the voting members present. A quorum shall consist of designated representative or alternate from at least five (5) of the participating jurisdictions. Each member of Working Group will have one (1) vote.

C. Emergency Actions by the Emergency Management Division

The Lake County Emergency Management Division is authorized to apply for grants, accept grants, create projects, approve projects, execute contracts and other actions consistent with the intent of public safety without the authorization of the LMS Working Group when, in the opinion of the Emergency Management Division Manager, such expeditious action is necessary and consistent with the purpose stated in Article I. All applications, grant acceptances actions, project creations, project approvals under the section shall be authorized directly by the Emergency Management Division Manager. The Chair or Vice-Chair of the LMS shall be informed of such action as soon as reasonably possible. All actions taken under this section shall be reported to the LMS Working Group at the next LMS Working Group meeting under new business.

D. 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 Lake County LMS Working Group or the Emergency Management Division to prohibit scheduling of a regular meeting of the Lake County LMS Working Group. Special votes may be by telephone, electronic medium (email and/or web-hosted service with conference call capabilities), first class mail, and shall be in accord with all applicable statutes for such actions.

E. Public Hearings

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

F. Documentation of Actions

All meetings and other forms of action by the Lake County LMS Working Group and 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 Lake County Working Group may be adopted and/or amended by a quorum of a designated representative or alternate from at least five (5) of the participating jurisdictions. Each member of Working Group will have one (1) vote. All proposed changes to the bylaws will be provided to each member of the Lake County LMS Working Group not less than ten (10) working days prior to such a vote.

ARTICLE VIII. DISSOLUTION OF THE WORKING GROUP

The Lake County LMS Working Group may be dissolved by affirmative vote of 100% of the attending quorum, 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 Lake County LMS Working Group will be transferred to the Lake County Emergency Management Division for disposition.

Lake County LMS Task Force Membership		
Member Name		**Jurisdiction or Entity and Position**
Roy, Paul		City of Clermont Environmental Services Director
Silvestris, Joe		City of Clermont Asst. Chief of Operations
Calhoun, Gary		City of Eustis Police Chief
Swanson, Mike		City of Eustis Fire Chief
Bogle, Dale		City of Fruitland Park Public Works Director
La Venia, Gary		City of Fruitland Park City Manager
Johnson, David		City of Leesburg Fire Chief
Maudlin, DC		City of Leesburg Public Works Director
Brasher, Randy		City of Mascotte Fire Chief
Walker, Larry		City of Mascotte Dep. Public Services Director
Miller, Fred		City of Minneola Public Works Director
Slaughter, Sam		City of Minneola Stormwater Supervisor
Kerkhof, Stephen "Skip"		City of Mount Dora Fire Chief
Peters, John		City of Mount Dora Public Works Director
Keith, Richard	Vice-Chair	City of Tavares Fire Chief
Luckock, Wayne (Buddy)		City of Tavares Fire Inspector/Captain
Hatfield, Richard		City of Umatilla Asst. Public Works Director
Mercer, Aaron		City of Umatilla Public Works Director
Echols, Dustin		Clay Electric Member Relations Rep
Christian, Pamela		Florida Department of Health in Lake County Preparedness Planner
Kissler, Aaron		Florida Department of Health in Lake County Administrator
Lovett, Ray		Florida Division of Forestry Area Supervisor
Tear, Judith		Florida Division of Forestry Wildfire Mitigation Specialist
Carpenter, Thomas	Chair	Lake County Government (Unincorporated) Emergency Management Manager

Lake County LMS Task Force Membership		
Hamilton, Mary		Lake County Government (Unincorporated) Environmental Services Division Manager
Mcray, Nicholas		Lake County Government (Unincorporated) Stormwater Project Manager
Jolliff, John		Lake County Government (Unincorporated) Director of Public Safety/Fire Chief
Kostus, Spencer	Coordinator	Lake County Government (Unincorporated) Disaster Assistance Specialist
Shaw, Nathan		Lake County Government (Unincorporated) Emergency Management Associate
Stivender, Jim		Lake County Government (Unincorporated) Public Works Director
Peebles, Peter		Lake County Property Appraiser Senior Supervisor Real Estate/Agriculture
Dillon-Banks, Sabrina		Lake County Schools Administrative Coordinator
Young, Reginald		Lake County Schools Security Services Manager
Luce, Todd		Lake County Sheriff's Office Captain
McDuffie, Ralph		Lake County Sheriff's Office Emergency Management Director/SWAT
Hart, Ron		Lake County Water Authority Water Resources Program Director
Perry, Michael		Lake County Water Authority Executive Director
Smith, Jerry		Lake Emergency Medical Services Executive Director
Cooper, Kitty		Town of Astatula Town Clerk
Morgan, Willie		Town of Groveland Fire Chief
Thomas, Rick		Town of Howey-in-the-Hills Police Chief
Roman, Richard		Town of Howey-in-the-Hills Police Lieutenant
McKinstry, Chris		Town of Lady Lake Police Chief
Burden, Terry		Town of Montverde Public Works Director
Longacre, John		Villages CCD Emergency Management Specialist
Hickey, Dan		Villages CCD Fire Marshal

Appendix III: Meeting Documentation

Local Mitigation Strategy Working Group
Draft Meeting Notes
December 16, 2011 at 10 AM
Call–In Number: 352-253-9990

Attendees:

Andrew Bicanovsky, Vice-Chair	Lake County Health Department
Tommy Carpenter	Lake County Emergency Management
Chuck Hiatt	BESH Engineering
Sharon Hogan	Lake County Stormwater Division
Dottie Jackson	Lake County Emergency Management
Amye King, Chair	Lake County Growth Management
Gina Lambert	Villages Community Development District
Sean Loughlin	Lake County Emergency Management
Mary Mason	Town of Montverde
Don Ruths	Withlacoochee Forest Center
John Schmidt	Lake County Schools
Ken White	City of Umatilla
Donna Wright	City of Leesburg

1) Opening Remarks, Amye King, AICP, Chair

The meeting started at approximately 10:01 AM. Ms. King welcome everyone to the meeting and they introduced themselves.

2) Identify Projects with Available Funding

Mr. Loughlin asked attendees which projects they had in cue with available funding. No jurisdictions had funding to implement a mitigation project, however, some did have projects in mind for the future.

Ms. Lambert stated that Station 43 in The Villages has been identified as a facility to get storm hardened. The Villages District would likely be able to budget dollars in the future to serve as a project match.

Mr. White from the City of Umatilla stated that there is a two block area in the vicnity of Seminole Street that could use drainage improvements to alleviate flooding to homeowners.

Ms. Mason from Montverde and Ms. Wright from Leesburg both stated that there could be flood projects within their communities and that they would look into potential projects.

3) Review Project Scoring Methodology

Ms. King asked if anyone wanted to volunteer to assist staff in rescoring projects to ensure that all projects are on the same scoring system. Not all of the projects were rescored during the last plan update—only the new ones. This will be very important if multiple projects are submitted for funding consideration at the same time. Mr. Loughlin thought that Ms. Karla Johnson from the Astor Chamber of Commerce and Mr. Andrew Bicanovsky from the Health Department would be good candidates for this. Mr. Bicanovsky stated he would be able to assist staff with this process.

4) Opportunity to Request Revisions to Existing LMS Plan

Chief Fred Cobb from the City of Eustis sent an updated project list via e-mail to Mr. Loughlin.

Ms. Hogan from the Dept. of Public Works Stormwater Division sent the status of a few projects via e-mail to Mr. Loughlin.

Mr. Don Ruths from the Withlacoochee Forest Center informed Mr. Loughlin that the Community Wildfire Protection Plan project has been completed and should be noted as such on the project listing within the LMS Plan.

5) Other Business as Required

Mr. Ruths stated that Ms. Anita Greiner, Chief Planner with Lake County Growth Management, deserves recognition for her cooperation with the Florida Forestry Service to incorporate the Community Wildfire Protection Plan into the Lake County Comprehensive Plan. Some county policies were updated. Ms. King stated that these policy changes would be sent to the cities for their information as well.

6) Adjournment

Ms. King adjourned the meeting at approximately 10:30 AM.

LAKE COUNTY
FLORIDA

January 29, 2013

Florida Division of Emergency Management
Attention: Mitigation Planning Section
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100

Re: Lake County Local Mitigation Strategy Annual Requirements of 27P-22.004, F.A.C.

Dear Mr. Anderson:

Transmitted herewith are the required annual transmittals identified within State Rule 27P-22.004, specifically as follows:

27P-22.004 (1)

- Provide list of current members of Working Group and designated Chair and Vice Chair;

Response: See enclosed documentation

27P-22.004 (3)

- Provide documentation showing that within the preceding year a written invitation has been sent to each municipality and other organizations as applicable to participate in LMS activities; and,

Response: Meeting conducted through December 2012 EOC Meeting – See enclosed documentation

27P-22.004 (4) (e)

- Provide annual updates addressing, at a minimum: changes to the hazard assessment; changes to the project list; changes to the critical facilities list; changes to the repetitive loss list; and revisions to any maps.

Response: There have no changes to the hazard assessment; project priority list; critical facilities list; repetitive lost list; or maps. The latest version of the plan is available online at http://www.lakecountyfl.gov/departments/public_safety/emergency_management/local_mitigation_strategy.aspx

Please do not hesitate to contact our office at (352) 343-9420 if you have any questions regarding this transmittal.

Sincerely,

Thomas G. Carpenter
Acting Division Manager

EOC MEETING REMINDER – LAST ONE IN ROOM 233!

Date: Tuesday, December 11, 2012
Time: 2:00PM - 4:00PM
Location: Lake County Administration Bldg., EOC, Room 233, 315 W. Main Street, Tavares

2012 EOC MEETING SCHEDULE

- ~~March 27~~
- ~~May: Hurricane Exercise - Executive Policy Group~~
- ~~September 18~~
- December 11

Tommy

Thomas G. Carpenter, FPEM
Lake County Board of County Commissioners
Public Safety Department | Emergency Management Division
315 West Main St., Suite # 411, Tavares, FL 32778
Office: 352-343-9420 | Cell: 352-267-1993 | Fax: 352-343-9728
E: tcarpenter@lakecountyfl.gov | W: www.lakecountyfl.gov

Please note: Florida has a very broad public records law. Your e-mail communications may be subject to public disclosure.

LOCAL MITIGATION STRATEGY

- Discussion by LMS Working Group & Endorsement of Plan
- All Lake municipalities have endorsed plan
- Other business

LAKE COUNTY
FLORIDA

DRAFT NOTES

Local Mitigation Strategy Working Group
Draft Meeting Notes
December 16, 2013 at 10 AM

Attendees:

Tommy Carpenter	Lake County Emergency Management
Fred Cobb	City of Eustis
Mary Hamilton	Lake County Public Works Department
Stephen Kerkhof	City of Mount Dora
Amye King, Chair	Lake County Growth Management
Gina Lambert	Villages Community Development District
Nick McCray	Lake County Public Works Department
Cyndie Earls	Lake Emergency Medical Services

1) Opening Remarks, Amye King, AICP, Chair
The meeting started at approximately 10:15 A.M. Ms. King welcomed everyone to the meeting. A quorum was present. The following documents were provided in the "LMS Meeting Packet:"

   a. Agenda
   b. Task Force Membership list
   c. Appendix II – LMS Bylaws
   d. LMS meeting minutes for 2011 and 2012
   e. LMS Projects by jurisdiction

2) Review of the Current LMS Group Membership
Mr. Carpenter mentioned that the Working Group's Vice-Chair, Andrew Bicanovsky is no longer with the Florida Department of Health, Lake County. The LMS Working Group would need to find a new Vice-Chair. Mr. Carpenter suggested Ms. Cathy Hoechst from the City of Mount Dora as a new Vice-Chair. Mr. Carpenter will follow-up with Ms. Hoechst.

   Upon unanimous consensus, Ms. Amye King was reappointed the Chair of the LMS Working Group.

   Ms. King asked the group to review the membership list to ensure accuracy and provide needed updates.

3) Review of Previous Meetings & Notes
Mr. Carpenter reviewed the 2012 and 2011 meeting minutes. Copies of the minutes were provided to the group. Chief Cobb and Ms. King asked about the scoring method of the projects. Mr. Carpenter briefly explained the STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, Environmental) Evaluation Table. Mr. Carpenter mentioned that he was working with the Orange County Emergency Management and the East Central Florida Regional Planning Council on utilizing a new form for evaluating projects. Form update to be provided before next meeting.

   Upon review of the meeting notes from the previous meetings, the group unanimously approved the 2012 meeting minutes.

DRAFT NOTES

4) Review of LMS Project Listing & Identify Projects with Available Funding
   Ms. King asked the group to review the project list provided in the meeting packet. The project list was the "Initiatives by Jurisdiction" list. Ms. King and Mr. Carpenter asked all attendees to review the list and update projects. Mr. Carpenter stated he would send an updated list to the Working Group membership. Mr. Carpenter re-emphasized the need for all stakeholders to review and update projects. Once the review has occurred, then the Working Group will need to vote to re-prioritize the projects.

5) Consider 2014 Quarterly Meetings for LMS Plan/Purpose
   Ms. King asked the group to consider moving to quarterly meetings in 2014. Mr. Carpenter mentioned the time table set forth in the current LMS document, the next update is due February 2016. Quarterly meetings will allow stakeholders ample time to perform plan and project updates. A tentative schedule proposed by Mr. Carpenter is the 1st or 2nd week of March, June, September and December. Definitive dates to be announced.

6) Discussion of LMS Working Group & Endorsement of Plan
   Ms. King stated that the current LMS has been endorsed and adopted by all municipalities and the Villages Community Development District.

7) Other Business
   None mentioned.

8) Adjournment
   Ms. King adjourned the meeting at 10:45 A.M.

DRAFT NOTES

Local Mitigation Strategy Working Group
Draft Meeting Notes
December 19, 2014 at 10 AM

Attendees:

Carle Bishop	City of Clermont
Tommy Carpenter	Lake County Emergency Management
Terry Carter	Florida Department of Health – Lake County
Pamela Christian	Florida Department of Health – Lake County
Richard Keith	City of Tavares
Amye King, Chair	Lake County Growth Management
Aaron Kissler	Florida Department of Health – Lake County
Spencer Kostus	Lake County Emergency Management
Nathan Shaw	Lake County Emergency Management
Paul Rov	City of Clermont

1) Opening Remarks, Amye King, AICP, Chair
   The meeting started at approximately 10:10 A.M. Amye King, Lake County Growth Management, welcomed everyone to the meeting. A quorum was not present. The following documents were provided in the "LMS Meeting Packet:"

   a. Agenda
   b. Task Force Membership list
   c. Appendix II – LMS Bylaws
   d. LMS meeting minutes for 2013
   e. LMS Projects by jurisdiction

2) Review of the Current LMS Group Membership
   Ms. King asked the group to review the membership list to ensure accuracy and provide needed updates.

3) Review of Previous Meetings & Notes
   Ms. King tabled review of previous meetings and notes until next meeting due a quorum not being present.

4) Review of LMS Project Listing & Identify Projects with Available Funding
   Ms. King asked the group to review the project list provided in the meeting packet.

   Ms. King discussed the idea of developing two projects lists: A 5 year cost feasible list and an unfunded list.

   Ms. King re-emphasized the need for all stakeholders to review and update projects. Once the review has occurred, then the Working Group will need to vote to re-prioritize the projects.

5) Consider 2014 Quarterly Meetings for LMS Plan/Purpose

Ms. King called for a quarterly meeting next quarter around either February or March of 2015.

6) Discussion of LMS Working Group & Endorsement of Plan
Ms. King stated that the current LMS has been endorsed and adopted by all municipalities and the Villages Community Development District.

7) Other Business
Spencer Kostus, Lake County Emergency Management, gave a presentation about how the Local Mitigation Strategy is organized and strucutred and how projects in the LMS would receive funding.

Mr. Kostus discussed changing how new projects would be submitted to the LMS working group to be added and prioritized.

8) Adjournment
Ms. King adjourned the meeting at 10:48 A.M.

Lake County Emergency Management - Local Mitigation Strategy
Face to Face Meeting
March 12, 2015
Minutes

I. Welcome and Introductions

- Thomas Carpenter, LCEM EM Division Manager
- Teresa Newsome, EREC

II. Current Local Mitigation Strategy

1. Meeting Planning Requests
   - Electronic copies of the current LMS and CEMP.
     - Copies are available in Microsoft Word and will be provided.
   - Any updates done to the project list since the last revision.
     - Last version was the 2012 Updates.
   - Working Group contact information
     - Most are new representatives and contract information will be provided. There are 14 municipalities that will be included in the LMS.
   - Any updates to HVA since last revision.
     - None have been done. Would like CEMP/LMS to be mirrored.
   - Notes from any meetings held since last revision for this draft
     - There have been a few meetings and notes will be provided.
   - Was your last plan done in Mitigation 2020 or just Microsoft Office documents?
     - Mitigation 2020 files were corrupt so Microsoft Word was used.
   - Electronic copy of the current crosswalk to be utilized.
     - Crosswalk to be used will be provided by LCEM.
2. Review of current Plans within 30 days of NOC
   - Today's meeting will be the kickoff meeting and starts 30 days for plan review.
3. Update HVA within 60 days of NOC
   - HVA needs to be mirrored between the CEMP and LMS. Draft to be presented to Thomas Carpenter and Spencer Kostus for approval.
4. Planning Meetings
   - Future Meeting Schedule. 60/120/150 days
     1. 60 days will be an introductory meeting for the new representatives and will be held May 8, 2015.

2. 120 days meeting will be held on July 7, 2015.
3. 150 days meeting will be held on August 7, 2015.

5. Draft due 120 days from Kickoff
6. County comments within 30 days
7. Final due 180 days
8. Point of Contact for Planning – Spencer Kostus
9. Billing Contact – Spencer Kostus

III. Action Items

1. Following items to be provided to EREC by Spencer Kostus:
   - Copies of current plans (CEMP and LMS)
   - Updates to Project List
   - Working Group contact information
   - Notes from meetings held
   - Crosswalk to be utilized
2. Thomas Carpenter to confirm meeting dates.

IV. Contact Information

Teresa Newsome, President/Planning Manager
(O) 352-236-5348
(C) 352-572-2759
tnewsome@erecinc.com

Spencer Kostus, Disaster Assistance Specialist
(O) 352-742-4654
(C) 352-455-3308
skostus@lakecountyfl.gov

Lake County Emergency Management - Local Mitigation Strategy
Lake County Emergency Communications & Operations Center (ECOC)
425 West Alfred Street, Tavares, FL
June 18, 2015
Minutes

I. Welcome and Introductions

- Tommy Carpenter — Lake County Emergency Management
- Pamela Christian — Florida Department of Health – Lake County
- Spencer Kostus, LMS Coordinator — Lake County Emergency Management
- Teresa Newsome — Emergency Response Educators and Consultants, Inc.
- Joseph Silvestris — City of Clermont

II. Opening Remarks, Tommy Carpenter, Emergency Management Division Manager

The meeting started at approximately 10:00 A.M. Tommy Carpenter, Lake County Emergency Management, welcomed everyone to the meeting and introduced Mrs. Teresa Newsome who is a consultant that will help assist in the 2015 LMS update. A quorum was not present. The following documents were provided in the "LMS Meeting Packet:"

a. Agenda
b. Task Force Membership list
c. Select elements of LMS plan – Table of Contents, Summary of Changes, Table III-8 'Summary Probabilities of all Hazards'
d. LMS meeting minutes for 2014, 2013, 2011
e. LMS Projects by jurisdiction

III. Discussion of New Chair

Since no quorum was present at the meeting, the discussion will have to wait to a future meeting.

IV. Review of Current LMS Group Membership

Mrs. Newsome asked the group to review the membership list to ensure accuracy and provide needed updates.

V. Review of Previous Meetings & Notes

Mr. Kostus tabled review of previous meetings and notes until next meeting due a quorum not being present.

VI. Review of LMS Project Listing

- Review Projects (Completed-New-Removed)

  Mrs. Newsome asked the group to review the project list provided in the meeting packet. Updates were provided by those present.

VII. Meetings for LMS Plan/Process

Next meeting was scheduled for July 20, 2015 with hopes of more attendees to further discuss the LMS.

VIII. Discussion of LMS Working Group & Endorsement of Plan

To be discussed at future meetings

IX. Other Business

The by-laws were discussed and determined to need updating. Tommy Carpenter will be updating the document for presentation at the next meeting.

X. Action Items

- Teresa Newsome to complete minutes of this meeting.
- Tommy Carpenter to revise by-laws to be presented at the next meeting
- Spencer Kostus and Tommy Carpenter to reach out to municipalities to get an update on the projects listed on the current version of the Project List.
- Spencer Kostus and Tommy Carpenter to reach out to municipalities to reconfirm representation and willingness to participate in the LMS process.

XI. Contact Information

Teresa Newsome, President/Planning Manager
(O) 352-236-5348
(C) 352-572-2759
tnewsome@erecinc.com

Spencer Kostus, Disaster Assistance Specialist
(O) 352-742-4654
(C) 352-455-3308
skostus@lakecountyfl.gov

Lake County Emergency Management - Local Mitigation Strategy (LMS)
Lake County Emergency Communications & Operations Center (ECOC)
425 West Alfred Street, Tavares, FL
July 30, 2015
Minutes

I. Welcome and Introductions

Meeting began at 10:05 with welcome by Teresa Newsome and everyone introduced themselves. A quorum of 5 agencies/participants was present. Those present are listed below.

Spencer Kostus, LMS Coordinator	Lake County Emergency Management
Richard Keith, Fire Chief,	City of Tavares Fire Dept
Pam Christian, Planner	Florida Dept of Health in Lake County
Tom Carpenter, EM Manager	Lake County Emergency Management
Richard Hatfield, Director	City of Umatilla Public Works
Nathan Shaw, EM Associate	Lake County Emergency Management
Skip Kerkhof, Fire Chief	Mount Dora Fire Dept
Nicholas Mcray, PW/Stormwater	Lake County
Teresa Newsome,	EREC

II. PowerPoint Presentation

Spencer Kostus presented a PowerPoint presentation overview of the LMS and how the process works.

III. Review of Previous Meetings & Notes

Since a quorum was present, the meeting minutes from December 16, 2011, December 16, 2013, and December 19, 2014 were approved with a motion and a second. The meeting minutes from the June 18, 2015 meeting were approved with a motion and a second as well. Motions were by Pam Christian and second by Tommy Carpenter. All present voted in the affirmative, with no nays.

IV. Discussion of New Chair

It was determined that a new chair and vice-chair needed to be elected and the LMS Coordinator needed to be confirmed. After discussion, Tommy Carpenter accepted the nomination for LMS Chair, Chief Richard Keith accepted the nomination for Vice-Chair. With motions by Nathan Shaw and second by Pam Christian, these gentlemen were elected to the positions. Spencer Kostus was confirmed as the LMS Coordinator with a motion by Richard Keith and second by Pam Christian. All present voted in the affirmative, with no nays for each position individually and respectively.

V. Review of Current LMS Group Membership

A discussion was held about the current list and how to engage and recruit new representatives. Tommy Carpenter and Chief Keith as Chair and Vice-Chair will reach out to the entities to obtain a primary and alternate representative with a goal of having the list complete by COB, August 13, 2015.

VI. Review of LMS Project Listing

Review Projects (Completed-New-Removed)

The current Project List was reviewed and discussed. Please see the list for projects that have been completed or terminated. New projects from the City of Clermont were presented and Pam Christian mentioned a new project from the Health Department. Further information with be provided to include a Cost/Benefit Analysis to be voted on and prioritized at the next meeting.

VII. By-law Revisions

It was determined in discussion that the existing by-laws need to be updated to more accurately describe the function of the LMS Working Group and requirements thereof. Tommy Carpenter accepted the project to revise the by-laws with input from the group and with notes from the previous meeting. By-laws will be presented via email to the LMS Working Group membership by COB, August 14, 2015 so that they can be voted on at the next meeting with 10 days' notice. One of the major changes will be the use of technology, i.e. GoToMeeting® to facilitate meetings with membership along with providing a public meeting concurrently at the Lake County Communications and Emergency Operations Center in Training Room A and B

VIII. Meetings for LMS Plan/Process

The next meeting of the LMS Working Group will be Monday, August 24, 2015 at 10:00 am at the Lake County Communications and Emergency Operations Center in Training Room A and B. Public Notice will be posted by August 14, 2015 for the required 10 days' notice.

IX. Discussion of LMS Working Group & Endorsement of Plan

The Draft LMS Plan will be presented to the LMS Working Group no later than August 24, 2015 with a draft submitted to the State for review by the COB August 31, 2015. Further revisions as dictated by the State will be complied and presented to the membership in an ongoing process via email with appropriate time for comments until approval is received from the State FDEM.

X. Other Business

There being no additional business, the meeting was adjourned with a motion by Richard Hatfield and second by Tommy Carpenter at 10:48.

XI. Action Items

- Teresa Newsome to prepare draft minutes by COB, Friday, July 31, 2015.
- Tommy Carpenter and Chief Keith to work on LMS Working Group membership completion by August 13, 2015.
- Tommy Carpenter to work on a draft revision of the by-laws by COB, August 14, 2015.
- Teresa Newsome to provide draft revised LMS Plan no later than August 24, 2015.
- LMS Working Group will update and prioritize the Project List at the next meeting on August 24, 2015.

XII. Contact Information

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(O) 352-236-5348
(C) 352-572-2759
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Spencer Kostus, Disaster Assistance Specialist
(O) 352-742-4654
(C) 352-455-3308
skostus@lakecountyfl.gov

RESOLUTION NO. 2016 - 12

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF LAKE COUNTY, FLORIDA, ADOPTING THE LAKE COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN AND PROVIDING AN EFFECTIVE DATE.

WHEREAS the Florida Division of Emergency Management and the Federal Emergency Management Agency recommends that all local governments, in cooperation with their local county emergency management agency, develop and maintain a Hazard Mitigation Plan; and

WHEREAS Lake County desires to have and maintain this plan to protect the life and property of its citizens; and

WHEREAS Lake County, in cooperation with the municipalities of Lake County, has developed the plan, policies and procedures necessary to plan and develop projects to protect the citizens of Lake County from hazards

NOW THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Lake County, Florida, that Lake County adopts the proposed Lake County Multi-Jurisdictional Hazard Mitigation Plan, dated February, 2016, identifying the hazards and strategies to mitigate those hazards.

This resolution shall become effective upon adoption.

PASSED AND ADOPTED this 2 day of February, 2016.

BOARD OF COUNTY COMMISSIONERS
LAKE COUNTY, FLORIDA

Sean M. Parks, Chairman

This 2 day of February, 2016

ATTEST:

Neil Kelly, Clerk of the Board of County Commissioners Lake County, Florida

Approved as to form & legality:

Melanie Marsh, County Attorney