

NOVEMBER 2009

COLUMBIA COUNTY



LOCAL MITIGATION STRATEGY



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1. INTRODUCTION

The United States and more specifically the State of Florida can no longer afford to shoulder the extraordinarily high human and economic costs disasters bear. All local communities must take steps to decrease the vulnerability of their citizens, businesses, infrastructure, and institutions to the impact from these events. The development of a multi-jurisdictional local mitigation strategy is a pivotal step in the effort to mitigate against natural and man-made disasters.

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

1.1.1. Purpose

The purpose of developing a Local Mitigation Strategy (LMS) is to establish an ongoing process that will make hazard mitigation part of the daily functioning life in Columbia County. It serves as a bridge between local governments' programs, plans, and policies including but not limited to the comprehensive growth management plan, comprehensive emergency management plan, land development regulations, and relevant codes and ordinances for effective floodplain management.

Since the early 1990s, Federal Emergency Management Agency (FEMA) and the United States Congress has witnessed large increases in disaster response and recovery costs; as a result, they have provided funds to communities, counties, and states to reduce impacts from natural hazards through hazard mitigation. This marked a fundamental shift in policy; rather than placing primary emphasis on response and recovery, FEMA's focus broadened to incorporate mitigation as the foundation of emergency management. Changes in Federal laws have resulted in predisaster mitigation project funding and mitigation planning requirements. As a result on October 30, 2000 amending the Robert T. Stafford Relief and Emergency Assistance Act, The Disaster Mitigation Act of 2000 (DMA2K) was signed into law. DMA2K states that if States and local governments do not have approved multi-hazard mitigation plans in place and a disaster occurs, they will not be entitled to Public Assistance and other FEMA funding. The following is a summary of the parts of DMA2K that pertain to local governments:

- The Act establishes a new requirement for local governments to prepare a Hazard Mitigation Plan in order to be eligible for funding from FEMA through Pre and Post-Disaster grant programs such as Pre-Disaster Mitigation Assistance (PDM) and Hazard Mitigation Grant Program (HMGP).



- The Act establishes a requirement that natural hazards such as but not limited to tornadoes, floods, and wildfires, need to be addressed in the risk and vulnerability assessment section of the Hazard Mitigation Plan.
- The Act authorizes states to receive up to seven percent of Hazard Mitigation Grant Program funds after a federal disaster to be used for development of state, local, and tribal organization Hazard Mitigation Plan (in Florida referred to as a Local Mitigation)
- The Act establishes November 1, 2004 as the date by which local governments and tribal organizations were required to prepare and adopt their respective plans in order to be eligible for FEMA Hazard Mitigation Assistance. In addition, local jurisdictions must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval within 5 years from date of FEMA approval to remain eligible for the mitigation project grant funding.

This Plan encompasses the most recent process of reviewing and revising the Columbia County LMS in accordance with the Disaster Mitigation Act of 2000. The main goal of the local mitigation strategy is to identify and assess the risk and vulnerability to various natural and technological disasters the County and its municipalities face, and then develop local strategies to reduce the impact of future disasters. This plan is a continuation of the 2005 efforts and is the product of the 1st 5-year revision and update process.

1.1.2. Plan Organization

This Plan is divided into four main sections (Sections 2 – 4) to address FEMA requirements for a local multi-hazard mitigation plan, plus the introduction, crosswalk and appendices. The sections are as follows:

- Section 1 – Introduction
- Section 2 – Planning Process
- Section 3 – Risk Assessment
- Section 4 – Mitigation Strategy
- Section 5 – Plan Maintenance
- Section 6 – Local Mitigation Plan Review Crosswalk
- Section 7 – Appendices



2. PREREQUISITES

Adoption by the Local Governing Body

Requirement §201.6(c)(5): *[The local hazard mitigation plan shall include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).*

Multi-Jurisdictional Plan Adoption

Requirement §201.6(c)(5):

For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.

A local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval within five years of the approval date in order to remain eligible for mitigation project grant funding.

The State and FEMA guidelines for submitting the updated LMS are located in Appendix A. Upon completion of FEMA's review and receipt of the "Approved Pending Adoption" letter from FEMA, the County, City of Lake City, and Town of Fort White will formally adopt the newly updated LMS. As per procedures put forth by FEMA, the county has within one calendar year of receipt of FEMA's "Approval Pending Adoption" letter to formally adopt the Plan.



Resolutions will be added upon approval and adoption.



3. PLANNING PROCESS

Requirement §201.6(b): *In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:*

- (1) *An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;*
- (2) *An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and*
- (3) *Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.*

Requirement §201.6(c)(1): *[The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.*

Hazard mitigation is any action taken to permanently reduce or eliminate long-term risk to people and their property from the effects of natural hazards. As the direct and indirect costs of disasters continue to rise, it becomes particularly critical that preparing for the onslaught of damage from these events must be done in order to reduce the amount of damage and destruction. The purpose of multi-hazard mitigation is two-fold: 1) to protect people and structures from harm and destruction; and 2) to minimize the costs of disaster response and recovery. Hazard mitigation planning is the process that analyzes a community's risk from natural hazards, coordinates available resources, and implements actions to reduce identified risks.

This section of the Columbia County Local Mitigation Strategy (LMS) describes and documents the process used to develop and update the Columbia County LMS. This includes how it was updated and who was involved in the process.

3.1.2. Planning Area and Participation

Columbia County is located in the north central portion of the State of Florida and is bordered on the north by the State of Georgia, on the east by Baker and Union Counties, on the south by Alachua and Gilchrist Counties and on the west by Hamilton and Suwannee Counties. The Santa Fe River forms the boundary in the south and the



Suwannee River forms a boundary on the northwest border of the County. Approximately 126 square miles or 80,640 acres are located within the Osceola National Forest on the eastern side of the County. The County has two incorporated municipalities within its border, The City of Lake City and The Town of Fort White. The interchange for Interstate Highways 10 and 75 is located in the northwest portion of the County.

Since the 2005 plan approval, no new municipalities have been either created or disbanded. The planning area continues to include the City of Lake City, Town of Fort White, and the unincorporated areas.

3.1.3. Coordination

The Columbia County Emergency Management office (CCEM) is the lead agency in scheduling and conducting the efforts of the Local Mitigation Strategy Working Group (LMSWG), including annual and 5-year LMS updates.

Local and Regional Agency Involvement

The Columbia County LMS is a local community product which was developed by the LMSWG in 2005 to be in compliance with the Disaster Mitigation Act of 2000 requirements, and in 2010 for the 5-year required update. The Working Group is comprised of local private citizens, local business, county / city government personnel, neighboring county government officials and regional officials.

The CCEM initiated the LMS planning process by hiring consultants to coordinate and author the Plan including the 2005 and 2010 update. Facilitated by the consultant, CCEM and the Working Group worked together to engage local agencies and community members in the planning process.

The Working Group is scheduled to meet on at least a semi-annual basis (if possible, fall and spring) to review the local mitigation strategy in order to ensure it is current and reflects changing conditions within the community (see Section 6 for more detail). The Working Group has been meeting since 2005 to review and approve mitigation projects to be added to the project list. The Working Group recognizes that they were not particularly diligent when it came to meeting the maintenance schedule between the 2005 and 2010 updates. They have since realized the importance of maintaining the LMS Plan and in moving forward will be fully committed in adhering to the schedule outlined in the Plan Maintenance section. The Working Group met numerous times during the 2010 update process, for a complete list of 2010 meeting dates and meeting materials please refer to Appendix B.

The Working Group members consist of a few remaining members from the 2005 Plan, as well as new members for the 2010 update. All members of the Working Group participated in various aspects of the update process including technical assistance, data input, and local knowledge and/or data gathering (see Appendix C). The newly required NFIP element was developed with the assistance of the County and City Floodplain Administrator.



Neighboring Community Involvement

Neighboring Communities were invited to participate in the update process. Hamilton County was represented during the update process.

Public Involvement

The general public (residents, businesses, and other interested parties) is given the opportunity to participate in any LMS meeting throughout the 5-year planning cycle. They also have the opportunity to comment on the plan during the annual and required 5-year update. Comments can be submitted during the drafting stage and prior to plan approval as outlined in the Plan Maintenance Section. All Working Group meetings are open to the public and welcome any input from attendees whether they are a committee member or not. All Working Group meeting notices are published in The Lake City Reporter and on the CCEM website (see Appendix B).

Meeting Summaries

The Working Group meets on a semi-annual basis and as needed. Since the 2005 plan approval, the Working Group has met to review and approve mitigation projects to be added to the project list in addition to conducting the annual update. For the purpose of 2010 Plan update, the Working Group meeting schedule is summarized below (see Appendix B for more detail). A copy of the updated LMS was made available to the public at the CCEM office, in the public library and on the Columbia County Emergency Management website. Any feedback from the public is submitted to the Columbia County Emergency Management office and reviewed by the Working Group for consideration.

July 23, 2009

A general overview was provided to the Working Group of the LMS update process describing why it is needed, who should be involved, what resources are needed to conduct the update, what timeframe to expect and the next steps.

The group was asked to review the Plan Maintenance Section of the plan and determine if the process is still viable. Following was an overview of the risk assessment and the process by which it will be updated. The current critical facilities list was requested and discussed.

August 20, 2009

The update timeline was reviewed and future meeting dates were agreed upon. They were scheduled as follows:



September 16, 2009 9:00a.m. – 12:00p.m.

October 7, 2009 9:00a.m. – 12:00p.m.

October 21, 2009 9:00a.m. – 12:00p.m.

The Working Group member list from the 2005 Plan was cross referenced to ensure the participants for this update capture an appropriate representation of the various segments of the county. The group developed a list of stakeholders of whom they felt were missing and the LMS Chair will extend written invitations to these individuals/organizations (see Appendix D). Other housekeeping issues, including the organization of the plan, were discussed. The Mitigation Strategy was reviewed and Goals and Objectives were revised.

The Working Group reviewed the Risk Assessment, specifically the hazards and vulnerabilities that affect Columbia County. This debate sparked a new discussion which resulted in additions to the goals and objectives list. Acquisition of historical hazard data was also discussed.

September 16, 2009

Discussions were conducted in regard to the process by which the draft LMS would be made available to the public. Additionally the Working Group reviewed the goals and objectives that were proposed during the August 20, 2009 meeting. These were found to be favorable with the addition of a few new objectives. The Working Group examined the existing plans, studies, reports and technical information section and created a list of documents to be reviewed for the 2010 update.

October 7, 2009

The group discussed the need for an additional meeting before the plan would be ready to submit to the State. A new meeting date of November 4, 2009 from 9:00am – 12:00pm was scheduled. The Working Group reviewed the final goals and objectives as amended after the 9/16/09 meeting. The Working Group reviewed the Risk Assessment and determined the probability for each identified hazard. The then reviewed the status of mitigation actions within the current mitigation strategy.

October 28, 2009

The Working Group reviewed and approved the Plan Maintenance and Public Participation sections. The Working Group conducted an assessment of the LMS Projects. Comments were accepted and new projects were considered for addition. In the end, the group updated the project list to incorporate 3 new countywide initiatives and 2 Lake City public acquisition projects. A draft of the prioritization process was presented and recommended revisions that the Working Group members felt best



reflected the objectives of the community were accepted. Formal suggestions were integrated into process with the draft pending finalization at the next meeting.

November 4, 2009

The revised prioritization process was reviewed and determined to be in accordance with the community objectives and was subsequently approved. A final review of the planning process, risk assessment, and mitigation strategy sections was conducted. After a thorough analysis, members concluded that these too were in concordance with community objectives and unanimously agreed for their approval.



4. RISK ASSESSMENT

4.1. Hazard Profile and Vulnerability

Identifying Hazards

Requirement §201.6(c)(2)(i): *[The risk assessment shall include] a description of the type... of all natural hazards that can affect the jurisdiction...*

Profiling Hazards

Requirement §201.6(c)(2)(i): *[The risk assessment shall include] a description of the... location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.*

Assessing Vulnerability: Overview

Requirement §201.6(c)(2)(ii): *[The risk assessment shall include] a description of the jurisdiction's vulnerability to hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.*

Multi-Jurisdictional Risk Assessment

Requirement §201.6(c)(2)(iii): *For multi-jurisdictional plans, the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.*

This section of the Columbia County Local Mitigation Strategy summarizes the results of the hazard identification and vulnerability assessment processes undertaken by the LMS Working Group members. The intent of this section is to provide a summary compilation of the information gathered and the judgments made about the hazards threatening Columbia County as a whole, and the potential vulnerability to those hazards.

Due to the topography and distribution of the population the incorporated as well as the unincorporated areas of Columbia County are equally vulnerable to the hazards summarized below. Each hazard that has historically or can potentially affect the county is summarized below. Included in the summaries by hazard is an overview, affected areas, probability, and magnitude.

HAZUS was utilized during the update of this plan. With that said, not all hazards are thoroughly covered in HAZUS therefore the data collected was the best available data from various sources depending upon the hazard. After careful deliberation, the Local Mitigation Strategy Working Group (LMSWG) developed the



following 4 levels of measurement to determine the probability that future events will affect the incorporated and unincorporated areas of Calhoun County:

- Minimal = less than 1 event in a 5-year period
- Low = 1 – 2 events in a 5-year period
- Moderate = 3 – 5 events in a 5-year period
- High = 1 or more events in a 1-year period

The hazard data provided by HAZUS also includes data for the value and number of buildings vulnerable to the hazard. Due to limited resources in the County this data was not readily available for all hazards. According to the county Capital Improvement Plan there are no future buildings or infrastructure planned.

**Table 4-1.
Risk and Vulnerability Summary**

Hazard	Risk	Area of Vulnerability
Earthquake	Minimal	Countywide
Coastal & Riverine Erosion	Low	Along the Suwannee and Santa Fe Rivers
Sinkholes	Moderate	Unincorporated
Hurricanes & Coastal Storms	Moderate	Countywide
Flooding	Moderate	A-Zone = Lake City and Northern area of county AE-Zone = border of Columbia and Hamilton Counties AE-Zone = Areas of the County bordering the Suwannee and Santa Fe River's AH-Zone = City of Lake City X-Zone = Town of Ft. White and the southern unincorporated areas.
Wildfire	Moderate	Highest risk areas primarily in the unincorporated areas
Drought	Low	Countywide
Winter Storm	Low	Countywide
Tornado	Low	Historically Lake City and Unincorporated areas but could occur countywide
Thunderstorm	High	Countywide

4.1.1. Earthquakes

Overview

Earthquakes are shaking at or close to the surface of the Earth. USGS describes Earthquake as "a term used to describe both sudden slip on a fault, and the resulting



ground shaking and radiated seismic energy caused by the slip, or by volcanic or magmatic activity, or other sudden stress changes in the earth." This motion generates waves of energy that start at the epicenter of the quake. The strength of this motion can be quantified by measuring the peak ground acceleration (PGA), expressed as the percentage of force due to gravity (g). For example, acceleration due to gravity is normally 9.81 meters/sec/sec, so an acceleration of 2 meters/sec/sec is $2/9.81 = .20$ g. In turn, .20 g is equivalent to 20% g. The USGS uses the PGA measure to quantify the likelihood of ground acceleration occurring in a given location. This is expressed as the probability of a given acceleration occurring in a give time period. For example, the probability of the ground acceleration exceeding 20% g in a given area can range from 0% to 100% likelihood.

Locations Affected, Extent and Probability

For the County risk assessment, the USGS 50-year, 10 percent likelihood of ground shaking map was used to assess earthquake risk. In other words, there is a 10% probability that an exceedance of 2 g will occur in the next 50 years within Columbia County. The risk of an earthquake occurring and affecting any part of the County is considered minimal because the predicted PGA is low and the probability of one occurring is also low.

Although the risk is minimal, an earthquake with an intense magnitude could occur equally throughout the County and cause significant damage and/or collapse of structures in the County. Damage to County facilities would impact the County's ability to respond in an emergency situation. Privately held homes and businesses could sustain damage resulting in displacement of residents and disruptions to the local economy.

Past Occurrences

As noted on the United States Geological Survey Earthquake Hazard Program (USGS) website (<http://earthquake.usgs.gov/regional/states/?region=Florida>), Florida in general is not an area subject to earthquakes. There have been a few quakes recorded in modern time. Of those, only one caused damage to areas in Florida.

No earthquakes have been recorded with an epicenter in the County and only two are known to have been felt by County residents. In January of 1879, a quake occurred in the northeast region of the state near the city of St. Augustine. Founded by Spain in 1565, the nation's oldest permanent settlement reported heavy shaking that knocked plaster from walls and articles from shelves. Similar effects were noted at Daytona Beach, 50 miles to the south. Tampa was the southernmost region to experience the quake, where trembling was preceded by a rumbling sound. The tremor was also felt through north and central Florida as well as in Savannah, Georgia.

The next tremor to be experienced by Floridians was centered outside the State. The Charleston quake of 1886 was felt throughout northern Florida, ringing church bells at St. Augustine and severely jolting other towns along that section of Florida's east coast. Jacksonville residents felt many of the strong aftershocks that occurred in September, October and November 1886.



On June 20, 1893, Jacksonville experienced another slight quake, apparently local, that lasted about 10 seconds. A second minor earthquake shook Jacksonville at 1:15 a.m., October 31, 1900. It caused no damage.

Table 4-2.
Value and Number of Buildings in 50-Year Ground Motion Zones

Building Type	Value	Value (in Millions)
Single Family Housing	\$1,463,310,770	\$1,463
Assisted Living Facilities	\$8,204,679	\$8
Mobile Homes	\$192,783,577	\$193
Multi Family Housing	\$366,346,057	\$2,258
Commercial/Industrial	\$1,036,873,756	\$1,037
Schools	\$160,018,934	\$160
Religious Facilities	\$68,131,984	\$68
Government Buildings	\$101,715,643	\$102
Total	\$3,397,385,400	\$5,289

Source: <http://earthquake.usgs.gov/regional/states/?region=Florida>

4.1.2. Tsunamis

Overview

Tsunamis are large sea waves produced by seismic disturbances in the ocean. Such disturbances are typically associated with earthquakes, massive landslides, or volcanic eruptions. According to some scientific research, they may also be caused by hurricanes.¹

Locations Affected, Extent and Probability

According to a jointly published NOAA and USGS paper, there are identified areas in the Atlantic Ocean that could cause a tsunami that would affect the East Coast of the United States. However, it was noted the likelihood of a tsunami is low. It is also highly unlikely that a tsunami would affect the County because it is over 60 miles from the Atlantic coast. Therefore, both the unincorporated areas as well as the municipalities located within the County are considered to be at minimal risk to tsunamis. Since the risk of tsunami damage is virtually nonexistent an assessment potential damage to the County infrastructure was not conducted.

¹ <http://www.bioedonline.org/news/news.cfm?art=2486>



Past Occurrences

There is one recorded case of a tsunami affecting the coast of Florida. This occurred in 1886 and was observed in South Carolina and Florida. There are no recorded incidents of tsunamis affecting the County.²

4.1.3. Coastal & Riverine Erosion

Overview

Coastal erosion is the wearing away of land or the removal of beach or dune sediments by wave action, tidal currents, wave currents, or drainage. Waves, generated by storms, wind, or fast moving motor craft, cause coastal erosion, which may take the form of long-term losses of sediment and rocks, or merely the temporary redistribution of coastal sediments; erosion in one location may result in accretion nearby.

Riverine erosion is the wearing away of river or stream banks that may be the result of naturally occurring inputs such as precipitation, or human intervention in the form of urban development, forestry, mining, flow diversions, flood regulation, navigation, and other activities. When stormwater flows exceed channel capacity, water will overtop channel banks and spread out as floods. For more information on flooding see section 4.1.7.

Locations Affected, Probability and Magnitude

Riverine Erosion can occur in the County as the result of floods and heavy rains. Due to the fact that the County is located inland, approximately 70 miles east of the Atlantic Ocean and 100 miles west of the Gulf of Mexico coastal erosion is not an issue. The County is bounded to the northwest by the Suwannee River and to the south by the Santa Fe River with numerous smaller rivers and streams located throughout the area. At present, there are no known significant incidents of riverine erosion in the County. Therefore, both the unincorporated areas as well as the municipalities located within the County are considered to be at low risk to coastal and riverine erosion due to the fact that the County is not close to the coast and there are no recorded erosion events. No information is available regarding potential dollar loss or structures vulnerable.

² Weaver, Craig S. 2008. U.S. States and Territories National Tsunami Hazard Assessment: Historical Record and Sources for Waves. U.S. Geological Survey http://nethmp.tsunami.gov/documents/Tsunami_Assessment_Final.pdf



Past Occurrences

There are no known occurrences of significant erosion in the County.

4.1.4. Sinkholes

Overview

Sinkholes are holes or depressions in the ground created by slightly acidic ground water dissolving cavities and caves in the limestone over a period of many years. They can occur anywhere in Florida due to the limestone bedrock which underlies the entire state. When the cavity enlarges to a point where its ceiling can no longer support the weight of the overlying sediments, the earth collapses into the cavity. In less catastrophic forms of sinkholes, a bowl-shaped depression forms at the surface, usually over a considerable period of time. Well drilling data suggests that much of the underlying bedrock in Florida is riddled with cavities of differing size and depth. However, relatively few ever collapse and directly affect roads or dwellings.

Locations Affected, Probability and Magnitude

Sinkholes are naturally occurring and are known to affect both the incorporated and unincorporated areas of the County. When they strike populated areas or critical facilities, they can be disastrous. If large enough, sinkholes can become disruptive to the point of creating an emergency.

Sinkhole occurrences within the County have been recorded by the Florida Geological Survey and two were recently recorded by the County EOC personnel. It should be noted that Columbia County Emergency Management personnel recently started recording sinkholes on County property but not on private property. Although the County has recorded more than 2 sinkholes in the past year, it is likely that other many occurrences have not been recorded due to the inability to access private property. Since sinkholes are occurring at a rate of 1-2 over a 5 year period, the probability of sinkholes affecting both the unincorporated areas as well as the municipalities located within the County is moderate.



Table 4-3.
Recorded Sinkhole Events

Date Discovered	Latitude	Longitude
7/27/1970	29.8875	-82.66528
10/21/1970	29.8875	-82.67222
1/1/1970	29.90972	-82.69861
10/11/1971	29.8875	-82.61111
8/25/1971	29.86806	-82.64722
10/20/1971	29.88889	-82.66944
6/26/1973	30.11667	-82.65833
8/16/1973	29.93611	-82.69583
9/6/1972	29.93611	-82.73472
9/25/1972	29.89167	-82.73472
10/30/1972	29.85972	-82.64444
10/31/1972	29.89583	-82.60833
1/15/1974	29.88472	-82.60694
6/9/1974	30.11667	-82.6625
1/14/1975	29.95278	-82.70556
1/25/1975	29.89722	-82.68472
unknown	29.88333	-82.66667
unknown	29.89167	-82.60833
unknown	29.89167	-82.60833
2/6/1978	30.08333	-82.60556
6/27/1983	30.05222	-82.705
9/30/1982	29.93972	-82.73806
3/19/1985	30.17083	-82.66667
9/15/1988	29.99306	-82.58333
1/2/2007	30.021	-82.77703
5/17/2009	29.8884	-82.69616

Source: Florida Geological Survey and Columbia County EOC

Past Occurrences

The locations of known sinkholes that materialized on County land are shown in Appendix E Figure SK1. It should be noted that sinkholes are also present on private property but are not mapped by the County.³

³ <http://ga.water.usgs.gov/edu/earthgwsinkholes.html>



Table 4-4.
Buildings Vulnerable to Sinkhole Hazard

Building Type	Value	Value (in Millions)
Single Family Housing	\$1,463,310,770	\$1,463
Assisted Living Facilities	\$8,204,679	\$8
Mobile Homes	\$192,783,577	\$193
Multi Family Housing	\$366,346,057	\$2,258
Commercial/Industrial	\$1,036,873,756	\$1,037
Schools	\$160,018,934	\$160
Religious Facilities	\$68,131,984	\$68
Government Buildings	\$101,715,643	\$102
Total	\$3,397,385,400	\$5,289

Source: Columbia County Assessor Database

4.1.5. Landslides

Landslides are not applicable to the County owing to its relatively flat topography.

4.1.6. Hurricanes and Coastal Storms

Overview

Hurricanes are tropical cyclones with high winds of 75 miles per hour or greater, usually accompanied by heavy rain, thunder and lightning, storm surge, and tornadoes. The Atlantic hurricane season is officially from June 1st through November 30th although storms are most likely to develop between August and October. Both high winds and flooding associated with hurricanes can cause significant damage within the County. Additionally, other coastal storms with lower wind speeds can also result in heavy rains, thunder and lightning, storm surge and tornadoes that can cause similar damage. Tornadoes, flooding and thunder storms are specifically addressed under separate subject areas.

Locations Affected, Probability and Magnitude

Although located inland and not subject to the storm surge, all parts of the County are vulnerable to high winds, flooding, tornadoes, and lightning strikes created by hurricanes and coastal storms.

A hurricane, depending on its severity, could cause significant damage and/or collapse of many buildings in the County, major disruptions to County critical facilities and adverse impacts to the economy. There are many mobile homes in the County which



are particularly vulnerable to winds generated by a storm. Radio towers used for emergency communication are also distinctly vulnerable.

Major dislocations of County residents could occur, requiring the use of emergency shelters. During a major hurricane event it is very likely that coastal areas will be evacuated toward inland counties, including Columbia County as it is a host county. This will put added pressure on emergency responders and cause traffic congestion on highway's I-10, I-75, and along other major roadways in the County.

Hurricanes have been subdivided into a series of categories based on strength. Below are overviews of each category.

Category 1 - Winds of 74 to 95 miles per hour. Damage caused primarily to shrubbery, trees, foliage and unanchored mobile homes. No real damage to other structures. Some damage to poorly constructed signs.

Category 2 - Winds of 96 to 110 miles per hour. Considerable damage to shrubbery and tree foliage, with some trees being blown down. Major damage to exposed mobile homes. Extensive damage to poorly constructed signs. Some damage to roofing materials of buildings and some window and door damage. No major damage to buildings.

Category 3 - Winds of 111 to 130 miles per hour. Foliage torn from trees and some large trees being blown down. Some damage to roofing materials of buildings and some window and door damage. Some structural damage to small buildings. Mobile homes destroyed.

Category 4 - Winds of 131 to 155 miles per hour. Shrubs, trees and signs blown down. Extensive damage to roofing materials, windows and doors. Complete failure of roofs on many small residences. Complete destruction of mobile homes.

Category 5 - Winds greater than 155 miles per hour. Shrubs, trees and signs are blown down. Considerable damage to roofs of buildings. Very severe and extensive damage to windows and doors. Some complete building failures. Small buildings overturned or blown away. Complete destruction of mobile homes.



Table 4-5.
Saffir/Simpson Hurricane Intensity Categories

Category	Central Pressure		Wind Speed		Damage
	millibars	Inches of Hg.	MPH	Knots	
1	>980	>28.9	74-95	64-83	Minimal
2	965-979	28.5-28.9	96-110	84-96	Moderate
3	945-964	27.9-28.5	111-130	97-113	Extensive
4	920-944	27.2-27.9	131-155	114-135	Extreme
5	<920	<27.2	>155	>135	Catastrophic

Source: Cedar Key Basin, Florida: Hurricane Evacuation Study, Final Technical Data Report, Department of the Army, Jacksonville District, Corps of Engineers, Table 2.1, Saffir/Simpson Hurricane Intensity Categories, 1996.

The HAZUS model shows a 1 in 50 year probability of hurricane force winds affecting any part the County. Therefore, it is concluded that the probability of a hurricane occurring within the incorporated and unincorporated areas of the County is moderate.

Table 4-6.
HAZUS-MH Model Prediction

Probability	Wind Gust Peak (mph)	Wind Gust Peak (knots)	Damage Prediction
1 in 10 year	50 – 65	43 - 56	Minimal
1 in 20 year	50 - 65	43 - 56	Minimal
1 in 50 year	65 - 80	56 - 70	Minimal
1 in 100 year	80 - 95	70 - 83	Moderate

Past Occurrences

Nineteen hurricanes/tropical storms were tracked through the County between 1851 and 2000. Other storms that have not tracked directly through the County but resulted in federal disaster declarations were in 2005 following Hurricanes Frances and Jeanne.



Table 4-7.
Storms Tracked Through Columbia County

Storm Name	Wind Speed (Knots)	Category	Date
Not Named	40	Tropical Storm	9-8-1880
Not Named	60	Tropical Storm	10-11-1882
Not Named	30	Tropical Depression	9-30-1885
Not Named	45	Tropical Storm	9-9-1888
Not Named	100	Category 3	9-29-1896
Not Named	40	Tropical Storm	10-12-1900
Not Named	50	Tropical Storm	7-29-1926
Not Named	45	Tropical Storm	9-15-1932
Not Named	40	Tropical Storm	8-22-1936
Not Named	30	Tropical Depression	9-21-1937
Not Named	40	Tropical Storm	10-24-1938
KING	35	Tropical Storm	10-19-1950
Not Named	40	Tropical Storm	9-20-1953
BRENDA	30	Tropical Depression	7-29-1960
DORA	90	Category 2	9-10-1964
ALMA	25	Tropical Depression	5-25-1970
SUBTROP1	40	Sub-Tropical Storm	5-23-1976
GEORGES	25	Tropical Depression	10-1-1998
GORDON	40	Tropical Storm	9-18-2000

Source: USGS GIS data. Source: <http://www.nhc.noaa.gov/>

Table 4-8.
Buildings Vulnerable to Hurricane

Building Type	Value	Value (in Millions)
Single Family Housing	\$1,463,310,770	\$1,463
Assisted Living Facilities	\$8,204,679	\$8
Mobile Homes	\$192,783,577	\$193
Multi Family Housing	\$366,346,057	\$2,258
Commercial/Industrial	\$1,036,873,756	\$1,037
Schools	\$160,018,934	\$160
Religious Facilities	\$68,131,984	\$68
Government Buildings	\$101,715,643	\$102
Total	\$3,397,385,400	\$5,289

Source: Columbia County Assessor Database



4.1.7. Flooding

Overview

Flooding can occur in the County as a result of high rains associated with hurricanes, coastal storms, and severe thunderstorms. While hurricanes and coastal storms are most likely to occur between August and October, flooding can occur during any month of the year.

Locations Affected, Probability and Magnitude

Figure FL1 in Appendix E identifies the areal extent of the County which is subject to flooding as a result of 100-year storm events. According to the FEMA flood zone designations, the majority of the A-Zone areas (1% annual chance of flooding) are in the more rural, unincorporated areas of the County.

According to accounts of historical flood events, there has been significant localized flooding when a storm produces a large amount of rain in a short time period. This localized flooding can be attributed to storm drains being clogged, damaged, or inadequate and tends to only affect the urban, incorporated areas of the County. Therefore, it is concluded that both the incorporated and unincorporated areas of the County are at moderate risk to flooding.

Past Occurrences

Certain low-lying areas of the County are subject to flooding from rising waters, particularly those within the floodplains of the Suwannee and Santa Fe Rivers. County floods of record have occurred in 1928, 1948, 1959, 1964, 1973, 1984, 1986, 1991, 1998 and 2009 according to the Suwannee River Water Management District. Table SRWMD in Appendix E shows historical extreme elevations at various river monitoring stations for these flood events.⁴

⁴ <http://www.fema.gov/hazard/flood/index.shtm>Buildings Vulnerable to Flood Hazard
Buildings Vulnerable to Flood Hazard



Table 4-9.
Buildings Vulnerable to Flood Hazard

Building Type	Building Value in X Flood Zone	Building Value in A Flood Zone	Building Value in AE Flood Zone	Building Value in AH Flood Zone	Building Value in 2% Annual Chance Flood Hazard Flood Zone	Total
Single Family Housing	\$1,342,727,568	\$85,601,013	\$38,310,458	\$16,172,527	\$11,866,708	\$1,494,678,274
Assisted Living Facilities	\$8,804,917					\$8,804,917
Commercial/Industrial	\$995,314,761	\$131,964,737	\$40,601,987	\$473,941	\$811,658	\$1,169,167,084
Government Buildings	\$101,715,643					\$101,715,643
Mobile Homes	\$172,763,496	\$12,785,417	\$3,676,164	\$7,680,639	\$1,768,213	\$198,673,929
Multi Family Housing	\$312,649,097	\$61,767,316	\$1,455,181		\$59,746	\$375,931,340
Religious Facilities	\$86,373,739	\$346,084	\$12,992,949			\$99,712,772
Schools	\$168,232,968	\$2,709,969				\$170,942,937
Total	\$3,188,582,189	\$295,174,536	\$97,036,739	\$24,327,107	\$14,506,325	\$3,619,626,896

Source: Columbia County Assessor Database

4.1.8. Wildfires

Overview

A wildfire is an uncontrolled fire that occurs in forest wildland or brush covered areas. They can be result from a variety of ignition sources including natural causes, such as lightning, or anthropogenic sources like arson and debris burning. In nature, wildfires provide a vital source of restoration for woodland communities with many plant and animal species depending on their regular occurrence. However, when communities are extended out into areas of old wildland, these fires can in time become natural hazards that can indiscriminately spread throughout an area. Their ability to jump gaps such as roads and rivers, can further their devastating effect on an area.

Locations Affected, Probability and Magnitude

Florida's ecosystems are dependent on natural fire. These low intensity fires re-nourish soil, thin abundant vegetation, and provide proper conditions for reproduction and forage. However, since the early 1950's when Floridians actively began to suppress all fires to protect newly planted forest areas and keep newly built dwellings safe, vegetative fuel has become dense and thick. Natural fires have given way to dangerous wildfires which often damage rather than benefit natural surroundings. Every year in



Florida, an average of 5,000 wildfires burn nearly 200,000 acres and affect residential and commercial areas over 85% of the time.

The growing number of people relocating to Florida adds to the wildfire problem. About 1,000 people move to Florida each day. Additionally, Floridians who are tired of big-city life are moving to rural areas to “get back to nature”. Many of them choose to live in areas where natural vegetation meets homes and communities. These areas are called the Wildland-Urban Interface. Often, new residents are unaware of the natural role of fire in Florida and therefore are unprepared.

Wildland-Urban Interface fires are fast moving fires that require many pieces of firefighting equipment and suppression operations that are both difficult and time-consuming. Wildfire suppression must also take on the challenge of home protection during almost every fire that is detected. The cost of these operations grows proportionally with their complexity. Since the County has been subject to three large fires over the past 10 years it was determined that all areas, except for the urban centers away from the urban interface, are moderately susceptible to wildfir

**Table 4-10.
Consequences of Wildfire**

Infrastructure	Environmental	Human	Vegetative	Economic
power outages	erosion	smoke inhalation	crop damage	business disruption
water/gas/communication lines disrupted	wildlife destruction	personal injury	timber damage	property loss
road closures	habitat loss	human evacuation	species endangered	economic loss
roadway destruction	species endangered	animal evacuation	invasive species increased	suppression cost
	water and air pollution			

Past Occurrences

Wildfires may occur in Florida at any point throughout the year. Typically, North Florida, including Columbia County, sees the greatest number of wildfires within the months of April, May and June. During the 20-year period from January 1, 1989 through December 31, 2008, Columbia County saw a total of 1,455 wildfires that burned 75,599 acres. This is an average of 73 wildfires each year, burning an average of 3,780 acres. During the 20 year period noted, three major fires - The Benton/Benton Grade Fires of 2000, The Impassable Bay Fire of 2004 and The Bugaboo Fire of 2007 - each had a heavy impact on Columbia County. When the impact of those fires is removed, Columbia County averages 480 acres per year lost to wildfire. Lightning-caused wildfires account for only 9% of the total wildfires in Columbia County; the remaining 91% are human-



caused.⁵ Human induced wildfires in Columbia County are primarily the result of “Escaped Debris Burning” (36%) and “Incendiary,” or the reckless or intentional burning of lands (10%).

Risk analysis for wildfires takes into account fuel types and density, fire history, and dwellings within the area. These factors as well as others are combined in the Florida Fire Risk Analysis System (FRAS) developed by the Florida Division of Forestry. FRAS displays maps depicting the greatest areas of concern in Columbia County.

The Risk Analysis map for Columbia County is shown in Appendix E Figure WF1.

The Level of Concern (LOC) is an integer scaled from 0 to 9 indicating the relative risk of Wildland Fire, and is an output of the Florida Division of Forestry Fire Risk Assessment System (FRAS). The Level of Concern Scale runs from low concern (1) to high concern (9). More information on FRAS and the LOC value is available at: http://www.fl-dof.com/wildfire/wf_pdfs/FRAS_User_Guide.pdf

Table 2 breaks down the Population at Risk in each of the 9 Division of Forestry Levels of Concern zones. Tables 3 and 4 break down the Structures at Risk and Values at Risk in the higher risk zones (Levels 4 – 9) by category.

Table 4-11.
Population at Risk for FDOF Fire Risk LOC*

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1(low)	0	0	0	0	0	0	0
Level 2	8587	1163	1142	5100	1261	64	490
Level 3	10732	2178	1648	4588	1145	32	712
Level 4	4170	1103	592	2209	978	32	369
Level 5(medium)	3735	1877	371	815	331	0	192
Level 6	3326	702	389	1701	536	22	202
Level 7	338	8	73	369	142	0	39
Level 8	5643	449	590	2189	592	0	344
Level 9(high)	594	126	46	75	107	0	76

Source: Suwannee Forestry Center

⁵ Florida Division of Forestry, Suwannee Forestry Center



Table 4-12.
Structures at Risk for FDOF Fire Risk LOC*

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/ Instit
Level 4	1890	979	331	58	192	50	280
Level 5(medium)	1667	805	343	46	143	71	259
Level 6	490	157	158	8	5	25	137
Level 7	1453	501	299	32	92	262	267
Level 8	2816	1138	344	118	133	846	237
Level 9(high)	3935	1726	332	483	320	988	86

Source: Suwannee Forestry Center

Table 4-13.
Value Of Structures for FDOF Fire Risk LOC*

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 4	\$509.02 MI	\$212.78 MI	\$28.80 MI	\$10.35 MI	\$84.16 MI	\$79.33 MI	\$93.60 MI
Level 5(medium)	\$425.10 MI	\$185.32 MI	\$30.74 MI	\$11.80 MI	\$29.90 MI	\$79.22 MI	\$88.12 MI
Level 6	\$116.76 MI	\$40.15 MI	\$15.76 MI	\$842.35 TH	\$8.91 MI	\$5.21 MI	\$45.90 MI
Level 7	\$471.87 MI	\$96.89 MI	\$27.58 MI	\$7.85 MI	\$11.14 MI	\$241.05 MI	\$87.36 MI
Level 8	\$788.37 MI	\$190.15 MI	\$31.19 MI	\$64.76 MI	\$113.36 MI	\$309.13 MI	\$79.78 MI
Level 9(high)	\$1.03 BI	\$233.93 MI	\$57.92 MI	\$180.85 MI	\$208.44 MI	\$322.89 MI	\$27.79 MI

4.1.9. Dam/Levee Failure

The County has no large dams or levees. Therefore, damage as a result of dam/levee failure is not applicable to the County.

4.1.10. Drought/Heat Wave

Overview

A drought is an extended period of time when there is an abnormally low amount of rainfall in a given time period. Drought can further be defined as lower than average amounts of groundwater resultant from lower amounts of rainfall. This causes wells to go dry and accordingly, the need for drilling deeper to meet water supply demands. Reduced water supply can lead to failed crops leading to adverse impacts to the local economy. Drought also strains ecosystems that rely on predictable seasonal rains and raises the danger of wildfire.



A heat wave is a prolonged period of time with excessively hot weather usually caused by a high pressure system. This excessive heat puts a strain on the local population. Overexposure can cause heat related illness or death. People that do not have access to air-conditioning are more vulnerable.

Locations Affected, Probability and Magnitude

Drought can be particularly damaging to the important agricultural industry of the County as well as resulting in an increased wildfire danger. Long-term concerns include the reduced supplies of potable water for domestic consumption. The entire County population could be affected by a drought or water shortage.

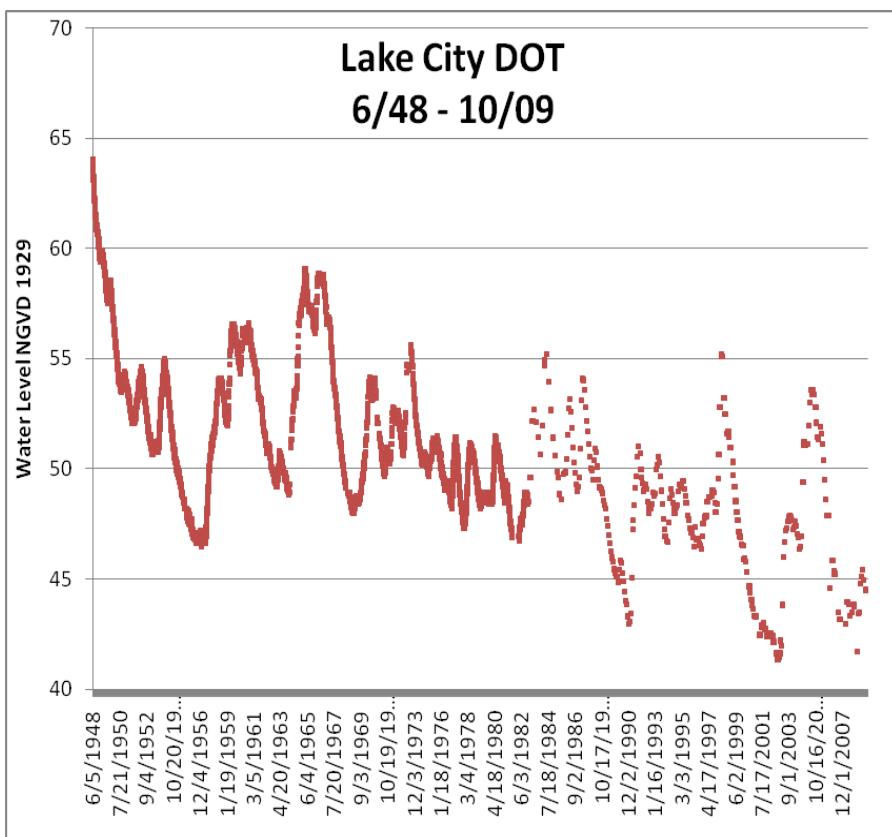
Long range climate forecasts indicate that drought will continue to be an issue in the County. Even with this trend, utilities have been able to provide water without interruption but this may change if a drought affects water supplies in the future. If such an event were to occur, responses may include water restrictions or conservation efforts implemented by the utilities companies or SRWMD. Therefore, it is concluded that the incorporated and unincorporated areas of the County are at low risk to drought/heat waves.

Past Occurrences

According to groundwater data collected by Suwannee River Water Management District (SRWMD) on regular basis since 1948, water levels in the municipal well field have fluctuated from a high of 64 feet (above mean sea level) in late 1940's to a low of 41 feet (above mean sea level) in the early 2000's. Although there are many periods of high groundwater levels in the past sixty years, the data shows a continued trend of lower groundwater levels. Figure 4-1 shows this trend for the City of Lake City.



Figure 4-1: City of Lake City Historic Water Levels



Source: SRWMD

4.1.11. Winter Storms/Freezes

Overview

Severe winter weather consisting of freezing rain, sleet, snow and below freezing temperatures are taxing to the resources of citizens, businesses, timber and agriculture. Extreme freezing conditions can render roads impassable, thereby having a dramatic effect on local emergency response agencies. Below freezing temperatures could cause electrical power outages thereby leaving many homes without heat. In such cases, the requirement to open emergency shelters could exist.

Past Occurrences

The last winter storm to occur in the County was the "no name" of March 1993. Significant wind damage was caused by this storm.



Locations Affected, Probability and Magnitude

Due to the nature of the Florida climate and the lack of winter storms to affect the County, it is concluded that the unincorporated areas of the County as well as the municipalities located within the County are at low risk to winter storms/freezes.

4.1.12. Tornadoes and Downbursts

Overview

Tornadoes are characterized by violent and destructive winds as well as hail, flooding and lightning that accompany them. They materialize when large high pressure systems collide with low pressure systems. The most common, least destructive tornadoes are warm weather tornadoes which occur between May and August. Cool season tornadoes are the most destructive, occurring between December and April.

Downbursts are large wind events associated with thunder storms that also produce high wind. Unlike tornadoes that have a circular wind pattern, downbursts produce straight line winds that form by a column of sinking air hitting the ground and dispersing. Winds in excess of 150 mph are possible making these types of storms dangerous to life and property.

Locations Affected, Probability and Magnitude

The County is extremely vulnerable to tornado and downburst wind hazards due to a high concentration of the population residing in manufactured and/or mobile homes. A tornado or a series of tornadoes could affect many residents if they should occur in a populated area of the County.

The Fujita is used to classify the intensity of tornadoes: Weak tornadoes (F0 and F1), strong (F2 and F3), or violent (F4 and F5). The weakest tornadoes (F0) may damage chimneys and signs, whereas the most violent tornadoes (F5) can blow houses completely off their foundation.

Since the number of occurrences is low, the probability of a tornado hitting the County is low. Therefore, it is concluded that the unincorporated areas of the County as well as the municipalities located within the County are at low risk to tornadoes.

Past Occurrences

According to the Tornado History Project, there have been 19 tornadoes in the County since 1950. Thirteen of these tornadoes were rated as F0 or F1. Five were rated as F2 or F3 and one was not rated. Damage assessments range from \$5,000 to \$5,000,000. The most recent tornado was a F2 category storm that in March of 2008 in the incorporated area of Lake City. Damage was extensive (\$4,000,000) due to the storm occurring in an urban area. Figure TR1 in Appendix E identifies known locations of tornadoes and tornado tracks in the County by damage to man-made structures.



Table 4-14.
Buildings Vulnerable to Sinkhole Hazard

Building Type	Value	Value (in Millions)
Single Family Housing	\$1,463,310,770	\$1,463
Assisted Living Facilities	\$8,204,679	\$8
Mobile Homes	\$192,783,577	\$193
Multi Family Housing	\$366,346,057	\$2,258
Commercial/Industrial	\$1,036,873,756	\$1,037
Schools	\$160,018,934	\$160
Religious Facilities	\$68,131,984	\$68
Government Buildings	\$101,715,643	\$102
Total	\$3,397,385,400	\$5,289

Source: Columbia County Assessor Database

4.1.13. Thunderstorms

Overview

A thunderstorm is weather formation typically accompanied by strong winds and heavy rain. They also have the potential to produce hail, lightning, downburst winds and flooding. This section will focus on lightning and hail since wind events and flooding are covered elsewhere.

Locations Affected, Probability and Magnitude

Dangers associated with thunderstorms covered in this section include large hail, and lightning. Lightning can cause power outages, damage to structures as well as injury or death. During a single thunderstorm lightning strikes can continuously erupt over the duration of the storm. Hailstorms are less frequent than lightning. They can also damage buildings, vehicles and other emergency equipment during a storm.

Thunderstorms can occur daily within the County and are very likely to occur from June through September. Therefore, it is concluded that the unincorporated areas of the County as well as the municipalities located within the County are at high risk for thunderstorms.

Past Occurrences

While not as potentially damaging individually, many severe thunderstorms are produced during hurricanes, tornadoes and downbursts which are accompanied by high wind, hail, flooding and dangerous lightning. During 2009 there was a thunderstorm reported that caused straight-line winds but there was no severe damage reported. In addition there has not been any severe damage reported due to commonly occurring thunderstorms. Minor damage occurs from thunderstorms in the County each year and largely goes unreported.



Table 4-15.
Value and Number of Buildings Vulnerable to Thunderstorms

Building Type	Value	Value (in Millions)
Single Family Housing	\$1,463,310,770	\$1,463
Assisted Living Facilities	\$8,204,679	\$8
Mobile Homes	\$192,783,577	\$193
Multi Family Housing	\$366,346,057	\$2,258
Commercial/Industrial	\$1,036,873,756	\$1,037
Schools	\$160,018,934	\$160
Religious Facilities	\$68,131,984	\$68
Government Buildings	\$101,715,643	\$102
Total	\$3,397,385,400	\$5,289

Source: Columbia County Assessor Database

4.2. Assessing Vulnerability: Addressing Repetitive Loss Properties

Requirement §201.6(c)(2)(ii): [The risk assessment in all] plans approved after October 1, 2008 **must** also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged by floods .

Repetitive loss properties are properties with two or more flood insurance claims of at least \$1,000 have been filed with the National Flood Insurance Program (NFIP) over a 10-year period since 1978. There are 17 such properties within the County. They are presented in Appendix E on Figure RL1.

The repetitive loss information was obtained from FEMA and cross checked with the County Assessor parcel database. According to the Assessor data there are 14 single-family, 1 multi-family, 1 mobile home, and 1 commercial parcel. The average value of the buildings on these parcels is \$46,100.

Generally, there are clusters of repetitive loss properties along the Suwannee and Santa Fe Rivers. Other repetitive loss properties are located in isolated locations in the County and are associated with FEMA identified flood zones.



4.3. Analysis of Land Use and Development Trends

Requirement §201.6(c)(2)(ii): [The plan should describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

In 2008, Columbia ranked 40th out of the state's 67 counties for general population, estimated to comprise a total of 69,092 individuals⁶. This figure represents an overall increase of 22% over the April 2000 base estimate and is indicative of the growth trend Columbia is currently undergoing. Of the sixty nine thousand residents, more than twelve thousand are located in Lake City while nearly 500 can be found in Fort White, the county's only two incorporated areas. The rest, roughly 56,000 or about 81%, are spread throughout Columbia's 720 square miles of rural, unincorporated area.

**Table 4-16.
County Population Development Trends**

Place	2008 (est)	2000	1990
City of Lake City	12,427	9,980	10,005
Town of Fort White	483	409	268
Unincorporated	56,182	46,124	32,340

Source: U.S. Census Bureau, 2008 Population Estimates, Census 2000, 1990 Census

**Table 4-17.
County Population Projections**

Columbia County	2010	2015	2020	2025	2030
Low	66,000	68,400	70,100	71,100	71,500
Medium	68,800	74,200	79,200	83,500	87,600
High	71,500	80,300	89,200	98,200	107,300

Source: Bureau of Economic and Business Research, Florida State and County Population Estimates, April 2006 Report

One of the inherent principles guiding Columbia County's Comprehensive Plan is the preservation of rural areas coupled with the facilitation of growth in urban centers. To do this, the county has created Designated Urban Development Areas to which higher density residential, commercial, and industrial development are subsequently directed. Policy I.1.1. of the Future Land Use Element sets the basis for Designated Urban Development Areas, describing them as land development regulations that limit higher intensity development to "areas adjacent to arterial or collector roads where public facilities are available to support such a higher density or intensity." Ultimately, these

⁶ Source U.S. Census Bureau, 2008 Florida County Population Estimates (Geographies Ranked by Estimates)



regulations are applied to ensure that future development trends conform to a sustainable base from which the County can efficiently allocate services while encouraging the associated population to locate in regions of decreased vulnerability. Such a standard maintains the unique character of rural sectors, allows environmentally sensitive zones such as wetlands, floodplains, spring basins, etc. to function normally, and furthers county initiatives to acquire flood prone areas.

Start Here



5. MITIGATION STRATEGY

5.1. Local Hazard Mitigation Goals

Requirement §201.6(c)(3)(i): [The hazard mitigation strategy **shall** include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

The LMSWG reviewed the 2005 goals and decided as a group to revise and reorganize the goals. To better suit the needs of the communities, the Group chose to sort goals first by the hazards most likely to affect the County (Flooding, Hurricanes, and Wildfire) and then by incorporating all others under the heading of Multi-hazard, accounting for all other hazards identified. In addition, the Group brainstormed objectives for each goal to give the County a better means to measure the outcome of the goals. Although this format is completely different than the 2005 plan, most of the items remain in concept.

5.1.1. Flooding

Goal 1 – Minimize the effects of flooding in Columbia County

Objective 1.1

Identify most problem area's

Objective 1.2

Maintain and update flood data/maps

Objective 1.3

Ensure infrastructure can withstand and function effectively during flooding events.

Objective 1.4

Update and maintain current sub-division zoning regulations.

Objective 1.5

Perform additional flood studies in Zone A areas to establish Base Flood Elevations (BFE)



Objective 1.6
Purchase/retrofit repetitive loss properties

Objective 1.8
Continue to enforce zoning regulations and flood ordinance.

Objective 1.9
Annually review and update existing flood ordinances if necessary.

Objective 1.10
Continue to educate public on flood issues to include: safety, insurance, retrofitting/floodproofing, and maps

Objective 1.11
Work to increase inspection of existing properties in AE floodway zones for compliance with flood ordinance

Goal 2 – Minimize loss of public utilities

Objective 2.1
Update and maintain current zoning regulations to minimize damage and utility service disruption.

Objective 2.2
Continually work with utility companies to maintain utility service minimizing down time.

5.1.2. Hurricanes

Goal 3 – Minimize damage to existing and future buildings and infrastructure as a result of a hurricane.

Objective 3.1
Continue to enforce current building codes

Goal 4 – Minimize loss of public utilities

Objective 4.1
Update and maintain current zoning regulations to minimize damage and utility service disruption.



Objective 4.2

Continually work with County utility companies to maintain utility standards for minimizing down time.

Objective 4.3

Continually work with City utility companies to maintain utility standards for minimizing down time.

5.1.3. Wildfire

Goal 5 – Minimize the effects of wildfire in Columbia County

Objective 5.1

Support the Florida Division of Forestry with fuel reduction activities in the Wildland-Urban Interface.

Objective 5.2

Support Florida Division of Forestry to educate homeowners about wildfires and the need for vegetation management programs such as prescribed fire.

Objective 5.3

Coordinate with the Florida Division of Forestry to develop and retrofit strategies incorporating Firewise construction and landscaping techniques.

Goal 6 – Minimize loss of public utilities

Objective 6.1

Continually work with utility companies to maintain utility service minimizing down time.

5.1.4. Multi-hazard

Goal 7 – Minimize loss of life and property to natural hazards

Objective 7.1

Adhere to current rules and regulations to reduce the affects of coastal and riverine erosion

Objective 7.2

Maintain infrastructure at City Municipal Airport

Objective 7.3

Maintain sufficient number of emergency shelters



Objective 7.4

Evaluate current conditions of public building and facilities to withstand natural hazards

Objective 7.5

Ensure public facilities and buildings are hardened to withstand natural hazards

Objective 7.6

Promote early warning systems to promote the safety of citizens through communication regarding hazardous materials events

Objective 7.7

Work to provide continued training for government officials (through FEMA, ASFPM etc.)

Goal 8 – Minimize loss of public utilities

Objective 8.1

Maintain level of utility service to public in City limits

5.2. Identification and Analysis of Mitigation Actions

Requirement §201.6(c)(3)(ii): [The mitigation strategy **shall** include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

The Local Mitigation Strategy consists of actions designed to minimize potential losses to natural disasters identified in the risk assessment. The strategy provides for maintaining existing protection mechanisms provided in the County and municipal government comprehensive plans, land development regulations and other implementation mechanisms. The strategy also provides for identifying future local government capital improvements which, among other purposes, mitigate adverse impacts from natural disasters, and a public information program to educate County residents of the need to prevent and mitigate damage caused by natural disasters. Consideration was given to amending local government comprehensive plans to include the natural hazards maps and hazard mitigation goals contained in the Local Mitigation Strategy. After careful consideration, it was recommended that it would better serve the local communities to include references of the LMS hazard maps in the comprehensive plans. The Group determined that the fluctuation in hazards and the areas affected was



too great to be sufficiently effective over the seven year comprehensive planning timeframe and decided not to include the maps but instead where possible, refer to the LMS.

The County, as well as its municipalities, are small local governments lacking in financial resources. Therefore, it will be necessary for the County as well as its associated municipalities to rely heavily on state and federal grants to implement mitigation actions identified in the Local Mitigation Strategy.

As part of its strategy, the County will maintain its National Flood Insurance Program and Community Rating System certificate. The County and its associated municipalities will also use any Federal Emergency Management Agency updated floodplain maps prepared as a result of the Federal Emergency Management Agency Floodplain Map Modernization Program and Repetitive Loss Initiative. The County and its associated municipalities, when feasible, will also use any products produced through the Federal Emergency Management Agency's on-going field and database verification projects for repetitive loss properties.

The risk assessment identifies the County is most susceptible to hurricanes, floods and wildfires. After the 2004-05 hurricane season, the County and its associated municipalities evaluated their comprehensive plans and land development regulations for modifications to improve mitigation measures, with special emphasis on floods, hurricanes and wildfires.

The County improved its recordkeeping with regards to natural disasters. A historical record of natural disasters and disaster-related news events as published in local newspapers and media was established and is currently housed in the County Courthouse. The County also continues to maintain a list of repetitive loss structures and properties.

The County with the assistance of other related agencies (FDOT, SRWMD) implements a public education campaign regarding construction within floodable areas, the use of Firewise construction and landscaping practices, the use of burn bans, emergency water conservation regulations, as well as minimum housing codes with regards to minimum building standards. The County recently expanded their website to help disseminate this information.

For the 2010 update the LMSWG reviewed and revised the list of actions developed during the creation of the 2005 plan. Appendix F contains the list of all mitigation projects/initiatives for all identified hazards. The list contains actions that address the reduction of hazards on new as well as existing buildings and infrastructure.



5.3. Identification and Analysis of Mitigation Actions: National Flood Insurance Program (NFIP) Compliance

Requirement: §201.6(c)(3)(ii): [The mitigation strategy] must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.

Columbia County consists of two municipalities (City of Lake City and Town of Fort White) and the unincorporated area. The Town of Fort White is the only jurisdiction that does not participate in the National Flood Insurance Program (NFIP).

5.3.1. Unincorporated Columbia County NFIP Overview

The unincorporated area joined the NFIP on December 15, 1995. The community identification number is #120070. They currently have a CRS rating of 8 and the potential to improve to a rating of 7. The most recent Community Rating System (CRS) audit was conducted on July 22, 2009. As the county still awaits the results, any major findings will be incorporated into the LMS during the next scheduled update (see Section 6).

There are currently 708 flood insurance policies in force of which 366 are in the SFHA. Columbia County currently has 17 properties identified by the NFIP as repetitive loss. Appendix E.

The current flood maps were updated and adopted February 4, 2009. Prior to that date Columbia County was using flood maps from January 6, 1988. Floodplain studies on Rose Creek, Cannon Creek, and Montgomery Outlet Stream to create profiles were performed by FEMA and the Suwannee River Water Management District prior to our last map revision. These profiles can be found in Flood Insurance Study #12023CV000A dated February 4, 2009.

Columbia County's current floodplain ordinance was amended December 30, 2008 and can be found in Article 8 of the Land Development Regulations (Appendix H). The new ordinance was adopted to meet 44 Code of Federal Regulations Section 60.3(b) of the National Flood Insurance Program. The Columbia County Planner serves as the designated Floodplain Administrator (section 8.3.3 of Article 8.) and is also currently the CRS Coordinator.

Article 7 of the Land Development Regulations provides requirements for storm water management. Section 8.3.4 of Article 8 requires a development permit for all development on any properties located within designated flood hazard areas. Section 8.4.1 of Article 8 lists the procedures and requirements for a development permit. Section 8.5.2 of Article 8 lists the specific standards that must be adhered to for development in all A zones where a BFE has been established. Section 8.5.3 of Article 8 lists specific standards required for development in A zones where a BFE has not been established. Section 8.5.4 of Article 8 lists standards required for development in AO



zones. Section 4.2.27 Article Four restricts placement of any structure no closer than 75' to the Ichetucknee River, Olustee Creek, Sante Fe River and Suwannee River. All other waterfront yards are restricted to 50' to the mean high water line or generally recognized river bank. Section 4.2.38 of Article 4 lists requirements for development in stream to sink and watershed areas. Section 4.2.40 of Article 4 lists standards for finished floor heights on all properties that are not located in a special flood hazard area. Article 4 of the Land Development Regulations also has Conservation (section 4.3), Environmentally Sensitive Areas (section 4.4), Agriculture 1, 2, and 3 (section 4.5) zoning districts wherein low density development is required. These zoning categories also have a special provision that prohibits development within 35' of any wetland.

Columbia County has 512,554 acres of which 200,822 acres lie within a special flood hazard area (see Appendix E).

The last CAV was conducted December 10, 1993. It is unknown what issues were identified or resolved. The County and the State Floodplain Office are in the process of scheduling the next CAV.

As stated above, Columbia County does participate in the CRS and currently has a rating of 8. This represents a 10% savings on flood insurance rates for the community. Columbia County currently implements and gets credit for the following CRS activities:

Activity 310 - Elevation Certificates—copies of elevation certificates for properties built in the SFHA from June, 2004 and on are kept for the public to review

Activity 320 - Map Information----Notification to three key groups, (lending, insurance, realtors) of map change effective 2-4-09, sources of additional information and process for review of determinations.

Activity 330 - Outreach Projects----Flood information booklet sent to all properties that exist in determined repetitive flood areas.

Activity 350 - Flood Protection Information----Website created for public use.

Activity 410 - Additional Flood Data----flood studies done on additional areas of Alligator Lake, Lake Montgomery, Montgomery Outlet Stream, Cannon Creek, Rose Creek with profiles created for FIRM adopted February 4, 2009.

Activity 420 - Open Space Preservation----Aerial maps created depicting areas of open space within SFHA and acres of land designated as open space.

Activity 430LD Land Development Criteria---Aerial map created depicting low density, open space and special flood hazard areas.

Activity 440 - Flood Data Maintenance----Maintenance of flood maps to show and revisions (LOMA, LOMR, etc.)



Activity 450 - Storm Water Management----Inspection for compliance to all permits issued by SRWMD.

Activity 502 - Repetitive Losses----Map created to determine repetitive loss areas and properties. Outreach project sent to all properties located in potential repetitive loss area.

Activity 510 - Floodplain Management Planning----Update of LMS plan. Continued adherence to requirements set forth in Article 8 of Columbia County Land Development Regulations, Flood Prevention Damage Regulations.

The Conservation Element of Columbia County Comprehensive Plan contains many objectives and policies that support floodplain management provisions. Policy V.2.3 requires the county to identify and purchase environmentally sensitive lands. Policy V.2.4 establishes the 35 ft. buffer around all wetlands. Policy V.2.6 requires the county's land development regulations to require all new development to maintain the natural functions of environmentally sensitive areas. Policy V.2.7 requires the county to provide for the regulation of development within 100-yr. floodplain, regulating freeboard requirements and density. Policy V.2.14 and V.2.15 establish buffers from rivers, streams, creeks, etc. Policy V.3.2 requires all proposed subdivision plats be submitted to the Suwannee River Water Management District for review and comment.

The Columbia County Building Department currently requires all permit applications to be reviewed by the building official to ensure compliance with the Florida Building Code and to be reviewed by the zoning department to determine zoning and flood zone determinations. All permit applications must be signed off on by these two departments before a permit can be issued. Any information dealing with flood zone, BFE, FIRM panel # and date are shown on the permit as well as any other requirements such as finished floor elevation certificate, etc.

Building inspectors are required to obtain 14 continuing education credits every 2 yrs. The Certified Floodplain Manager is required to obtain 16 continuing education credits every 2 yrs. Columbia County currently has a tutorial for surveyors on the website on proper completion of elevation certificates.

The Emergency Operations Center of Columbia County works closely with the Building and Zoning Department to map areas that are prone to frequent floods and track repetitive loss properties. After a disaster all damaged structures are inspected and the damage documented. Repetitive loss properties are purchased utilizing grant monies whenever possible.

The county library maintains a wealth of information for the public to access to educated themselves on flood issues to include retrofitting, safety, insurance, maps, historical data, and many other sources of information.

The County recently developed an eight-page color booklet (Appendix G) for residence and property owners to educate and provide important information regarding the risk of floods in Columbia County. This booklet was sent to all property owners in the repetitive flood areas and is to be handed out to the general public at various fairs and



festivals. Copies will also be given to the library and are available in the Building and Zoning Dept.

Columbia County will continue to participate in the NFIP. The following actions have been identified, analyzed, and prioritized as necessary steps to remain in compliance with the program:

1. Continue to enforce the most current Florida Building Code, Land Development Regulations, and Comprehensive Plan,
2. Continue outreach efforts to the public with extra emphasis to those properties lying in the repetitive flood areas,
3. Continue to provide up-to-date FIRM information to all that seek information.
4. Continue to update our website with information that will benefit the public and educate the builders, surveyors, and engineers that we work with,
5. Continue to monitor all elevation certificates and maintain records and copies for anyone to review,
6. Continue to assist local insurance agents with obtaining correct FIRM's and flood insurance rates,
7. Continue to participate in all hazard mitigation efforts to include working with Columbia County's Emergency Operations Center to maintain and monitor hazard data for future planning,
8. Continue to obtain grants to purchase repetitive loss properties,
9. Submit all information to FEMA necessary to keep current FIRM's as accurate as possible,
10. Participate whenever possible in any future flood studies,
11. Continue to keep staff trained.

The Building and Zoning Department will be reviewing FEMA 85, Protecting Manufactured Homes from Floods and Other Hazards: A Multi-Hazard Foundation and Installation Guide as soon as it is released by FEMA. The Building and Zoning Department will then determine if flood policies need to be updated to comply with the publication. If changes are made, the department will then begin the process of educating the local mobile home installers. The department is also currently reviewing 24 CFR Part 3286 Manufactured Home Installation Program that was published June 20, 2008. This publication from HUD sets prerequisites for installation licenses. We will coordinate this effort with the State of Florida Department of Business and Professional Regulation to determine what changes will be required.

To improve our level of participation, possible changes for the future may include expanding the ESA zoning and land use classification to include properties that are in all A zones. Increase the freeboard requirement for development in SFHA's, prohibit development in any floodways, increase inspection efforts for non-compliance of



existing properties in AE floodway areas, participate in new flood studies as funds permit, and obtain additional funding to acquire more repetitive loss properties.

Columbia County will examine all CRS activities every 5 years during our CRS visit to determine if it is feasible to augment an existing activity or add additional activities.

5.3.2. City of Lake City NFIP Overview

The City of Lake City has been participating in the NFIP since October 29, 1976. The City's Community Identification Number is 120406. Currently the City has issued 54 flood insurance policies to which no claims have been paid. In addition, there are no repetitive loss properties within Lake City. The latest Community Assistance Visit (CAV) was conducted on August 7, 2009 (see Appendix H).

The current flood maps were updated and adopted February 4, 2009 and are reflected in City Ordinance #2009-1175 (see Appendix H). The most recent Flood Studies were conducted in 1988 and are included in the current adopted map.

The City of Lake City's Flood Management Ordinance is adopted Ordinance #2009-1175 and can be found in the City's Land Development Regulations as Article 8. The Ordinance makes findings to reflect current State and Federal requirements specifically those promulgated in part 44, CFR. In addition, there are program administrative components found in Subdivision Regulations (Art.5) and Planned Residential Developments (PRD Sec.)

Other Related Codes

The City of Lake City, Florida adopted and maintains a Comprehensive Plan which establishes Goals, Objectives, and Policies which establishes needs of the City to:

- Enhance quality of life by directing development to areas which have levels of service to accommodate growth in environmentally acceptable standards.
- Provide for traffic circulation
- Provide safe, decent, and sanitary housing in suitable environments

The City integrates flood plain management into the Comprehensive Plan through the following sections:

- Future Land Use (Sec. 1)
- Traffic circulation (Sec.2)
- Housing (Sec. 3)
- Levels of Service



- Sanitary sewer, solid waste, drainage, potable water and natural ground water aquifer recharge areas (Sec. 4)
- Conservation (Sec. 5)
- Recreation and Open Space (Sec. 6)
- Intergovernmental Coordination (Sec. 7)

City of Lake City Land Development Regulation (Ord. 1996-779-B) provides the following:

- Establishes Land Uses within districts (Art. 4)
- Provides for density or intensity of developments
- Establishes Subdivision regulations (Art. 5)
- High natural ground water aquifer recharge and water well field regulations (Art. 7)
- Flood damage Prevention (Art. 8)
- Hazardous Building regulations (Art. 9)
- Historic Sites and Structures preservation regulations (Art. 10)
- Concurrency Management (Art. 13)
- Enforcement and Review (Art. 14)

Although the City does not participate in the Community Rating System they have adopted and implemented standards above and beyond the NFIP standards in an effort to further reduce or eliminate damage from flooding.

Ord. 2009-1175, Sec. 50-67 requires 2' to bottom of floor joist where elevations for "A" zones are not specified.

Section 50-67 (4) (a) requires mobile homes outside of mobile home parks be elevated no lower than 2' above base flood elevation.

Section 50-67 (4) (6) requires mobile homes inside parks in "A" thru "A-30" zones be elevated no lower than 2' above Base Flood Elevation.

Ensure the Provision of Public Drainage Facilities for Future Developments by:

- Standards to ensure post run-off rates do not exceed re-development rates
- Provide guidance to developers of storm design requirements



- Maintain standards as adopted by Florida Department of Environmental Protection and Rules of the Suwannee River Water Management District
- Ensure provisions for safe and reliable potable water system and Fire Hazard reduction capabilities
- Provide for conservation element that establishes policies which conserve wetlands by use of alternative clustering development and the setting of density performance standards.
- Requiring the City to participate in the National Flood Insurance Program (NFIP)
- Establish 35' buffers around wetlands
- Where appropriate, City shall purchase environmentally sensitive lands (policy v.2.3)
- Establishes an Intergovernmental Coordination Element

The City's Land Development Administrator is designated as the Floodplain Administrator. In addition to information available within the public library the City's Growth Management Department maintains information and guides to development in SFHA's.

The City of Lake City will continue to participate in the NFIP. The following actions have been identified, analyzed, and prioritized as necessary steps to remain in compliance with the program:

- City will emphasize the establishment of on-going drainage maintenance programs to support timely maintenance and repairs of ditches and culverts to minimize affects of flood events.
- City will continue to emphasize and promote training for Planners/Plan Reviewers for certification as Flood Plain Managers.
- Create and maintain overlay maps of SFHA's to identify additional flood prone areas not identified on adopted FIRM's.
- Identify flood prone areas not on FIRM's and apply for assistance grants to include areas on maps. (northeast section of city)
- Continue to provide information to assist homeowner and developer guidance and measures to reduce damage related to hazard identified in Local Mitigation Strategy.
- Apply through grant process measures to improve or construct shelters in the event of future hazards.



5.4. Implementation of Mitigation Actions

Requirement: §201.6(c)(3)(iii): [The mitigation strategy section **shall include**] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization **shall** include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

For the 2010 update the LMSWG reviewed and revised the list of actions developed during the creation of the 2005 plan. Appendix F contains the list of all mitigation projects/initiatives for all identified hazards. The list includes actions that address the reduction of hazards on new as well as existing buildings and infrastructure. To illustrate progress in mitigation efforts, the list also features project/initiative status such as completed, deleted, or deferred. The Working Group reviewed and upon joint agreement, revised the process by which projects are prioritized. The new process is explained below.

5.4.1. Prioritization Process

The main emphasis of the prioritization process is to promote initiatives with the greatest mitigation benefits which support public health and safety. In developing the prioritization procedures, it is not the intent of the Working Group to direct that the initiatives be accomplished in their prioritized order. The purpose of the ranking is to indicate the overall importance of the project to local mitigation efforts. The accomplishment of an initiative will usually depend more on the availability of funds, than on how high or low it ranked compared to other initiatives. After a natural disaster receives a presidential declaration and Columbia County was designated as a result of the disaster; the county will be eligible for Hazard Mitigation Grant Program funding. Once the county receives the disaster designation and/or allocation the LMSWG will convene to analyze the damage that was sustained. Then in respect to current conditions in the County, changes in policy and overall mitigation needs, the LMSWG will prioritize a list of projects to be funded for the specific disaster.

The prioritization process developed by the 2010 LMSWG requires the identification of projects and programs that appear to have a reduction in property damage, have technical merit, be cost-effective, and will protect the health, safety and welfare of Columbia County's citizens.

Each action is scored individually and is based on five weighted criteria developed by the LMSWG (below). The process to prioritize the mitigation actions is accomplished during joint meetings between Local Mitigation Strategy Working Group members and officials from the respective local governments. Using the same criteria, the City of Lake City prioritizes their own projects before submitting them to the LMS Working Group.



Listed below are the criteria and weighted values:

Prioritization criteria

1. Does it accomplish the one or all of the LMS goals
4 points for each goal accomplished to total no more than 32 points.
2. Does it promote the reduction of the loss of lives
Yes = 25 points; no = 0 points
3. Promote reduction in property damage
Yes = 20 points; no = 0 points
4. Is the project required by regulation or is there an additional benefit to be provided by sponsoring agency (federal, state, or local programs)
Yes = 10 points; no = 0 points
5. Funding availability.
 - a. Source already identified = 7 points
 - b. Strong potential source = 3 points
 - c. No source identified = 0 points
 - d. BONUS – if multiple sources are identified = 3 additional points

5.4.2. Implementation of Mitigation Actions

Actions implemented by the County and municipalities will be dependent on available funding. It is anticipated that the County and municipalities will seek federal, state, and local funds to assist in the implementation of action items involving capital improvements and/or additional personnel. In addition to local and county matching funds, there are hosts of funding sources available to counties of all sizes. Below is a list of possible funding sources that can be used for mitigation actions;

a) Capitalization Grants for Clean Water State Revolving Funds

Overview:

EPA awards capitalization grants to States to establish their Clean Water State Revolving Funds (SRF). The States, through the SRF, make loans for high priority water quality activities. As loan recipients make payments back into the fund, money is available for new loans to be issued to other recipients. While traditionally used to build wastewater treatment facilities, loans are used increasingly for other water quality management activities, including: (1) agricultural, silviculture, rural and urban runoff control; (2) estuary improvement projects; (3) wet weather flow control, including stormwater and sewer overflows; (4) alternative wastewater treatment technologies; and (5) nontraditional projects such as landfills and riparian buffers.



Eligibility:

Capitalization grant funds available to States, Puerto Rico, Territories and D.C. Indian Tribes can receive project grants from either EPA or Indian Health Service. States lend money to municipalities, communities, citizens' groups; nonprofit organizations; and private citizens implementing NPS and Estuary management activities (provided for in State plans developed under CES Sections 319 and 320).

b) Coastal Services Center Cooperative Agreements

Overview:

The Coastal Services Center supports projects aimed at developing creative science-based solutions to coastal management issues that will allow maintenance or improvement of natural resources while also allowing for economic growth. The Center will support activities in the following program areas: Landscape Characterization and Restoration; the Coastal Change Analysis Program; Coastal Remote Sensing; Integration and Development; the administration of the Coastal Management Fellowship program; training and meeting facilitation; and Special Projects.

Eligibility:

State and local governments, public nonprofit institutions/organizations, other public institutions/organizations.

c) Community Assistance Program-State (CAP-SSEE)

Overview:

The CAP-SSEE is intended to identify, prevent and resolve floodplain management issues in participating communities before they develop into problems requiring enforcement action. FEMA annually informs each State of its eligibility to participate in the SSEE under notification separate from the solicitation package with the Cooperative Agreement Performance Partnership Agreement (PPA) Package. The SSEE is administered through the Mitigation Division of each FEMA Regional Office. The CAP-SSEE is a product-oriented program directly related to the flood loss reduction objectives of the NFIP.

Eligibility:

States and Indian Tribes



d) Community Development Block Grant

Overview:

The Community Development Block Grants (CDBG) provide for long-term needs, such as acquisition, rehabilitation, or reconstruction of damaged properties and facilities and redevelopment of disaster-affected areas. Funds may also be used for emergency response activities, such as debris clearance and demolition, and extraordinary increases in the level of necessary public services. Eligible projects include the following: Voluntary acquisition, or if appropriate, elevation of storm damaged structures; Relocation payments for displaced people and businesses; Rehabilitation or reconstruction of residential and commercial buildings; Assistance to help people buy homes, including down payment assistance and interest rate subsidies; and Improvements to public sewer and water facilities.

Eligibility:

State governments that have elected to administer CDBG funds for non-entitlement communities; States with designated major disaster areas may receive statutory and regulatory waivers of program requirements regarding the use of regular CDBG funds which recipients designate to address the damage.

e) Conservation and Recreation Lands

Overview:

This grant program is intended to conserve environmentally endangered lands and provide resource conservation measures for other types of lands. Funding is provided for acquisition of environmentally endangered and other lands for resource conservation.

Eligibility:

States and Indian Tribes

f) Emergency Management Preparedness and Assistance Trust Fund/Municipal Competitive Grant Program

Overview:

The Emergency Management Competitive Grant Program and Municipal Competitive Grant Program provide competitive grants to state or regional agencies, local governments, and private non-profit organizations to implement projects that will further state and local emergency management objectives. The Municipal Competitive Grant Program provides competitive grants to municipalities that are legally constituted, have



an authorized, established, and maintained emergency management program, and have signed the Statewide Mutual Aid Agreement (SMAA). Applications are accepted in the following four categories under both programs:

1. Projects that will promote public education on disaster preparedness and recovery issues.
2. Projects that will enhance coordination of relief efforts of statewide private sector organizations, including public-private business partnership efforts.
3. Projects that will improve the training and operations capabilities of agencies assigned lead or support responsibilities in the State Comprehensive Emergency Management Plan.
4. Other projects that will further state and local emergency management objectives which have been designated by the State of Florida as priorities in the applicable Notice of Fund Availability.

Eligibility:

State or regional agencies, local governments, and private non-profit organizations may submit multiple proposals, to implement projects that will further state and local emergency management objectives; however, no individual proposal may exceed \$300,000 in requested grant funds. Each Municipal Emergency Management Program may apply for one competitive grant not to exceed \$50,000 in requested grant funds.

g) Environmental Education Grant

Overview:

The purpose of the Environmental Education Grant (EEG) is to provide financial support for projects, which design, demonstrate or disseminate environmental education projects, methods, or techniques. Projects must focus on one of the following: (1) improving environmental education teaching skills; (2) education teachers, students, or the public about human health problems; (3) building State, local, or Tribal government capacity to develop environmental education programs; (4) educating communities through community-based organizations; or (5) educating general public through print, broadcast, or other media.

Eligibility:

Local, Tribal, or State education agencies, colleges and universities, nonprofit organizations, State environmental agencies, and noncommercial education broadcasting agencies.



h) Federal Highway Administration, Planning & Environment, Intermodal and Statewide Programs

Overview

The intent of the Federal Highway Administration (FHA) Intermodal and Statewide Programs is the expeditious development and management of high quality feasibility studies with FHA funds. Within the context of Title 23 U.S.C. or in 23 CFR guidelines, the meaning of feasibility has the following parts:

1. The degree to which a given alternative mode, management strategy, design or location is economically justified.
2. The degree to which such an alternative is considered preferable from an environmental or social perspective.
3. The degree to which eventual construction and operation of such an alternative can be financed and managed.

Eligibility:

Public or private, profit or nonprofit entities or individuals; Local government agencies; Universities, colleges, technical schools, institutes

i) Flood Mitigation Assistance Program

Overview:

The Flood Mitigation Assistance program (FMAP) helps States and communities identify and implement measures to reduce or eliminate the long-term risk of flood damage to homes and other structures insurable under the National Flood Insurance Program (NFIP). Projects may include: (1) elevation, relocation, or demolition of insured structures; acquisition of insured structures and property; (2) dry flood proofing of insured structures; (3) minor, localized structural projects that are not fundable by State or other Federal programs (e.g., erosion-control and drainage improvements), and (4) beach nourishment activities such as planting of dune grass.

Eligibility:

State agencies, participating NFIP communities, or qualified local organizations; Communities that have been suspended from the NFIP are not eligible.



j) Florida Communities Trust (FCT)

Overview:

This grant program facilitates the purchase of lands for conservation and/or recreation purposes by local governments. This land acquisition program helps to implement conservation, recreation, open space, and coastal elements of local comprehensive plans. The Board of Florida Communities Trust has latitude to consider innovative financing arrangements, loans, and land swaps. However, most of the Trust's funding is for land acquisition. Land acquisition projects in which matching funds are available will receive more favorable consideration, although a portion of available funds may be awarded on outright grants.

Eligibility:

States and Indian Tribes

k) Hazard Mitigation Grant Program

Overview:

This program helps States and communities implement long-term hazard mitigation measures following a major disaster declaration. The program's objectives are to prevent or reduce the loss of life and property from natural hazards, to implement State or local Local Mitigation Strategies, to enable mitigation measures to be implemented during immediate recovery from a disaster, and to provide funding for previously identified mitigation measures that benefit the disaster area. Eligible projects include the elevation, relocation, acquisition, or demolition of structures that will reduce future losses and retrofitting of critical facilities.

Eligibility:

State and local governments, certain private non-profit organizations or institutions, and Indian tribes or authorized Tribal organizations and Alaskan Native villages or organizations; Project must be in a previously declared (by the President) disaster area.

l) Hurricane Program

Overview:

This program provides state and local assistance; property protection; hazard identification and evacuation studies; post storm analysis; training and exercises; and



public awareness and education campaigns, and materials to support State and local activities. The intent is to significantly reduce the loss of life, property, economic disruption, and disaster assistance costs resulting from hurricanes.

Eligibility:

Several states, including Florida.

m) Nonpoint Source Implementation Grants

Overview:

The 319 Program provides formula grants to the States to implement Nonpoint source projects and programs in accordance with Section 319 of the Clean Water Act. Examples of previously-funded projects include best management practices (BMPs) installation for animal waste; design and implementation of BMP systems for stream, lake, and estuary watersheds; basin-wide landowner education program; and lake projects previously funded under the CWA Section 314 Clean Lakes Program.

Eligibility:

States and Indian Tribes

n) Outdoor Recreation-Acquisition; Development and Planning (Land and Water Conservation Fund Grants)

Overview:

This grant program provides financial assistance to the States and their political subdivisions for the preparation of Statewide Comprehensive Outdoor Recreation Plans (SCORPs) and acquisition and development of outdoor recreation areas and facilities for the general public, to meet current and future needs. Acquisition and development grants may be used for a wide range of outdoor recreation projects, such as picnic areas, inner city parks, campgrounds, tennis courts, boat launching ramps, bike trails, outdoor swimming pools, and support facilities such as roads, water supply, etc. Facilities must be open to the general public and not limited to special groups. Development of basic rather than elaborate facilities is favored. Funds are not available for the operation and maintenance of these facilities.

Eligibility:

States and Indian Tribes



o) Pollution Prevention Grants Program

Overview:

This grant program provides project grants to States to implement pollution prevention projects. The grant program is focused on institutionalizing multimedia pollution (air, water, land) prevention as an environmental management priority, establishing prevention goals, providing direct technical assistance to businesses, conducting outreach, and collecting and analyzing data.

Eligibility:

States and Indian Tribes

p) Public Assistance (PA)

Overview:

This grant program provides supplemental assistance to States, local governments, and certain private nonprofit organizations to alleviate suffering and hardship resulting from major disasters or emergencies declared by the President. Grants can be used to clear debris; apply emergency protective measures to preserve life and property in response to the declared event; and repair or replace damaged structures, such as buildings, utilities, roads and bridges, water-control facilities and recreational facilities.

Eligibility:

States, Indian Tribes, and local governments; Also, eligible are private nonprofit organizations that operate educational, utility, emergency or medical facilities, provide custodial care or other essential services of a governmental nature to the general public.

q) Small County Road Assistance Program (SCRAP)

Overview:

The purpose of this program is to assist small county governments in resurfacing and reconstructing county roads.

Eligibility:

Any county that has a population of 75,000 or less according to the federal census data. Capacity improvement on county roads shall not be eligible for funding under the program.



At a minimum, small counties shall be eligible only if the county has enacted the maximum rate of the local option fuel tax authorized by section 336.025(1)(a), and has imposed an advalorem millage rate of at least 8 mills or the county has imposed an advalorem millage rate of 10 mills. The primary criterion is the physical condition of the road as measured by the Department.

r) Small County Outreach Program (SCOP)

Overview:

The purpose of this program is to assist small county governments in repairing or rehabilitating county bridges, paving unpaved roads, addressing road-related drainage improvements, resurfacing or reconstructing county roads, constructing capacity or safety improvements to county roads. Small counties shall be eligible to compete for funds that have been designated for the Small County Outreach Program for projects on county roads. The Department shall fund 75% of the cost of projects on county roads funded under the program. Any initial bid costs or project overruns after the letting that exceed the Department's participation as stated, will be at the county's expense. This will help ensure that the funds are utilized on as many projects as possible.

Eligibility:

The county must have a population of 150,000 or less as determined by the most recent official estimate pursuant to Section 186.901, Florida Statutes. The county has attempted to keep county roads in satisfactory condition which may be evidenced through an established pavement management plan.

The county must provide 25% of the project costs. The county's participation may be in the form of matching local funds (i.e., in-kind services). Such matching funds will be deducted from the project costs as part of the county's contribution. The Department will participate to the extent stated above. Cost overruns or scope changes after letting shall be covered by the counties.

s) County Incentive Grant Program

Overview:

This program provides grants to counties, to improve a transportation facility which is located on the State Highway System or which relieves traffic congestion on the State Highway System.

Eligibility:

To be eligible for consideration, projects must be consistent, to the maximum extent feasible, with local metropolitan planning organization plans and local government comprehensive plans.



t) Special Economic Development and Adjustment Assistance Program-Sudden and Severe Economic Dislocation (SSED) and Long Term Economic Deterioration (LTED)

Overview:

The Economic Adjustment Program Grants assist State and local areas in the development and/or implementation of strategies designed to address structural economic adjustment problems resulting from sudden and severe economic dislocation such as plant closings, military base closures and defense contract cutbacks, and natural disasters (SSED), or from long-term economic deterioration in the area's economy (LTED). Grants may be made to develop an Economic Adjustment Strategy Grant, or to implement such strategies. Implementation grants may be made for the construction of public facilities, business development and financing (including revolving loan funds), technical assistance, training or any other activity that addresses the economic adjustment problem.

Eligibility:

States, cities, counties or other political subdivisions of a State, consortia of such political subdivisions, public or private nonprofit organizations representing redevelopment areas designated under the Public Works and Economic Development Act of 1965, Economic Development Districts established under Title IV of the Act, Indian Tribes; Geographic areas, usually counties, or groups of counties, which meet either LTED and/or SSED eligibility criteria; LTED eligibility determined by: (1) Very high unemployment; (2) low per capita income; and (3) chronic distress. For SSED eligibility, the economic dislocation must exceed certain job loss thresholds for the area.

u) Transportation Equity Act for the 21st Century, Surface Transportation Program

Overview:

Surface Transportation Program (STP) funds may be used by State and local governments for any roads (including the National Highway System) that are not functionally classified as local or rural minor collectors. Each State sets aside 10% of STP funds for transportation enhancements, which can include water-related projects, such as wetland mitigation and implementation of control technologies to prevent polluted highway runoff from reaching surface water bodies. Other transportation enhancements include landscaping and other scenic beautification, pedestrian and bicycle trails, archaeological planning and research, preservation of abandoned railway corridors,



historic preservation, sidewalk modifications to comply with Americans with Disabilities Act, natural habitat or wetland mitigation efforts, Intelligent Transportation System (ITS) capital improvements and environmental and pollution abatement projects.

Eligibility:

Public or private, profit or nonprofit entities or individuals; Local government agencies; Universities, colleges, technical schools, institutes

v) Water and Waste Disposal Loans and Grants

Overview:

This program provides water and waste disposal facilities and services to low income rural communities whose residents face significant health risks. Funds may be used for 100% construction costs to construct, enlarge, extend, or otherwise improve a community water or sewer system; extend service lines and connect individual residences to a system. The program allows applicants to make grants directly to individuals to extend service lines, connect resident's plumbing to system, pay reasonable charges and fees for connecting to system, installation of plumbing and related fixtures, and construction in dwelling of a bathroom.

Eligibility:

Local governments, Indian Tribes and nonprofit associations.

w) Water Pollution Control

Overview:

This program assists in the establishment and maintenance of adequate measures for prevention and control of surface and ground water pollution. The program provides broad support for the prevention and abatement of surface and ground water pollution from point and nonpoint sources including water quality planning, monitoring, water quality standards, assessments, permitting, pollution control studies, planning, surveillance and enforcement; advice and assistance to local agencies; training; and public information. Funds cannot be used for construction, operation, or maintenance of waste treatment plants, nor can they be used for costs finance by other Federal grants.

Eligibility:

States, Indian Tribes and interstate agencies in establishing and maintaining adequate measures for prevention and control of surface and ground water pollution.



x) Watershed Protection and Flood Prevention

Overview:

This program works through local government sponsors and helps participants solve natural resource and related economic problems on a watershed basis. Projects include watershed protection, flood prevention, erosion and sediment control, water supply, water quality, fish and wildlife habitat enhancement, wetlands creation and restoration, and public recreation in watersheds of 250,000 or fewer acres. Technical and financial assistance is available for installation of works of improvement to protect, develop, and utilize the land and water resources in small watersheds.

Eligibility:

Local or State agency, county, municipality, town or township, soil and water conservation district, flood prevention or flood control district, Indian Tribe or Tribal organization, or nonprofit agency with authority to carry out, maintain, and operate watershed improvement works.

5.4.3. Administration of Actions

It is anticipated that the County, municipalities within the County, and private-not-for-profit corporations with actions included in the Local Mitigation Strategy, will apply for and administer grants for actions within their respective jurisdictions. The following is a list of agencies responsible for carrying out the identified mitigation actions contained in the Local Mitigation Strategy as well as the functions they provide.

(1) Columbia County Division of Emergency Management

The Division is the lead agency responsible to develop and maintain the Local Mitigation Strategy (LMS). This includes annual and 5-year updates and continual maintenance of the LMS mitigation project list. The Division is also responsible to help the communities prepare for, respond to, and mitigate against natural and man-made hazards.

(2) County and City Building, and Zoning Departments

Identify, develop and recommend changes to the building and zoning codes that will eliminate or lessen the impact of disasters. Assure enforcement of all existing building and land development regulations.

(3) County and City Fire Departments

Identify and recommend mitigation goals that will reduce and/or lessen the impact of wildfires within their jurisdiction. Provide education and training that will assist in accomplishing the mitigation goals and objectives.



(4) County School Board

Responsible for construction and maintenance of public schools used as emergency shelters. The School Board will be responsible for implementation of mitigation actions proposed for public school buildings.

(5) United Way of Suwannee Valley

Works with the Suwannee Valley Homeless Coalition and local churches to secure temporary warming shelters for the homeless and others without heat when temperatures fall below 35 degrees Fahrenheit.

(6) County and City Public Work Departments

Provide technical assistance and advice on identifying and accomplishing mitigation actions to improve the design, construction and placement of roads, bridges, culverts, etc., that will eliminate or lessen the impact of disasters.

(7) Florida Division of Forestry

Provide technical assistance and advice on all aspects of wildfire issues including identification and accomplishment of mitigation actions designed to reduce the loss of life and real property.

(8) Florida Department of Transportation

Provide technical assistance and advice on identifying and accomplishing mitigation actions to improve the design, construction and placement of roads, bridges, culverts, etc., that will eliminate or lessen the impact of disasters.

(9) Florida Division of Emergency Management

Provide technical assistance and funding when available; in all aspects of emergency management in order to better able the county to prepare for, respond to, and mitigate against natural and man-made hazards.

(10) Suwannee River Water Management District

Provide technical assistance and advice on identifying and accomplishing mitigation actions to help reduce or eliminate the impact of flooding in the County.

(11) Utility Company

Review and offers recommendations in regard to City subdivision plans and requirements.



Implementation Timeline:

In addition to the list of mitigation projects, the LMSWG identified other strategies in 2005 that would increase mitigation efforts throughout the County. The following table shows implementation status of those strategies. For the 2010 update the LMSWG reviewed each item, reported the status and identified additional strategies for the 2010 – 2015 planning period.

YEAR	DESCRIPTION	STATUS
2005 - 2010	Implement and enforce existing local government comprehensive plan policies, land development regulations, building codes and other local ordinances which mitigate/reduce susceptibility to natural disasters by the County and municipalities located within the County.	Conducted in an on-going process.
2005	Implement public warming shelters by not-for-profit organizations within the County.	Was identified by the 2005 LMSWG to be conducted during the 2005 timeframe. The 2010 LMSWG was unclear as to the intent of this strategy and will research further.
2006 - 2010	Apply for grant funds to assist the County and municipalities within the County with actions identified in the Local Mitigation Strategy.	Conducted on an on-going basis.
2006 - 2010	Implement public education programs as funding permits by the County and municipalities within the County.	Conducted on an on-going basis. Successful outreach consists of Flood information booklet sent to all properties that exist in determined repetitive flood areas as well as handed out to the general public at various fairs and festivals. The county library maintains a wealth of information for the public to access to educated themselves on flood issues to include retrofitting, safety, insurance, maps, historical data, and many other sources of information. County maintains a website with information that will benefit the public and educate the builders, surveyors, and engineers that we work with
2006	The County will begin to maintain a historical record of natural disasters and disaster related news events to assist in documenting natural hazards.	Was initiated in 2006 and continues on an on-going basis.



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2006	The County will begin to maintain an inventory of repetitive loss structures.	Was initiated in 2006 and continues on an on-going basis as part of the NFIP/CRS programs
2006	Request a drainage study of the Little River Basin from the Suwannee River Water Management District to identify future actions that may alleviate repetitive road damage, such as additional or larger culverts, grade elevations and bridges on flooded road segments.	Suwannee River Water Management District (SRWMD) has done some work and has incorporated data into the new flood study.
2007 - 2010	Encourage the school district when building new schools, to build core areas within schools in compliance with American Red Cross hurricane shelter standards.	Department of Education (DOE) now has jurisdiction over the building of educational facilities. Permits/plans are reviewed by DOE.
2007	Request the Florida Department of Transportation to place evacuation route signs on County hurricane evacuation routes and educate the public on use of evacuation routes.	Signs are on the interstate system. Implemented as expected.
2008	Review Local Mitigation Strategy as part of the County Comprehensive Plan Evaluation and Appraisal Report.	Due to the mismatched review cycles this was not accomplished. Although any LMS strategies identified in the Comprehensive Plan were reviewed as required by Statute.
2009 - 2010	Review, update, and seek approval for Columbia County Local Mitigation Strategy.	
2009	Review of Local Mitigation Strategy as part of the Town of Fort White Comprehensive Plan Evaluation and Appraisal Report.	LMS strategies identified in the Comprehensive Plan were reviewed as required by Statute.
2009	Submit proposed Evaluation and Appraisal-based amendments to the County Comprehensive Plan.	Submitted to Department of Community Affairs (DCA) in 2009
2010	Review of Local Mitigation Strategy as part of the City of Lake City Comprehensive Plan Evaluation and Appraisal Report.	LMS strategies identified in the Comprehensive Plan will be reviewed as required by Statute.
2010	Submit proposed Evaluation and Appraisal Report-based amendments to the Town of Fort White Comprehensive Plan.	
2010	Consider amendments to County Land Development Regulations to implement newly amended policies contained in Evaluation and Appraisal Report-based amendments to the County Comprehensive Plan.	
2010	Consider amendments to County Land Development Regulations to implement newly amended policies contained in Evaluation and Appraisal Report-based amendments to the County Comprehensive Plan.	
2011	Submit proposed Evaluation and Appraisal Report-based amendments to the City of Lake City Comprehensive Plan.	
2011	Consider amendments to Town of Fort White Land Development Regulations to implement newly amended policies contained in Evaluation and Appraisal Report-based amendments to the Town of Fort White Comprehensive Plan.	
2012	Consider amendments to City of Lake City Land	



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	Development Regulations to implement newly amended policies contained in Evaluation and Appraisal Report-based amendments to the City of Lake City Comprehensive Plan.	
2010 - 2015	Implement and enforce existing local government comprehensive plan policies, land development regulations, building codes and other local ordinances which mitigate/reduce susceptibility to natural disasters by the County and municipalities located within the County.	Conducted in an on-going process.
2010 - 2015	Apply for grant funds to assist the County and municipalities within the County with actions identified in the Local Mitigation Strategy.	Conducted on an on-going basis.
2010 - 2015	Implement public education programs as funding permits by the County and municipalities within the County.	



6. PLAN MAINTENANCE

6.1. Monitoring, Evaluating, and Updating the Plan

Requirement §201.6(c)(4)(i): [The plan maintenance process shall include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

The Columbia County Local Mitigation Strategy (LMS) is a living document that must continually reflect the changing needs of the communities as the county experiences growth and changes in relation to hazard vulnerability. Changes in land use and development can affect a variety of infrastructure issues such as potable water, sewer, roads, storm water runoff patterns and ecological considerations such as water quality. Natural Hazards and other processes, like erosion, continually alter hazard prone areas. In addition, the LMS process should help to achieve the mitigation goals and objectives identified and present the opportunity for the development of new goals and actions. Since many factors will affect the success of mitigation efforts, a planned evaluation and update of the Local Mitigation Strategy is essential at least once every five years. All monitoring, evaluation, and revisions of the Local Mitigation Strategy are coordinated by the Director of the Columbia County Emergency Management office in conjunction with the Columbia County Local Mitigation Strategy Working Group (LMSWG) to be known as the Working Group.

In addition to the five-year update, the Working Group will meet at least bi-annually (fall and spring) to monitor the progress of the LMS. The Working Group will monitor and review changes in the risk assessment and any changes in the progress of ongoing mitigation actions. As a result of these efforts, any significant changes as well as information required in Florida Statute 9G-22 will be submitted to the Mitigation Planning Unit at the Florida Division of Emergency Management within the timeframe outlined in the statute. Should a disaster or other type of emergency occur in the County, the Working Group may chose to meet early in the recovery phase, soon after damage assessments are conducted. At this point, the current strategy will be reviewed and necessary changes made based on lessons learned from the response and recovery phase of the disaster. Also, new mitigation actions identified as a result of the disaster will be considered and added to the project list if deemed viable.

The Columbia County Local Mitigation Strategy Working Group will initiate the 5-year update process as close to 18-months prior to the expiration of the LMS as possible. The 5-year update will be based on an evaluation/update of the risk and vulnerability assessment. The intent is to incorporate any changes in the estimate of replacement costs; new scientific data on hazards, the effects hazards have on the communities,



changes in growth patterns, and if there are any reductions in vulnerability due to completion of mitigation projects. Once the risk assessment is updated, the Working Group will utilize this information and evaluate the goals, objectives, and actions contained in the Local Mitigation Strategy to determine if they are still applicable.

In addition, the Working Group will evaluate whether or not the communities have the resources available to implement current and new programs and actions. The updated LMS will also capture the planning process followed during the update of the Plan.

During the 5-year LMS evaluation and revision process, one or more public meetings will be conducted by the Columbia County LMSWG which includes elected and appointed County officials and each participating municipality and their general public, for consideration of the proposed changes. Upon final coordination between these groups and formal approval from the Federal Emergency Management Agency (FEMA), the updated Local Mitigation Strategy will be presented to the Board of County Commissioners and the governing bodies of the municipalities for their approval and adoption.

6.2. Incorporation into Existing Planning Mechanisms

Requirement §201.6(c)(4)(ii): *[The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.*

When feasible, the local governments should incorporate the requirements of the Local Mitigation Strategy into their comprehensive plans and land development regulations. The process for amending local government comprehensive plans is specified by Florida law. Section 163.31 91, Florida Statutes, which requires local governments to prepare Evaluation and Appraisal Reports of their comprehensive plan once every seven years. The purpose of the process is to consider changes to comprehensive plans that reflect new information, comprehensive plan successes and failures, changing conditions and trends, as well as changes in state policy on planning and growth management which may have occurred during the prior seven years. Local governments will consider new information and policy guidance provided in the Local Mitigation Strategy in their next evaluation and appraisal report for amendments to their comprehensive plans. The last Evaluation and Appraisal Report for the County was submitted to the Florida Department of Community Affairs in September, 2008; the Town of Fort White in October, 2009; and the City of Lake City is due April 1, 2010. Amendments to local government comprehensive plans to implement recommendations contained in the reports are anticipated to be adopted by the local governments within one year of approval of their Evaluation and Appraisal Reports. Amendments to implementing regulations and ordinances necessary to implement the comprehensive plan



amendments are anticipated to occur within one year after approval of the comprehensive plan amendments.

Section 163.3 177, Florida Statutes, requires local government comprehensive plans to include a capital improvements element and a 5-year schedule of capital improvements. Furthermore, Section 163.3 177 (3)(b), Florida Statutes, requires the capital improvements element to be reviewed and modified as necessary on an annual basis. In addition, that statue mandates that the identified improvements be consistent with the plan and that all public facilities shall be consistent with the capital improvements element. Therefore, all identified capital improvement projects contained in the Local Mitigation Strategy which are anticipated to be implemented within the next five years should be considered for incorporation into capital improvements element on an annual basis.

The LMS is not intended to be created or used in a vacuum, if done correctly it should provide the local communities an opportunity to implement across planning boundaries. After careful review, below is a description of a variety of ways that the LMS has incorporated elements of other planning mechanisms and programs in addition to related mechanisms and program that have integrated components of the LMS.

a) Suwannee River Water Management District Strategic Plan 2009 – 2018

■ **Community-Based Flood Management**

SRWMD is in cooperation with FEMA, which has provided federal funding for FEMA flood rate map modernization. These maps provide data for local development regulations and help communities avoid flood hazards from new development. SRWMD will continue to develop accessible and accurate floodplain data for all communities (SRWMD Strategic Plan, pg 5). The updated maps are used for Columbia NFIP and CRS activities.

■ **Land Acquisition**

Acquiring land for nonstructural flood protection through the “Excellence in Land Management Program,” (Strategic Plan, pg 13). When appropriate the acquisition projects should be included on the LMS list of actions.

■ **Resource Monitoring and Reporting**

- SRWMD will improve water management through monitoring water quality and quantity in natural systems. The data collected will serve as an information source for developing Minimum Flow Level's, regulatory programs, land management, and flood protection (Strategic Plan, pg 5).
- Groundwater and surface water levels and rainfall networks are collected at numerous sites around the District. River levels and rainfall data are provided to the National Weather Service for use in flood forecasting.



During flood events, the District is a primary source of flooding information for the public (Strategic Plan, pg 9)

- Regulatory Programs
 - SRWMD will continue to implement district rules to protect resources and ensure minimal impact. Permits are required for all activities that affect water quality, flooding and stormwater management, water supplies, and impacts to water related natural systems (Strategic Plan, pg 6).

b) Columbia County Capital Improvements

- Serves as a means to monitor and evaluate the effectiveness of Columbia County's Planning Program
- Helps the County in maintaining a consistent level of service standards for public facilities and recreation
- The Capital Improvements Element strives to remain consistent with other elements in the Comprehensive Plan, particularly the Future Land Use Element.

c) Columbia County CRS and Floodplain Ordinance

- Columbia County's current floodplain ordinance was amended December 30, 2008 to meet 44 Code of Federal Regulations Section 60.3(b) of the National Flood Insurance Program.
- The Emergency Operations Center of Columbia County works closely with the Building and Zoning Department to map areas that are prone to frequent floods and track repetitive loss properties. After a disaster all damaged structures are inspected and the damage documented. Repetitive loss properties are purchased utilizing grant monies whenever possible.
- Columbia County maintains a variety of outreach programs to ensure residents can easily access flood information and remain informed about the latest issues surrounding flood management.
 - The county library maintains a wealth of information for the public to educate themselves on flood issues which include retrofitting, safety, insurance, maps, historical data, and many other sources of information
 - The county has also developed a booklet for residence and property owners to educate and provide important information regarding the risk of floods in Columbia County.



d) Columbia County Land Development Regulations

- Article 4 – Zoning Regulations
 - Columbia County attempts to limit development in flood prone areas by requiring all structures (with the exception of permitted docks, walkways, a piers) to be set back a minimum of 35 feet from wetlands, 75 feet from the Suwannee, Santa Fe, and Ichetucknee Rivers, and 35 feet from all other perennial rivers, streams, and Creeks (Sec. 4.3.7, 4.4.7, 4.6.7, 4.7.7, 4.8.7, 4.9.7, 4.10.7, 4.11.7, 4.12.7, 4.13.7, 4.14.7, 4.15.7, 4.16.7, 4.17.7, 4.18.6, 4.18.12, 4.19.6, 4.19.12, 4.20.7)
 - Columbia County restricts development of environmentally sensitive areas “ESA” defined as districts with land used to “ provide mitigating measures to protect the natural functions of areas which are limited to the planning and treatment of land development within the 100-year floodplain of the Ichetucknee Springs State Park, O’Leno State Park, Osceola National Forest, Pinhook Swamp, Suwannee River Corridor, Santa Fe River Corridor and Ichetucknee Trace, as designated within the Federal Emergency Management [Agency] flood insurance rate map for the county.” These regulations prohibit intensive residential, intensive recreational and intensive agricultural uses and prohibit industrial and commercial development within the 100-year floodplain of the areas designated as environmentally sensitive areas (Sec 4.4.1).
 - Columbia County mitigates the potential for fires by requiring industrial zoned districts with bulk storage yards (including bulk storage of flammable liquids) to be subject to provisions of local and state fire codes (Sec. 4.17.5)
 - Site analyses are required for all planned residential developments in order to identify flood prone areas (Sec 4.18.6, 4.19.6)
- Article 5 – Subdivision Regulations
 - Columbia County requires that subdivided land shall prevent periodic and seasonal flooding by providing adequate protective flood control and drainage facilities (Sec 5.2.2).
 - Land which the Board of County Commissioners finds to be unsuitable for subdivision development due to flooding, improper drainage, steep slopes, rock formations, adverse earth formations or topography, utility easements, or other features which will reasonably be harmful to the safety, health, and general welfare of the present or future inhabitants of the subdivision and/or its surrounding areas shall not be subdivided or developed unless adequate methods are formulated by the subdivider and approved by the Board of County Commissioners to solve the problems created by the unsuitable land conditions (Sec 5.5)
 - Preliminary subdivision plats are required to document natural features, including lakes, marshes or swamps, water courses, wooded areas, and



land subject to the 100-year flood as defined by the Federal Emergency Management Agency official flood maps (Sec. 5.33, 5.36)

- Article 7 – Stormwater Management Regulations
 - Actions taken under emergency conditions to prevent imminent harm or danger to persons, or to protect property from imminent fire, violent storms, hurricanes, or other hazards is exempt from land development regulation. A report of the emergency action to the board of county commissioners and water management district is required as soon as possible (Sec. 7.2.1).
- Article 8 – Flood Damage Prevention Regulation (see above “Columbia County CRS for more info)
 - Columbia County maintains a set of floodplain regulations that are designed to restrict, protect, control, and prevent or regulate flooding throughout the County (Sec 8.1.3)
- Article 12 – Appeals, Special Exceptions, Variances
 - The Board of County Commissioners may permit modifications in the minimum standards of design set forth within flood damage prevention regulations. The Land Development Regulation Administrator shall maintain the records of all variance actions and report any variances to the Federal Emergency Management Agency upon request (Sec 12.3.3)
- Article 14 – Permitting and Concurrency Management
 - Mining which will result in an adverse effect on environmentally sensitive lands, such as wetlands and floodplains is prohibited (Sec 14.7).

e) Columbia County Comprehensive Plan 2023

- Future Land Use Element
 - In moving forward, Columbia County will continue to preserve environmentally sensitive areas (within the areas of the 100-year flood, as designated by the Federal Emergency Management Agency flood insurance rate map dated January 6, 1988, and located in the Santa Fe River corridor, Suwannee River corridor, Olustee Creek corridor and Ichetucknee trace). All developments in these areas will maintain a 75-foot undisturbed buffer from a perennial river, stream or creek and a minimum 50-foot setback from a lake, pond or wetland and all of the developed area will remain outside of floodplains and wetlands (Policy I.1.6, I.2.2, .



- As part of the county's development review process, environmentally sensitive land (including flood prone areas) shall be identified for protection. (Policy I.7.4)
- Housing Element
 - In attempting to achieve its commitment to safe, affordable housing, Columbia County will prohibit future government subsidized housing in areas with the 100-year floodplain, as designated by the FEMA flood insurance rate map (Policy III.1.2)
- Conservation Element
 - a. In order to development land use in potentially hazardous location, Columbia County will continue to regulate development within the 100 year floodplain. In addition, the county shall participate in the National Flood Insurance Program and regulate all development and the installation of utilities in the county within flood hazard areas in conformance with the program requirements. Further, the county shall require all structures in the county to be clustered on the non-flood prone portion of a site. Where the entire site is in a flood prone area, or an insufficient buildable area on the non-flood prone portion of a site exists, all structures located in floodplains shall be elevated no lower than one foot above base flood elevation. Where the entire site is in a flood prone area or an insufficient buildable area on the non-flood prone portion of site exists, all structures located in areas of shallow flooding shall be elevated at least two feet above the highest adjacent grade (Policy V.2.8)

The following are examples “success stories” where Columbia County has successfully implemented mitigation theories and measures into other local planning mechanisms during the past 5 years.

a) Columbia County FEMA FIRM Map Updates

Columbia County has undergone a “county-wide” initiative to amend the County Comprehensive Plan code to include the updated FEMA Flood Insurance Rate Maps. FEMA’s latest flood insurance rate maps were adopted by the board of county commissioners in February 2009 and are on track to be fully incorporated within the comprehensive plan by February 2010

b) Comprehensive Plan Maintenance (Columbia County and Fort White) – 100 Year Floodplains

Columbia County’s local government comprehensive plans have maintained strict standard of limitations on land uses within environmentally sensitive areas and floodplains. The County strives to remain consistent in its limitations within the 100-year flood plains of the Ichetucknee and Suwannee Rivers as Environmental Sensitive on the future Land Use Plan Map.



c) Columbia County Comprehensive Plan Floodable Areas

During the 2004 hurricane season, Columbia County gained a significant amount of knowledge about the susceptibility of certain areas to flooding. Currently, the county is in the process of implementing higher development standards within drafted overlay districts outside the FEMA FIRM zones.

d) Columbia County Repetitive Loss Resident Buyouts

Columbia County encompasses a series of properties that have been designated as “repetitive loss”. The county is currently in an on-going process to continue to acquire and remove 20 high priority residences, preventing any further susceptibility to the welfare of these residents.

e) Columbia County, Fort White, Lake City Public Education for Disaster Prevention

The three jurisdictions combined in an initiative to further educational outreach for disaster prevention. The primary goal was to update the County’s website and provide an easily accessible tool for homeowners and business to gain knowledge on prevention and mitigation.

f) Columbia County, Fort White, Lake City Comprehensive Plan Evaluation

All three jurisdictions are continuing on a combined effort to evaluate the consistency of both county and local government comprehensive plans with the Local Mitigation Strategy. When inconsistencies arise and when feasible, local government comprehensive plans are to be amended to appropriately account for natural hazard mitigation with special emphasis on existing and future buildings and infrastructure.

g) Countywide Comprehensive Plan Water Conservation

Maintain local government comprehensive plan policies which support compliance with water conservation programs and emergency water conservation efforts established by the Suwannee River Water Management District.

6.3. Continued Public Involvement

Requirement §201.6(c)(4)(iii): [The plan maintenance process **shall** include a] discussion on how the community will continue public participation in the plan maintenance process.

The Columbia County Local Mitigation Strategy Working Group (LMSWG) will hold regularly-scheduled meetings throughout the 5-year mitigation planning process. All meetings of the LMSWG will be public meetings. There will be an opportunity at every



meeting for the public to speak and comment on the Local Mitigation Strategy and planning process for updating the Local Mitigation Strategy.

A legal notice of all County Local Mitigation Strategy Working Group meetings will be advertised on the Columbia County Emergency Management website and published in a newspaper of general circulation in the County prior to each meeting. The notice will specifically invite members of the public to attend and participate.

The Local Mitigation Strategy Working Group will provide a means for persons who do not attend the meeting to submit formal comments. A binder containing the draft Plan, meeting notices, agendas, meeting minutes, Power Point presentations and other materials presented at County Local Mitigation Strategy Working Group meetings will be available for review at the Columbia County Emergency Management office. Comments can be submitted in writing to;

CCEM Director
Columbia County Emergency Management
P.O. Box 1787 Lake City, FL 32056-1787.

Any person wishing to discuss the draft in person can set an appointment with the EM Director at (386) 758 – 1125. Drafts can also be found on the CCEM website at <http://www.columbiacountyem.com/>.

The County Local Mitigation Strategy Working Group will hold at least one public meeting prior to the approval of the updated Local Mitigation Strategy to solicit formal comments from the public. At this meeting, the County Local Mitigation Strategy Working Group will also consider any other comments collected from the public.

After approval by the County Local Mitigation Strategy Working Group, the revised plan and appropriate crosswalk will be submitted to the State and FEMA for review and final approval. Upon receiving an “approved pending adoption” letter from FEMA, the Working Group will present the updated plan to the County Commission as well as the Commissions of the City of Lake City and the Town of Fort White for approval and adoption. At least one jurisdiction must adopt the updated plan within one year of receiving FEMA’s “approved pending adoption” letter in order to receive a final approval. All other jurisdictions must adopt the updated plan in order to be eligible for federal mitigation grant funds.



7. APPENDICES



APPENDIX A

Resolutions (To be added upon adoption)

APPENDIX B

Meeting Materials

THE LAKE CITY REPORTER

Lake City, Columbia County, Florida

OF FLORIDA,
COUNTY OF COLUMBIA,

Legal Copy
As Published

Before the undersigned authority personally appeared Todd Wilson
who on oath says that he is Publisher of the Lake City Reporter, a newspaper published at
Lake City, Columbia County, Florida; that the attached copy of advertisement, being a .

in the matter of.....

Legal Notice of Meeting

in the Court, was published
in said newspaper in the issues of

July 19, 2009

Affiant further says that The Lake City Reporter is a newspaper published at Lake
City in said Columbia County, Florida, and that the said newspaper has heretofore been
continuously published in said Columbia County, Florida, and has been entered as second
class mail matter at the post office in Lake City, in said Columbia County, Florida, for a
period of one year next preceding the first publication of the attached copy of advertise-
ment; and affiant further says that he has neither paid nor promised any person, firm or
corporation any discount, rebate, commission or refund for the purpose of securing this
advertisement for publication in the said newspaper.

Sworn to and subscribed before me this

KATHLEEN A. RIOTTO
MY COMMISSION # DD 57782
EXPIRES August 20, 2010
SOUTHERN Budget Notary Services



20 July
Kathleen Riotto

Notary Public

NOTICE OF MEETING

The Columbia County Local Mitigation Strategy Working Group will
meet on July 23, 2009 at 9 a.m. at the
Columbia County Emergency Operations Center, located at 263 NW
Lake City Avenue, Lake City, Florida.

The purpose for this meeting is to re-
view the list of existing mitigation
projects and to identify new projects
that need to be included in the updat-
ed Local Mitigation Strategy.
The public is invited to attend this
meeting.

04533225
July 19, 2009



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Reverse 911 System

Important Links[Columbia County Fire Department](#)[Department of Homeland Security](#)[FL Division of Emergency Management](#)[Florida Emergency Preparedness Association](#)**Directions to the Columbia County Emergency Operations Center (EOC)****NOTICE OF MEETING**

The Columbia County Local Mitigation Strategy Working Group will meet on July 23, 2009 at 9 a.m. at the Columbia County Emergency Operations Center, located at 263 NW Lake City Avenue, Lake City, Florida.

The purpose for this meeting is to review the list of existing mitigation projects and to identify new projects that need to be included in the updated Local Mitigation Strategy. The public is invited to attend this meeting.

Emergency Management**Columbia County Emergency Management**

Stay tuned to WNMY AM 530 for information in the event of an emergency affecting Columbia County, as well as other local radio and television stations.

Welcome to our Site!

Make sure to check back frequently for the latest updates to our site!

If you need to contact our office:

Emergency Management Director: Ronnie McCardle

E-Mail: ronnie_mccardle@columbiacountyfla.com

Emergency Management Specialist: Shayne Morgan

E-Mail: shayne_morgan@columbiacountyfla.com

Mailing Address:

Columbia County Emergency Management

P.O. Box 1787

Lake City, FL 32056-1787

Phone: (386) 758 - 1125

Fax: (386) 752 - 9644

2009 Atlantic Ocean Hurricane Names

Ana

Bill

Claudette

Danny

Erika

Fred

Grace

Henri

Current Situation**Hurricane Season**

There are 132 days left until the end of the 2009 Hurricane Season!

**County Links**[Columbia County](#)[Columbia County Sheriff](#)[Columbia County Chamber of Commerce](#)**0 0 4 0 0 8**



COLUMBIA COUNTY EMERGENCY MANAGEMENT

P.O. Box 1787, Lake City, FL 32056-1787

Telephone (386) 758-1125 or (386) 758-1126 • Fax (386) 752-9644

EOC Hotline Number (386) 719-7530

www.columbiacountyem.com

Meeting: LMS Meeting

Date/Time: 7-23-09 ; 9 AM

Local Mitigation Strategy Working Group
Meeting Summary
2010 Update
July 23, 2009

Attendees

LMS Committee Member	Community Role	Municipality
Ian Dyar	American Red Cross	
Hugh Hunnicutt	National Guard	
Larry Roth	National Guard	
Gina Reynolds	County IDA / Chamber of Commerce	
Brian Kepner	CC Building & Zoning	
John Kerce	CC Building & Zoning	
Wayne F. Kichens	CCSO	
Bob Edgar	Red Cross	
Ronnie McCardle	CC Emergency Management	
Ron Croft	CC Emergency Management	
Shayne Morgan	CC Emergency Management	
Kevin Kirby	Public Works	
Dale Williams	BCC – Admin	
Stew Lilker	Columbia County Observer	
Connie Scott	CC Bldg & Zoning	
Laurie Hodson	CC Bldg & Zoning	

The meeting was opened and introductions were given. The consultant gave a general overview of the LMS update process describing why it is needed, who should be involved, what resources were needed to conduct the update, what timeframe to expect and the next steps.

The group was asked to review the Plan Maintenance Section of the plan and determine if the process is still viable. Following was an overview of the risk assessment and the process by which it will be updated. Current critical facilities list was discussed and requested.

The next meeting was set for August 20, 2009 from 9:00am – 12:00pm. Meeting was adjourned.

THE LAKE CITY REPORTER

Lake City, Columbia County, Florida

OF FLORIDA,
TY OF COLUMBIA,

Before the undersigned authority personally appeared Todd Wilson
no on oath says that he is Publisher of the Lake City Reporter, a newspaper published at
Lake City, Columbia County, Florida; that the attached copy of advertisement, being a .

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in the matter of
.....
Legal Notice of Meeting

in the Court was published
in said newspaper in the issues of *August 16, 2009*

Affiant further says that The Lake City Reporter is a newspaper published at Lake
City in said Columbia County, Florida, and that the said newspaper has heretofore been
continuously published in said Columbia County, Florida, and has been entered as second
class mail matter at the post office in Lake City, in said Columbia County, Florida, for a
period of one year next preceding the first publication of the attached copy of advertise-
ment; and affiant further says that he has neither paid nor promised any person, firm or
corporation any discount, rebate, commission or refund for the purpose of securing this
advertisement for publication in the said newspaper.

Sworn to and subscribed before me this 17 day of August,
A.D., 20 2009. * MY COMMISSION # DD 577782
EXPIRES: August 20, 2010
Bonded Thru Budget Notary Services



Todd Wilson
Todd Wilson
Notary Public

Legal Copy
As Published

NOTICE OF MEETING

The Columbia County Local Mitigation Strategy Working Group will meet on Thursday, August 20, 2009 at 9 a.m. at the Columbia County Emergency Operations Center, located at 263 NW Lake City Avenue, Lake City, Florida.

The purpose of this meeting is to review the list of existing mitigation projects and to establish new projects that need to be included in the updated Local Mitigation Strategy. The public is invited to attend this meeting.

04533886
August 16, 2009



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- [Emergency Medical Services](#)
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- [Announcements](#)



Reverse 911 System

Important Links[Columbia County Fire Department](#)[Department of Homeland Security](#)[FL Division of Emergency Management](#)[Florida Emergency Preparedness Association](#)**Directions to the Columbia County Emergency Operations Center (EOC)****NOTICE OF MEETING**

The Columbia County Local Mitigation Strategy Working Group will meet on Thursday, August 20, 2009 at 9 a.m. at the Columbia County Emergency Operations Center, located at 263 NW Lake City Avenue, Lake City, Florida. The purpose for this meeting is to review the list of existing mitigation projects and to establish new projects that need to be included in the updated Local Mitigation Strategy. The public is invited to attend this meeting.

Emergency Management**Columbia County Emergency Management**

Stay tuned to WNMY AM 530 for information in the event of an emergency affecting Columbia County, as well as other local radio and television stations.

Welcome to our Site!

Make sure to check back frequently for the latest updates to our site!

If you need to contact our office:

Emergency Management Director: Ronnie McCardle

E-Mail: ronnie_mccardle@columbiacountyfla.com

Emergency Management Specialist: Shayne Morgan

E-Mail: shayne_morgan@columbiacountyfla.com

Mailing Address:

Columbia County Emergency Management

P.O. Box 1787

Lake City, FL 32056-1787

Phone: (386) 758 - 1125

Fax: (386) 752 - 9644

2009 Atlantic Ocean Hurricane Names

Ana

Bill

Claudette

Danny

Erika

Fred

Grace

Henri

Current Situation**Hurricane Season**

There are 107 days left until the end of the 2009 Hurricane Season!

**County Links**[Columbia County](#)[Columbia County Sheriff](#)[Columbia County Chamber of Commerce](#)**0 0 4 3 2 2**



COLUMBIA COUNTY EMERGENCY MANAGEMENT

P.O. Box 1787, Lake City, FL 32056-1787

Telephone (386) 758-1125 or (386) 758-1126 • Fax (386) 752-9644

EOC Hotline Number (386) 719-7530

www.columbiacountyem.com

Meeting; LMS Columiba County EOC

Date/Time; 8-20-2009

Local Mitigation Strategy Working Group
Meeting Summary
2010 Update
August 20, 2009

Attendees

LMS Committee Member	Community Role	Municipality
Ronnie McCardle	CC Emergency Management	County
Ron Croft	CC Emergency Management	County
Shayne Morgan	CC Emergency Management	County
Larry Lee	City of Lake City	Lake City
Laura Rissener	City of Lake City	Lake City
Wayne Keen	Private Citizen	
Henry Land	Hamilton County E.M.	Hamilton Co.
Pam Allen	Hamilton County E.M.	Hamilton Co.
Gene Bullard	City of Lake City	Lake City
Jim Poole	Lake City Chamber of Commerce/IDA	Lake City
Connie Scott	CC Building & Zoning	County
Laurie Hodson	CC Building & Zoning	County

The meeting was opened and members welcomed. The consultant re-capped some of the previous meeting (July 23, 2009) for those who were not in attendance and as a reminder for those who were. The agenda for today's meeting was discussed and there were no unresolved issues at this time.

The timeline was reviewed again and future meeting dates were agreed upon and are as follows:

September 16, 2009 9:00 – 12:00pm
October 7, 2009 9:00 – 12:00pm
October 21, 2009 9:00 – 12:00pm

The LMSWG list from the 2004 Plan was cross referenced to ensure the participants for this update capture appropriate representation of the various segments of the county. The group developed a list of stakeholders whom they felt are missing and the LMS Chair will extend written invitations. Other housekeeping issues such as the organization of the plan were discussed. The group agreed that the current plan didn't flow well and it was agreed that the updated plan should follow the local guidance better. The Mitigation Strategy was reviewed and Goals and Objectives revised. The group brainstormed some new goals and objectives to be included in the update.

The Working Group reviewed the Risk Assessment, specifically the hazards and vulnerabilities that affect Columbia County. The Working Group reviewed the list of hazards that have affected Columbia historically and agreed to add lightning. Transportation in relation to hazardous materials was also discussed. This discussion sparked new discussion resulting in additions to the goals and objectives list. Obtaining historical hazard data was also discussed. The new data is to be incorporated and submitted for review by the LMSWG members. The next meeting is set for September 16, 2009 from 9:00am – 12:00pm. Meeting was adjourned.

THE LAKE CITY REPORTER

Lake City, Columbia County, Florida

Legal Copy
As Published

STATE OF FLORIDA,
COUNTY OF COLUMBIA,

Before the undersigned authority personally appeared Todd Wilson who on oath says that he is Publisher of the Lake City Reporter, a newspaper published at Lake City, Columbia County, Florida; that the attached copy of advertisement, being a .

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in the matter of
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in the
in said newspaper in the issues of September 16, 2009
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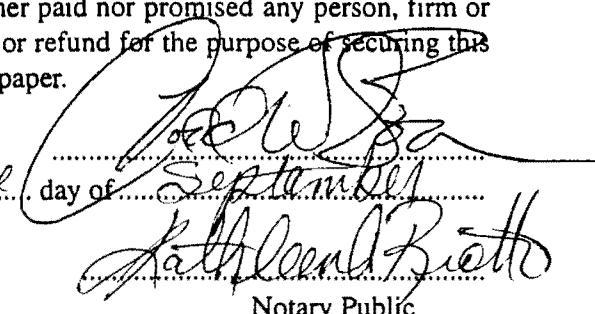
Affiant further says that The Lake City Reporter is a newspaper published at Lake City in said Columbia County, Florida, and that the said newspaper has heretofore been continuously published in said Columbia County, Florida, and has been entered as second class mail matter at the post office in Lake City, in said Columbia County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before me this 16 day of September
A.D., 2009 KATHLEEN A. RIOTTO
MY COMMISSION # DD 577782
EXPIRES August 20, 2010
Bonded Thru Budget Notary Services

The next meeting of the Columbia County Local Mitigation Strategy Working Group will meet on Wednesday, September 16, 2009 at 9 a.m. at the Columbia County Emergency Operations Center, located at 263 NW Lake City Avenue, Lake City, Florida.

The purpose of this meeting is to attempt to finalize objectives and projects that need to be in the 2009 Update of the Columbia County Local Mitigation Strategy. The public is invited to attend this meeting.

04534543
September 16, 2009


Notary Public



COLUMBIA COUNTY EMERGENCY MANAGEMENT

P.O. Box 1787, Lake City, FL 32056-1787

Telephone (386) 758-1125 or (386) 758-1126 • Fax (386) 752-9644

EOC Hotline Number (386) 719-7530

www.columbiacountyem.com

Meeting: 1 MS

Date/Time: 9-16-09; 9 AM

NAME	AGENCY	PHONE	E-MAIL
Shayne Morgan	Columbia County Em	386-7581125	Shayne.Morgan@columbiacounty.fl.us
Ronnie McCardle	Columbia County Em	758-1125	ronnie.mccardle@columbiacounty.fl.us
James Casen	CCFA	823-1257	JCASEN@COLUMBIACOUNTY.FIRE.COM
George Scott	Lake City Community College	386-7544 4325	SCOTT.G@LAKECITYCC.EDU
Laura Reissener	City of Lake City	719-5754	laura@lcfla.com
Larry Lee	" " "	719-5752	Lee.L@lcfla.com
Gene Bullard	" " "	719-5820	bullardg@lcfla.com
ED WARD	DOT	961-7581	ED.WARD@DOT.STATE.FL.US
Connie Breechen	Bldg & Zoning	754-7053	Connie.Scott@columbiacounty.fl.us
Leroy Marshall	Suwannee River WMD	762-1001	L.R.M@srwmd.org
Frank Armijo	L.C.F.D	752-3312	armijof@lcfla.com

Local Mitigation Strategy Working Group
Meeting Summary
2010 Update
September 16, 2009

Attendees

LMS Committee Member	Community Role	Municipality
Ronnie McCardle	CC Emergency Management	County
Gene Bullard	City of Lake City	Lake City
Shayne Morgan	CC Emergency Management	County
Larry Lee	City of Lake City	Lake City
Laura Reissener	City of Lake City	Lake City
Connie Brecheen Scott	CC Building & Zoning	County
George Scott	Lake City Community College	Lake City
James Cason	Columbia County Fire	County
Ed Ward	FDOT	
Leroy Marshall	Suwannee River Water MD	County
Frank Armijo	Lake City Fire Department	Lake City

The meeting was opened and members welcomed. The meeting agenda was discussed. There were no unresolved issues.

Meeting summaries from previous meetings were reviewed and comments/changes collected. Discussions included the process by which the draft LMS will be made available to the public. It was decided that the draft will be available on the City and County website as well as hard copies displayed in the jurisdictions respective libraries.

The LMSWG reviewed the goals and objectives brainstormed during the August 20, 2009. They were agreed upon with the addition of a few new objectives. The final version is to be emailed prior to the October 7, 2009 meeting for final approval. The Working Group reviewed the current section of existing plans, studies, reports and technical information and created a list of documents to be reviewed for this update. This list included Community Rating Survey Program activities, local and county Comprehensive Plans (conservation and land development regulation elements); Capital Improvement Element; Lake City Community College Emergency Management Plan, Suwanee Water Management District Management Plan, Columbia County Comprehensive Emergency Management Plan; and the Lake City Emergency Disaster Policy.

The next meeting is set for October 7, 2009 from 9:00am – 12:00pm. Meeting was adjourned.

THE LAKE CITY REPORTER

Lake City, Columbia County, Florida

OF FLORIDA,
COUNTY OF COLUMBIA,

Legal Copy
As Published

Before the undersigned authority personally appeared Todd Wilson who on oath says that he is Publisher of the Lake City Reporter, a newspaper published at Lake City, Columbia County, Florida; that the attached copy of advertisement, being a .

in the matter of

Legal Notice of Meeting

in the Court, was published
in said newspaper in the issues of ... *October 4, 2009*

Affiant further says that The Lake City Reporter is a newspaper published at Lake City in said Columbia County, Florida, and that the said newspaper has heretofore been continuously published in said Columbia County, Florida, and has been entered as second class mail matter at the post office in Lake City, in said Columbia County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before me this day of
A.D., 20 * *2009* * KATHLEEN A. RIOITO
MY COMMISSION # DD 57782
EXPIRES: August 20, 2010
Bonded Thru Budget Notary Services
STATE OF FLORIDA

Todd Wilson
Kathleen Rioito

Notary Public

Mary Beth's Copy

Please return a copy with payment

Total Due

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NOTICE OF MEETING

The Columbia County Local Mitigation Strategy Working Group will meet on Wednesday, October 7, 2009 at 9 a.m. at the Columbia County Emergency Operations Center, located at 263 NW Lake City Avenue, Lake City, Florida.

The purpose of this meeting is to attempt to finalize objectives and projects that need to be in the 2009 Update of the Columbia County Local Mitigation Strategy.

The public is invited to attend this meeting.

04534777
October 4, 2009



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County Fire Services](#)[Law Enforcement](#)[News / Media](#)[Alerts](#)[Public Service](#)[Announcements](#)**Directions to the Columbia County Emergency Operations Center (EOC)****NOTICE OF MEETING**

The Columbia County Local Mitigation Strategy Working Group will meet on Wednesday, October 7, 2009 at 9 a.m. at the Columbia County Emergency Operations Center, located at 263 NW Lake City Avenue, Lake City, Florida.

The purpose of this meeting is to attempt to finalize objectives and projects that need to be in the 2009 Update of the Columbia County Local Mitigation Strategy.

The public is invited to attend this meeting.

Emergency Management**Columbia County Emergency Management**

Stay tuned to WNYM AM 530 for information in the event of an emergency affecting Columbia County, as well as other local radio and television stations.

Welcome to our Site!

Make sure to check back frequently for the latest updates to our site!

If you need to contact our office:

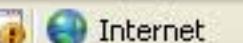
Emergency Management Director: Ronnie McCardle

Current Situation**Hurricane Season**

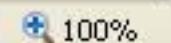
There are 53 days left until the end of the 2009 Hurricane Season!



**How's the
weather in
Lake City, FL?**

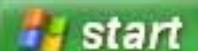
**County Links**[Columbia County](#)

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7:21 AM





COLUMBIA COUNTY EMERGENCY MANAGEMENT

P.O. Box 1787, Lake City, FL 32056-1787

Telephone (386) 758-1125 or (386) 758-1126 • Fax (386) 752-9644

EOC Hotline Number (386) 719-7530

www.columbiacountyem.com

Meeting: LMS

Date/Time: 10-7-09 ; 9 am

NAME	AGENCY	PHONE	E-MAIL
Shayne Morgan	CCEM	758-1125	Shayne.Morgan@columbiacounty.fl.a.com
Dale Williams	BCC Admin	758-1005	dale.williams@columbiacounty.fl.a.com
Bob Craft	CCEM/2dd/BS	758-1125	bob.craft@columbiacounty.fl.a.com
Ronnie McCordle	CCEM	758-1125	ronnie.mccordle@columbiacounty.fl.a.com
Leroy Marshall	Suwannee River WMD	362-0440	LRM@srwmd.org
Gene Bullard	C.ty of Lake City	386-719-582	bullard@ok.fl.a.com
Scott Lehman	Malcolm Pirnie	813-242-7211	slehman@pirnie.com
Connie Scott	Col. Co.	754-7053	connie.scott@columbiacounty.fl.a.com
Larry Lee	Lake City	5752	leel@lcfla.com

Local Mitigation Strategy Working Group
Meeting Summary
2010 Update
October 7, 2009

Attendees

LMS Committee Member	Community Role	Municipality
Ronnie McCardle	CC Emergency Management	County
Gene Bullard	City of Lake City	Lake City
Shayne Morgan	CC Emergency Management	County
Larry Lee	City of Lake City	Lake City
Dale Williams	BCC Admin	County
Connie Brecheen Scott	CC Building & Zoning	County
Ron Croft	CC Emergency Management	County
Leroy Marshall	Suwannee River Water MD	Regional
Scott Lehman	Malcolm Pirnie	
Marybeth Groff	Malcolm Pirnie	

The meeting was opened and members welcomed. The meeting agenda was discussed. The group discussed the need for an additional meeting before the plan would be ready to submit to the State. The group added a new meeting date of November 4, 2009 from 9:00am – 12:00pm.

Meeting summaries from previous meetings were reviewed and comments/changes collected.

The LMSWG reviewed the final goals and objectives as amended after the 9/16/09 meeting review. The final version is to be emailed prior to the November 4, 2009 meeting for final approval.

This meeting was primarily used to thoroughly review the draft of the Risk Assessment and Mitigation Strategy. The Working Group reviewed the Risk Assessment and agreed upon the definition of the probability measurement (high, medium, and low) that a hazard was likely to occur. The Group also reviewed and determined what the probability is for each identified hazard. The Working Group then provided status of mitigation actions included in the current mitigation strategy and would like to see it presented in table format in the updated plan to show progress in their mitigation efforts. A good portion of the actions were redundant from year to year and will be able to be consolidated. The Group also reviewed and agreed upon the draft of the monitoring, evaluation, and update process to be followed for the next 5-year planning period. The updated draft for all sections discussed will be presented for review prior to LMSWG approval.

The next meeting is set for October 28, 2009 from 9:00am – 12:00pm. Meeting was adjourned.

THE LAKE CITY REPORTER

Lake City, Columbia County, Florida

STATE OF FLORIDA,
COUNTY OF COLUMBIA,

Legal Copy
As Published

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.....
in the matter of Legal Notice of Meeting

in the Court, was published
in said newspaper in the issues of October 25, 2009

NOTICE OF MEETING

The Columbia County Local Mitigation Strategy Working Group will meet on Wednesday, October 28, 2009 at 9 a.m. at the Columbia County Emergency Operations Center, located at 263 NW Lake City Avenue, Lake City, Florida.

The purpose of this meeting is to review projects that need to be in the 2009 Update of the Columbia County Local Mitigation Strategy.

The public is invited to attend this meeting.

04535355
October 25, 2009

Affiant further says that The Lake City Reporter is a newspaper published at Lake City in said Columbia County, Florida, and that the said newspaper has heretofore been continuously published in said Columbia County, Florida, and has been entered as second class mail matter at the post office in Lake City, in said Columbia County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Todd Wilson
26 Oct 2009
Kathleen A. Riotto

Notary Public

Sworn to and subscribed before me this day of
A.D., 20 KATHLEEN A. RIOTTO
MY COMMISSION # DD 577782
EXPIRES: August 20, 2010
Bureau of Motor Vehicle Services
State of Florida

COPY

G. J. S.



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Reverse 911 System

Important Links

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[Department of Homeland Security](#)

Directions to the Columbia County Emergency Operations Center (EOC)

NOTICE OF MEETING

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The purpose of this meeting is to attempt to finalize objectives and projects that need to be in the 2009 Update of the Columbia County Local Mitigation Strategy.

The public is invited to attend this meeting.

Emergency Management

Columbia County Emergency Management

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Welcome to our Site!

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If you need to contact our office:

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E-Mail: ronnie_mccardle@columbiacountyfla.com

Emergency Management Specialist: Shayne Morgan

E-Mail: shayne_morgan@columbiacountyfla.com

Mailing Address:

Columbia County Emergency Management

P.O. Box 1787

Lake City, FL 32056-1787

Current Situation

Hurricane Season

There are 34 days left until the end of the 2009 Hurricane Season!



How's the weather in Lake City, FL?

StormReady Community

Are You StormReady?
Contact your National Weather Service or Emergency Management Office. Safety information at www.stormready.noaa.gov

County Links

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[Columbia County Sheriff](#)

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0 0 5 1 3 5



COLUMBIA COUNTY EMERGENCY MANAGEMENT

P.O. Box 1787, Lake City, FL 32056-1787

Telephone (386) 758-1125 or (386) 758-1126 • Fax (386) 752-9644

EOC Hotline Number (386) 719-7530

www.columbiacountyem.com

Meeting: 1-17-5

Date/Time: 10-29-2007, 9 AM

NAME	AGENCY	PHONE	E-MAIL
Shayre Morgan	CCEM	758-1125	shayre-morgan@columbiacounty.fl.us
DALE WILLIAMS	BCC-HAMIN	758-1005	dale-williams@columbiacounty.fl.us
Kurt Wisner	FL DIV of Forestry	758-5706	wisner@doacs.state.fl.us
Leroy Marshall	SRWMD	362-0440	LRM@srwmd.org
Edmund Hudson	Town of Fort White	497-3345	-
BRIAN KEPNER	Col. Co.	754-7119	brian_kepner@columbiacounty.fl.us
Gene Bullard	City of Lake City	719-5320	bullard@lakecityfla.com
George Scott	Lake City Comm College	754-9325	SCOTT9@LAKECITYCC.EDU
Ronnie McCaddle	CCEM	758-1125	
Bryan Lewis	FDEM	850-528-7520	bryan.lewis@floridaevf.com
MARY Lee	Lake City	386-219-5750	llee@leffca.com
Laura Rissman	Lake City	11	laura@leffca.com

COPY

Local Mitigation Strategy Working Group
Meeting Summary
2010 Update
October 28, 2009

Attendees

LMS Committee Member	Community Role	Municipality
Shayne Morgan	CC Emergency Management	County
Dale Williams	Board of County Commissioners	County
Kurt Wisener	Florida Division of Forestry	Regional
Leroy Marshall	Suwannee River Water MD	County
Edmund Hudson	Town of Fort White	Fort White
Brian Kepner	CC Building & Zoning	County
Gene Bullard	City of Lake City	Lake City
George Scott	Lake City Community College	Lake City
Ronnie McCardle	CC Emergency Management	County
Bryan Lowe	Florida Division of Emergency Management	Regional
Larry Lee	City of Lake City	Lake City
Laura Reissener	City of Lake City	Lake City

The meeting was opened and all in attendance were welcomed. There were no unresolved issues.

The summary from the October 7th meeting was reviewed and approved. The Working Group conducted an analysis of the Plan Maintenance and Public Participation sections. After a thorough discussion, both sections were found to be favorable for incorporation into the plan and members granted their approval.

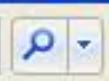
Following the Plan Maintenance and Public Participation sections, Working Group members conducted an assessment of the LMS Projects. Comments were accepted and new projects were considered for addition. In the end, the group updated the project list to incorporate 3 new countywide initiatives and 2 Lake City public acquisition projects.

For the final agenda item, the Working Group was presented with a representative draft of the prioritization process. Members were asked to contribute ideas and recommend revisions in order that the process best reflect the objectives of the community. Formal suggestions were integrated into process with the draft pending finalization at the next meeting.

The next meeting is set for November 4, 2009 from 9:00am – 12:00pm. Meeting was adjourned.



http://www.columbiacountyem.com/



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Columbia County Emergency Management - Home



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Announcements



Directions to the Columbia County Emergency Operations Center (EOC)

NOTICE OF MEETING

The Columbia County Local Mitigation Strategy Working Group will meet on Wednesday, November 4, 2009 at 9 a.m. at the Columbia County Emergency Operations Center, located at 263 NW Lake City Avenue, Lake City, Florida.

The purpose of this meeting is to attempt to finalize objectives and projects that need to be in the 2009 Update of the Columbia County Local Mitigation Strategy.

The public is invited to attend this meeting.

Emergency Management

Columbia County Emergency Management

Stay tuned to WNYM AM 530 for information in the event of an emergency affecting Columbia County, as well as other local radio and television stations.

Welcome to our Site!

Make sure to check back frequently for the latest updates to our site!

If you need to contact our office:

Emergency Management Director: Ronnie McCardle

Current Situation

Hurricane Season

There are 25 days left until the end of the 2009 Hurricane Season!



How's the
weather in
Lake City, FL?



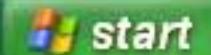
County Links

[Columbia County](#)

Internet

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8:53 AM





COLUMBIA COUNTY EMERGENCY MANAGEMENT

P.O. Box 1787, Lake City, FL 32056-1787

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EOC Hotline Number (386) 719-7530

www.columbiacountyem.com

Meeting: LMS

Date/Time: 11-4-09

NAME	AGENCY	PHONE	E-MAIL
Shayne Munger	CCEM		
Kurt Wisner	Div of Forestry 911 Add/EGS	758 5206	wisner@doacs.state.fl.us
Ron Cross	Columbia County EM	758 1125	roncross@columbiacountyfla.com
Laurie Hudson	BIZ	8-1007	laurie.hudson@columbiacounty.fl.us
Henry Marshall	SRWMD	362-1001	LRM@srwmd.org
Gene Bullard	C.ty of Lake Cty	386-745-5820	bulldog@lcfla.com
Ronnie McCord	CCEM	758-1125	
Edmund Hudson	Town of Thelma	623-9557	
TONY BATT	Columbia Department	752-1293	tonybatt@county.fl.us
Larry Lee	City of Lake City	719-5750	lee1@lcfla.com
Laura Reissener	City of Lake City	719-5754	laura@lcfla.com

Local Mitigation Strategy Working Group
Meeting Summary
2010 Update
November 4, 2009

Attendees

LMS Committee Member	Community Role	Municipality
Shayne Morgan	CC Emergency Management	County
Kurt Wisener	Florida Division of Forestry	Regional
Ron Croft	CC Emergency Management	County
Laurie Hodson	CC Building & Zoning	County
Leroy Marshall	Suwannee River Water MD	County
Gene Bullard	City of Lake City	Lake City
Ronnie McCardle	CC Emergency Management	County
Edmund Hudson	Town of Fort White	Fort White
Tony Britt	Lake City Reporter	Lake City
Larry Lee	City of Lake City	Lake City
Laura Reissener	City of Lake City	Lake City

The meeting was opened and all in attendance were welcomed. To begin, the day's meeting agenda was discussed and the opportunity to present unresolved issues was given; none were expressed.

Members were initially tasked with assessing the draft version of the prioritization process which reflected Working Group member comments from the October 28th meeting. Upon review, the draft process was determined to be in accordance with the community plan and it was subsequently finalized.

After finalization of the prioritization process, the Working Group proceeded to conduct a review of the planning process, risk assessment, and mitigation strategy sections. After a thorough analysis was complete, members concluded that these too were in concordance with community objectives and unanimously agreed for their approval.

APPENDIX C

Working Group Participation

APPENDIX C
Update 2010 Local Mitigation Strategy Working Group Participation

Name	Agency	23-Jul	20-Aug	16-Sep	7-Oct	28-Oct	4-Nov	Planning Process	Risk Assessment	Mitigation Strategy	Plan Maintenance
Ian Dyar	American Red Cross	X							X		X
Hugh Hunnicutt	National Guard	X							X		X
Larry Roth	National Guard	X							X		X
Gina Reynolds	County IDA / Chamber of Commerce	X							X		X
Brian Kepner	CC Building & Zoning	X			X		X		X	X	X
John Kerce	CC Building & Zoning	X							X		X
Wayne F. Kichens	CCSO	X							X		X
Bob Edgar	Red Cross	X							X		X
Kevin Kirby	Public Works	X							X		X
Dale Williams	BCC - Admin	X		X	X		X		X	X	X
Stew Lilker	Columbia County Observer	X							X		X
Bryan Lowe	FDEM				X		X			X	X
Ronnie McCardle	CC Emergency Management	X	X	X	X	X	X		X	X	X
Ron Croft	CC Emergency Management	X	X		X	X	X		X	X	X
Shayne Morgan	CC Emergency Management	X	X	X	X	X	X		X	X	X
Larry Lee	City of Lake City		X	X	X	X	X		X		X
Laura Rissener	City of Lake City		X	X		X	X		X		X
Wayne Keen	Private Citizen		X						X		X
Henry Land	Hamilton County E.M.		X						X		X
Pam Allen	Hamilton County E.M.		X						X		X
Gene Bullard	City of Lake City	X	X	X	X	X	X		X	X	X
Jim Poole	Lake City Chamber of Commerce/IDA		X						X	X	
Connie Brecheen	CC Building & Zoning	X	X	X	X				X	X	X
Laurie Hodson	CC Building & Zoning	X	X			X	X		X	X	X
James Cason	Columbia County Fire			X						X	X

George Scott	Lake City Community College	X	X	X		X	X
Ed Ward	FDOT	X				X	X
Leroy Marshal	Suwannee River Water MD	X	X	X	X	X	X
Frank Armijo	Lake City Fire Department	X				X	X
David Donnelly	Alachua County EM						
Gene Leslie	City of Lake City Public Works						
Kimberly Thomas	Suwannee County EM						
Karl Burkhardt	lakecityjournal.com						
Randy Jones	Columbia County Bldg and Zoning						
Sandra Caslow	City of Lake City Code Enforcement						
Scott Lehman	Malcolm Pirnie	X	X	X		X	X
Tommy Horton	Malcolm Pirnie	X	X	X	X	X	X
Marybeth Groff	Malcolm Pirnie	X	X	X	X	X	X
Todd Wilson	Lake City Reporter Newspaper						
Troy Roberts	Lake City Reporter Newspaper						
Tony Britt	Lake City Reporter Newspaper			X	X	X	X
Kurt Wisener	Florida Division of Forestry		X	X	X	X	X
Edmund Hudson	Town of Fort White		X	X	X	X	X

APPENDIX D

Invitation Letters



COLUMBIA COUNTY EMERGENCY MANAGEMENT

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September 1, 2009

Chief Carlton Tunsil
Lake City Fire Department
225 NW Main Blvd.
Lake City, FL 32055

Re: Columbia County Local Mitigation Strategy Update Participation

Dear Chief Tunsil:

Columbia County is currently in the process of revising the *Columbia County Local Mitigation Strategy* and will be meeting again on Wednesday September 16, 2009 at 9:00a.m. in the Columbia County Emergency Operation Center.

The purpose of this letter is to inform you of the importance that the Lake City Fire Department participates in the Columbia County Local Mitigation Strategy (LMS) 2009 update process.

A local jurisdiction is required by 44 CFR §201.6(d)(3) to review and revise its plan, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funds. As part of this process it is required (44 CFR §201.6(b) and §201.6(c)(1)) that an open public involvement process be conducted. Including "an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process."

In order to develop and implement a holistic approach to mitigation in Columbia County and to meet the federal requirements, we invite and encourage you to assign a representative from your organization to participate in this process; starting with the September 16th meeting.

We look forward to your participation. If you have any questions please contact Ronnie McCardle, Director Columbia County Emergency Management at 386-758-1125.

Sincerely,

A handwritten signature in black ink that reads "Ronnie McCardle".

Ronnie McCardle
Director

COPY



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September 1, 2009

PCS Phosphate Corporation
15843 Southeast 78th Street
White Springs, Florida 32096

Re: Columbia County Local Mitigation Strategy Update Participation

Dear Mr. Warner:

Columbia County is currently in the process of revising the *Columbia County Local Mitigation Strategy* and will be meeting again on Wednesday September 16, 2009 at 9:00a.m. in the Columbia County Emergency Operation Center.

The purpose of this letter is to inform you of the importance that PCS Phosphate participates in the Columbia County Local Mitigation Strategy (LMS) 2009 update process.

A local jurisdiction is required by 44 CFR §201.6(d)(3) to review and revise its plan, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funds. As part of this process it is required (44 CFR §201.6(b) and §201.6(c)(1)) that an open public involvement process be conducted. Including "an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process."

In order to develop and implement a holistic approach to mitigation in Columbia County and to meet the federal requirements, we invite and encourage you to assign a representative from your organization to participate in this process; starting with the September 16th meeting.

We look forward to your participation. If you have any questions please contact Ronnie McCardle, Director Columbia County Emergency Management at 386-758-1125.

Sincerely,

Ronnie McCardle
Director

COPY



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October 16, 2009

Mayor Truette George
Town of Fort White
P.O. Box 129
Fort White, FL 32038

Re: Columbia County Local Mitigation Strategy Update Participation

Dear Mayor George:

The purpose of this letter is two-fold; 1) is to remind you that Columbia County is currently in the process of revising the *Columbia County Local Mitigation Strategy*, and 2) to inform you of the importance that the Town of Fort White participates in the Columbia County Local Mitigation Strategy (LMS) 2010 update process. There are only a few meetings remaining, **the next will be on Wednesday October 28, 2009 from 9:00 a.m. – 12:00 p.m.**

A local jurisdiction is required by 44 CFR §201.6(d)(3) to review and revise its plan, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funds. **In order for the Town of Fort White to continue to be eligible for federal project grant funds, you must participate in Columbia's LMS revision process and adopt the LMS upon its approval from Federal Emergency Management Agency (FEMA).** In addition, if you are interested in participating in the National Flood Insurance Program you must have participated in the LMS update.

In order to develop and implement a holistic approach to mitigation in Columbia County and to meet the federal requirements, we strongly encourage you to have a Fort White representative(s) participate in this process; starting with the *October 28th* meeting.

We look forward to your participation. If you have any questions please contact myself, Ronnie McCardle at Columbia County Emergency Management at 386-758-1125 or ccem_rmc当地居民@comcast.net.

Sincerely,

A handwritten signature in black ink that reads "Ronnie McCardle".

Ronnie McCardle
Director

Cc: Bill Whitley, Attorney Town of Fort White

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August 27, 2009

Mr. Tom Sawyer
Lake City Municipal Airport
3526 E US Hwy 90
Lake City, FL 32055

Re: Columbia County Local Mitigation Strategy Update Participation

Dear Mr. Sawyer:

Columbia County is currently in the process of revising the *Columbia County Local Mitigation Strategy* and will be meeting again on Wednesday September 16, 2009 at 9:00a.m. in the Columbia County Emergency Operation Center.

The purpose of this letter is to inform you of the importance that the Lake City Municipal Airport participates in the Columbia County Local Mitigation Strategy (LMS) 2009 update process.

A local jurisdiction is required by 44 CFR §201.6(d)(3) to review and revise its plan, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funds. As part of this process it is required (44 CFR §201.6(b) and §201.6(c)(1)) that an open public involvement process be conducted. Including "an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process."

In order to develop and implement a holistic approach to mitigation in Columbia County and to meet the federal requirements, we invite and encourage you to assign a representative from your organization to participate in this process; starting with the September 16th meeting.

We look forward to your participation. If you have any questions please contact Ronnie McCardle, Director Columbia County Emergency Management at 386-758-1125.

Sincerely,

Ronnie McCardle
Director

COPY



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September 1, 2009

Wiley Horton
BellSouth Business Class
6026 NW 1st Place
Gainesville, FL 32607

Re: Columbia County Local Mitigation Strategy Update Participation

Dear Mr. Horton:

Columbia County is currently in the process of revising the *Columbia County Local Mitigation Strategy* and will be meeting again on Wednesday September 16, 2009 at 9:00a.m. in the Columbia County Emergency Operation Center.

The purpose of this letter is to inform you of the importance that A T & T participates in the Columbia County Local Mitigation Strategy (LMS) 2009 update process.

A local jurisdiction is required by 44 CFR §201.6(d)(3) to review and revise its plan, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funds. As part of this process it is required (44 CFR §201.6(b) and §201.6(c)(1)) that an open public involvement process be conducted. Including “an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process.”

In order to develop and implement a holistic approach to mitigation in Columbia County and to meet the federal requirements, we invite and encourage you to assign a representative from your organization to participate in this process; starting with the September 16th meeting.

We look forward to your participation. If you have any questions please contact Ronnie McCardle, Director Columbia County Emergency Management at 386-758-1125.

Sincerely,

A handwritten signature in black ink that reads "Ronnie McCardle".

Ronnie McCardle
Director

COPY



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September 1, 2009

Chief Tres Atkinson
Columbia County Fire Department
P.O. Box 1529
Lake City, FL 32056-1529

Re: Columbia County Local Mitigation Strategy Update Participation

Dear Chief Atkinson:

Columbia County is currently in the process of revising the *Columbia County Local Mitigation Strategy* and will be meeting again on Wednesday September 16, 2009 at 9:00a.m. in the Columbia County Emergency Operation Center.

The purpose of this letter is to inform you of the importance that the Columbia County Fire Department participates in the Columbia County Local Mitigation Strategy (LMS) 2009 update process.

A local jurisdiction is required by 44 CFR §201.6(d)(3) to review and revise its plan, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funds. As part of this process it is required (44 CFR §201.6(b) and §201.6(c)(1)) that an open public involvement process be conducted. Including "an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process."

In order to develop and implement a holistic approach to mitigation in Columbia County and to meet the federal requirements, we invite and encourage you to assign a representative from your organization to participate in this process; starting with the September 16th meeting.

We look forward to your participation. If you have any questions please contact Ronnie McCardle, Director Columbia County Emergency Management at 386-758-1125.

Sincerely,

A handwritten signature in black ink that reads "Ronnie McCardle".

Ronnie McCardle
Director

COPY



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EOC Hotline Number (386) 719-7530

www.columbiacountyem.com

September 1, 2009

Keith O'Steen
Division of Forestry
137 SE Forestry Circle
Lake City, FL 32025

Re: Columbia County Local Mitigation Strategy Update Participation

Dear Keith:

Columbia County is currently in the process of revising the *Columbia County Local Mitigation Strategy* and will be meeting again on Wednesday September 16, 2009 at 9:00a.m. in the Columbia County Emergency Operation Center.

The purpose of this letter is to inform you of the importance that the Division of Forestry participates in the Columbia County Local Mitigation Strategy (LMS) 2009 update process.

A local jurisdiction is required by 44 CFR §201.6(d)(3) to review and revise its plan, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funds. As part of this process it is required (44 CFR §201.6(b) and §201.6(c)(1)) that an open public involvement process be conducted. Including “an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process.”

In order to develop and implement a holistic approach to mitigation in Columbia County and to meet the federal requirements, we invite and encourage you to assign a representative from your organization to participate in this process; starting with the September 16th meeting.

We look forward to your participation. If you have any questions please contact Ronnie McCardle, Director Columbia County Emergency Management at 386-758-1125.

Sincerely,

A handwritten signature in black ink that reads "Ronnie McCardle".

Ronnie McCardle
Director

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September 1, 2009

Ed Ward
Florida Dept. of Transportation
1109 S. Marion Ave.
Lake City, FL 32025

Re: Columbia County Local Mitigation Strategy Update Participation

Dear Ed:

Columbia County is currently in the process of revising the *Columbia County Local Mitigation Strategy* and will be meeting again on Wednesday September 16, 2009 at 9:00a.m. in the Columbia County Emergency Operation Center.

The purpose of this letter is to inform you of the importance that the Florida Department of Transportation participates in the Columbia County Local Mitigation Strategy (LMS) 2009 update process.

A local jurisdiction is required by 44 CFR §201.6(d)(3) to review and revise its plan, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funds. As part of this process it is required (44 CFR §201.6(b) and §201.6(c)(1)) that an open public involvement process be conducted. Including "an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process."

In order to develop and implement a holistic approach to mitigation in Columbia County and to meet the federal requirements, we invite and encourage you to assign a representative from your organization to participate in this process; starting with the September 16th meeting.

We look forward to your participation. If you have any questions please contact Ronnie McCardle, Director Columbia County Emergency Management at 386-758-1125.

Sincerely,

A handwritten signature in black ink that reads "Ronnie McCardle".

Ronnie McCardle
Director

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September 1, 2009

Dr. Charles Hall
Lake City Community College
149 SE College Place
Lake City, FL 32025

Re: Columbia County Local Mitigation Strategy Update Participation

Dear Dr. Hall:

Columbia County is currently in the process of revising the *Columbia County Local Mitigation Strategy* and will be meeting again on Wednesday September 16, 2009 at 9:00a.m. in the Columbia County Emergency Operation Center.

The purpose of this letter is to inform you of the importance that Lake City Community College participates in the Columbia County Local Mitigation Strategy (LMS) 2009 update process.

A local jurisdiction is required by 44 CFR §201.6(d)(3) to review and revise its plan, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funds. As part of this process it is required (44 CFR §201.6(b) and §201.6(c)(1)) that an open public involvement process be conducted. Including "an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process."

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We look forward to your participation. If you have any questions please contact Ronnie McCardle, Director Columbia County Emergency Management at 386-758-1125.

Sincerely,

A handwritten signature in black ink that reads "Ronnie McCardle".

Ronnie McCardle
Director

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September 1, 2009

Joe Flanagan
Suwannee River Water Management District
9225 County Road 49
Live Oak, FL 32060

Re: Columbia County Local Mitigation Strategy Update Participation

Dear Joe:

Columbia County is currently in the process of revising the *Columbia County Local Mitigation Strategy* and will be meeting again on Wednesday September 16, 2009 at 9:00a.m. in the Columbia County Emergency Operation Center.

The purpose of this letter is to inform you of the importance that the Suwannee River Water Management District participates in the Columbia County Local Mitigation Strategy (LMS) 2009 update process.

A local jurisdiction is required by 44 CFR §201.6(d)(3) to review and revise its plan, and resubmit it for approval within 5 years in order to continue to be eligible for mitigation project grant funds. As part of this process it is required (44 CFR §201.6(b) and §201.6(c)(1)) that an open public involvement process be conducted. Including "an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process."

In order to develop and implement a holistic approach to mitigation in Columbia County and to meet the federal requirements, we invite and encourage you to assign a representative from your organization to participate in this process; starting with the September 16th meeting.

We look forward to your participation. If you have any questions please contact Ronnie McCardle, Director Columbia County Emergency Management at 386-758-1125.

Sincerely,

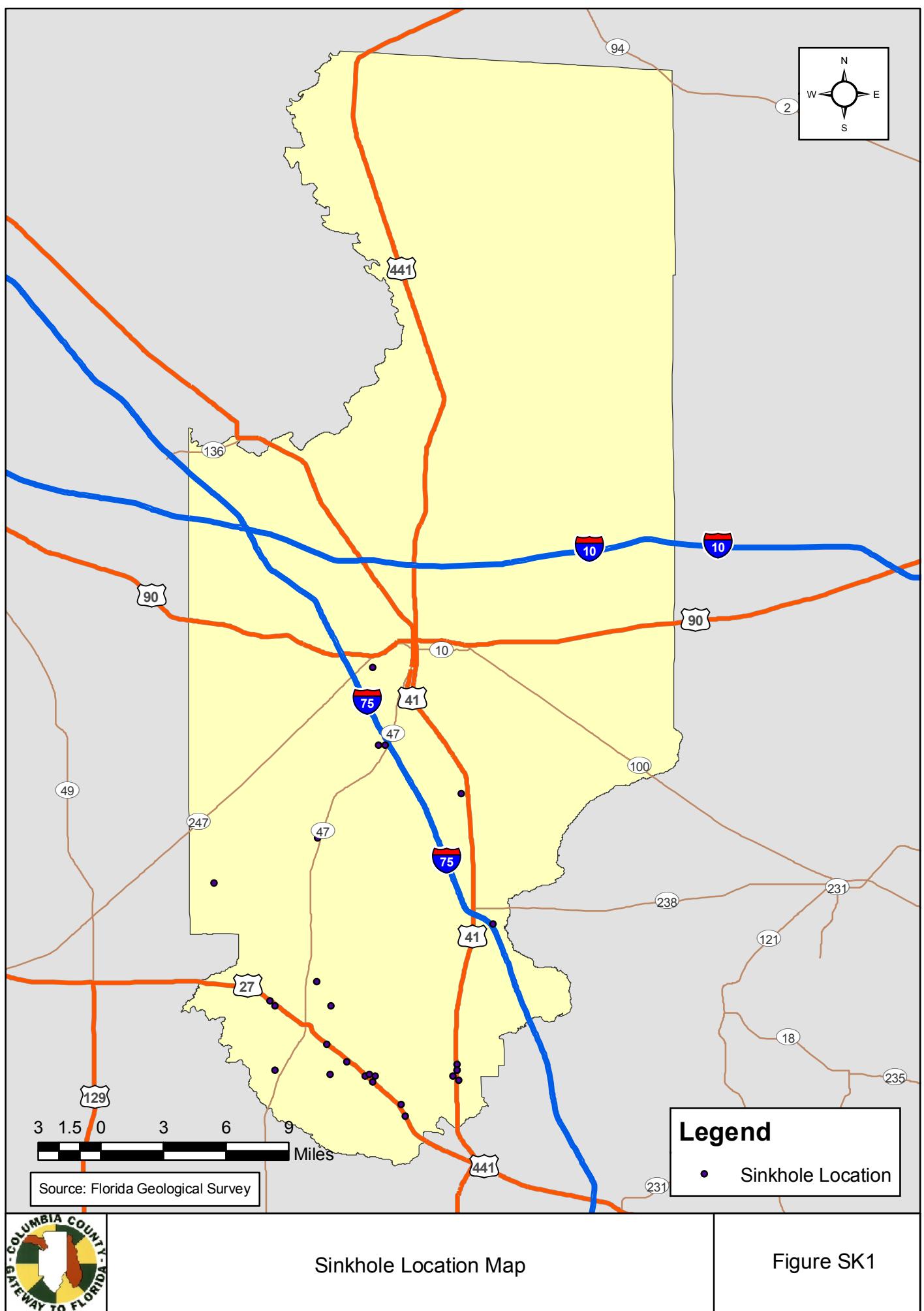
A handwritten signature in black ink that reads "Ronnie McCardle".

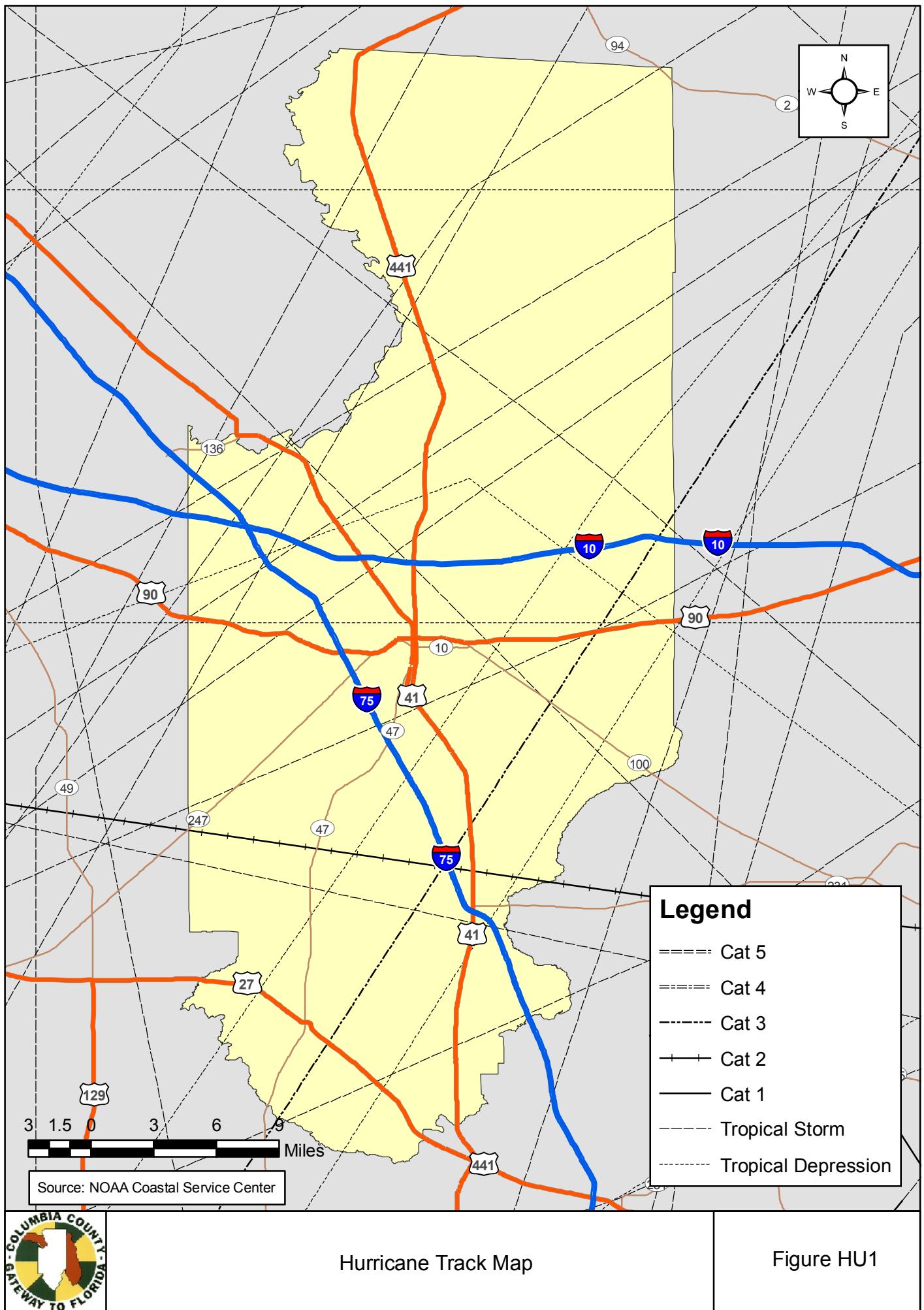
Ronnie McCardle
Director

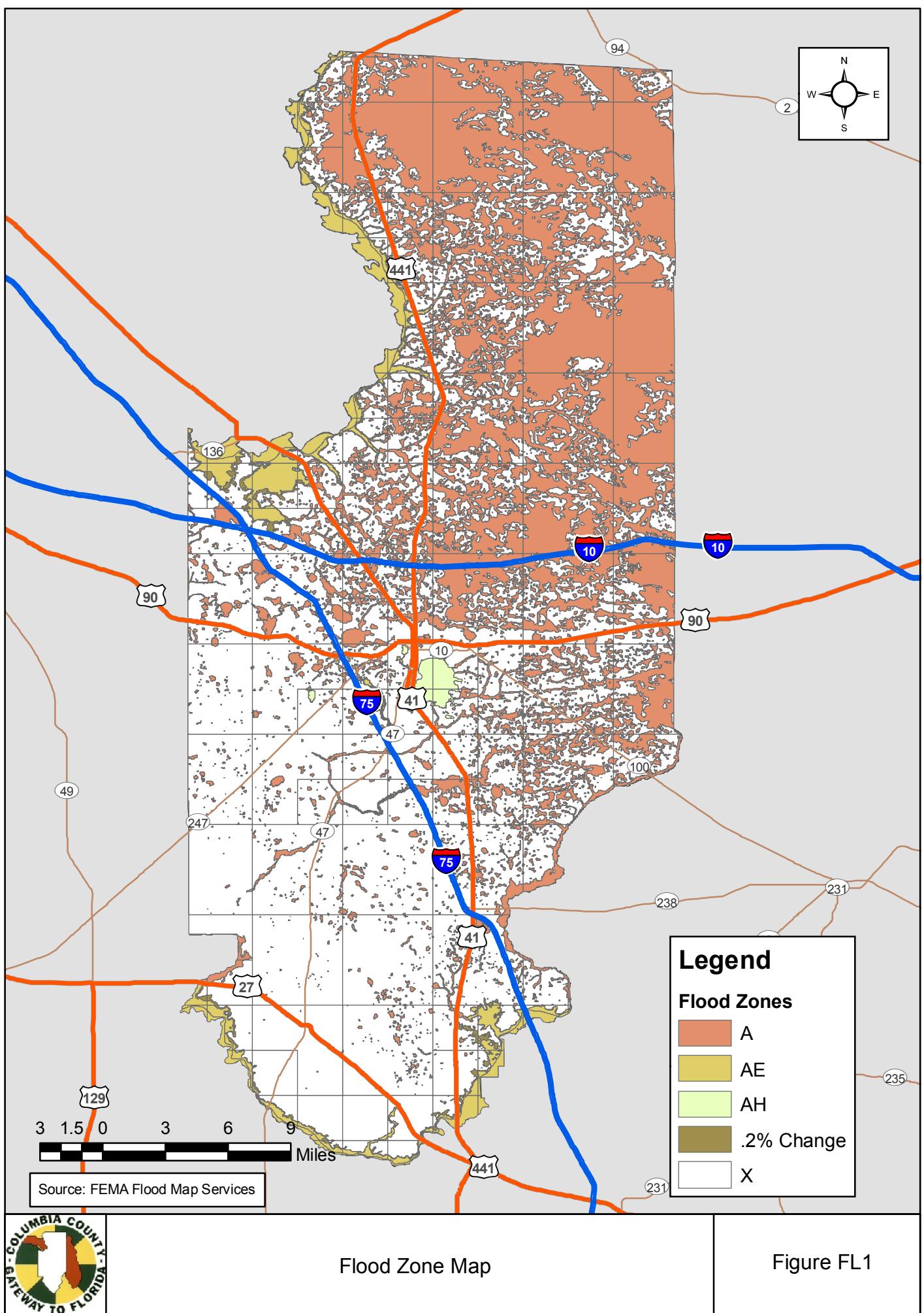
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APPENDIX E

Risk Assessment Maps









Historical River Level Elevations (in feet above Mean Sea Level-NGVD 1929)

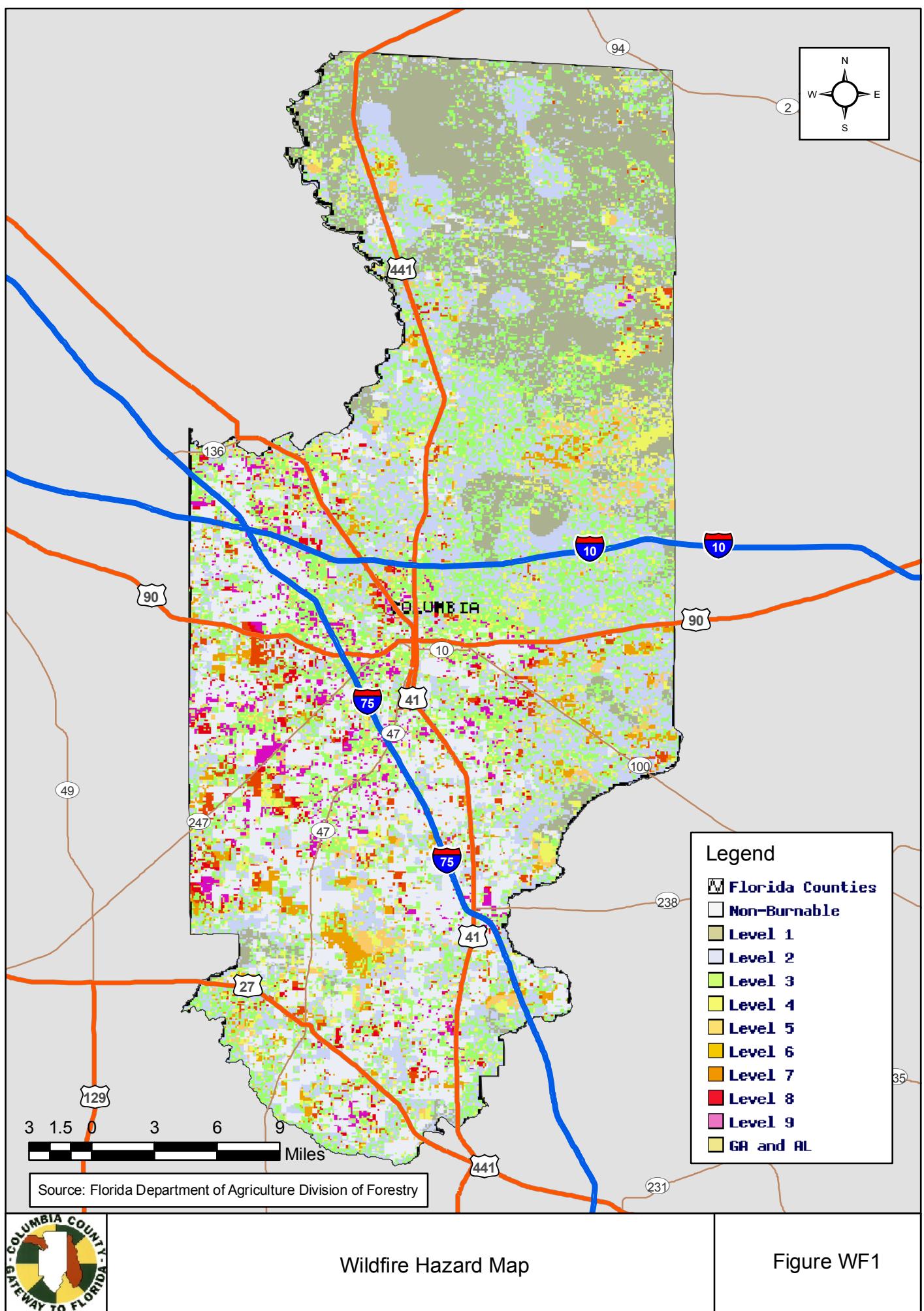
SRWMD	Flood Stage	River Mile	Low Mo-Yr	April 1948	March 1959	Sept. 1964	April 1973	April 1984	Feb. 1986	March 1991	March 1998	2004/2005	April 2009
Suwannee River													(provisional)
White Springs	77	171	49.49 May-07	85.19	83.14	84.36	88.56	85.36	80.67	79.79	84.73	84.01	76.40
Suwannee Springs	67	150	36.04 May-07	76.80*	72.30**	73.60*	78.91	74.38	69.78	68.45	72.14	71.30	67.64
Ellaville	54	128	28.48 Jul-07	68.10	59.04	56.89	64.97	60.72	61.79	60.84	61.67	58.63	63.82
Dowling Park	50	113	21.12 Jun-02	61.46*	52.00**	-	58.90	53.55	54.36	53.52	54.07	50.55	54.95
Luraville	N/A	98	16.89 Jul-07	53.50*	44.33*	41.14*	49.44	46.54	46.30	45.40	47.09	43.83	46.80
Branford	29	76	6.74 Jul-02	38.88	32.30	30.17	35.57	33.69	33.07	32.61	34.04	31.44	32.76
Rock Bluff	N/A	57	3.82 Jun-02	31.03	24.80**	-	27.40**	26.28	23.20	22.92	25.12	22.12	22.34
Wilcox	11	34	-1.08 Sep-99	21.79	15.35	14.96	18.03	16.53	15.10	14.91	16.84	14.14	14.23
Manatee Springs	10	24	-1.09 Jan-08	16.00*	11.40	-	13.00*	12.65	11.00	10.91	12.41	10.42	10.46
Fowlers Bluff	5.5	15	-0.71 ^L Jan-08	10.80**	-	-	8.80**	-	-	8.02	8.61	6.90	7.20
Santa Fe River													
Worthington Springs	N/A	49	48.42 Jul-07	67.34	64.99	71.14	63.90	62.63	61.73	63.24	66.43	64.74	-
Oleno State Park	N/A	36	31.40 Jul-01	-	-	-	-	45.87	42.67	46.07	50.57	49.76	-
Near Ft. White	N/A	18	20.92 Dec-07	34.98	31.21	36.20	31.12	30.29	27.98	27.90	33.01	30.41 ^P	26.60
3 Rivers Estates	19	7	- - -	-	-	-	-	29.51	27.82	27.47	29.92	26.58	26.81
129 Bridge	21	2	5.61 Jun-02	34.19	31.17	27.11	-	29.14	27.55	27.33	29.54	26.34	26.85
Withlacoochee River													
Quitman			85.80 Jun-00	116.00	-	-	-	-	-	-	113.82	109.90	118.90
Pinetta	79	22	53.26 Aug-02	85.85	-	82.28	82.31	83.41	85.41	84.04	83.38	78.27	88.50
Alapaha River													
Statenville	101	30	77.31 Oct-99	106.57	-	-	104.19	104.37	-	105.65	106.22	104.60	108.28
Jennings	N/A	20	61.27 Oct-06	-	-	-	-	89.20	90.06	-	-	89.44	94.00
Aucilla River													
Lamont	51.9	34	43.50 Jun-55	-	55.86	56.19	59.47	57.43	56.89	57.76	56.72	56.08	56.38

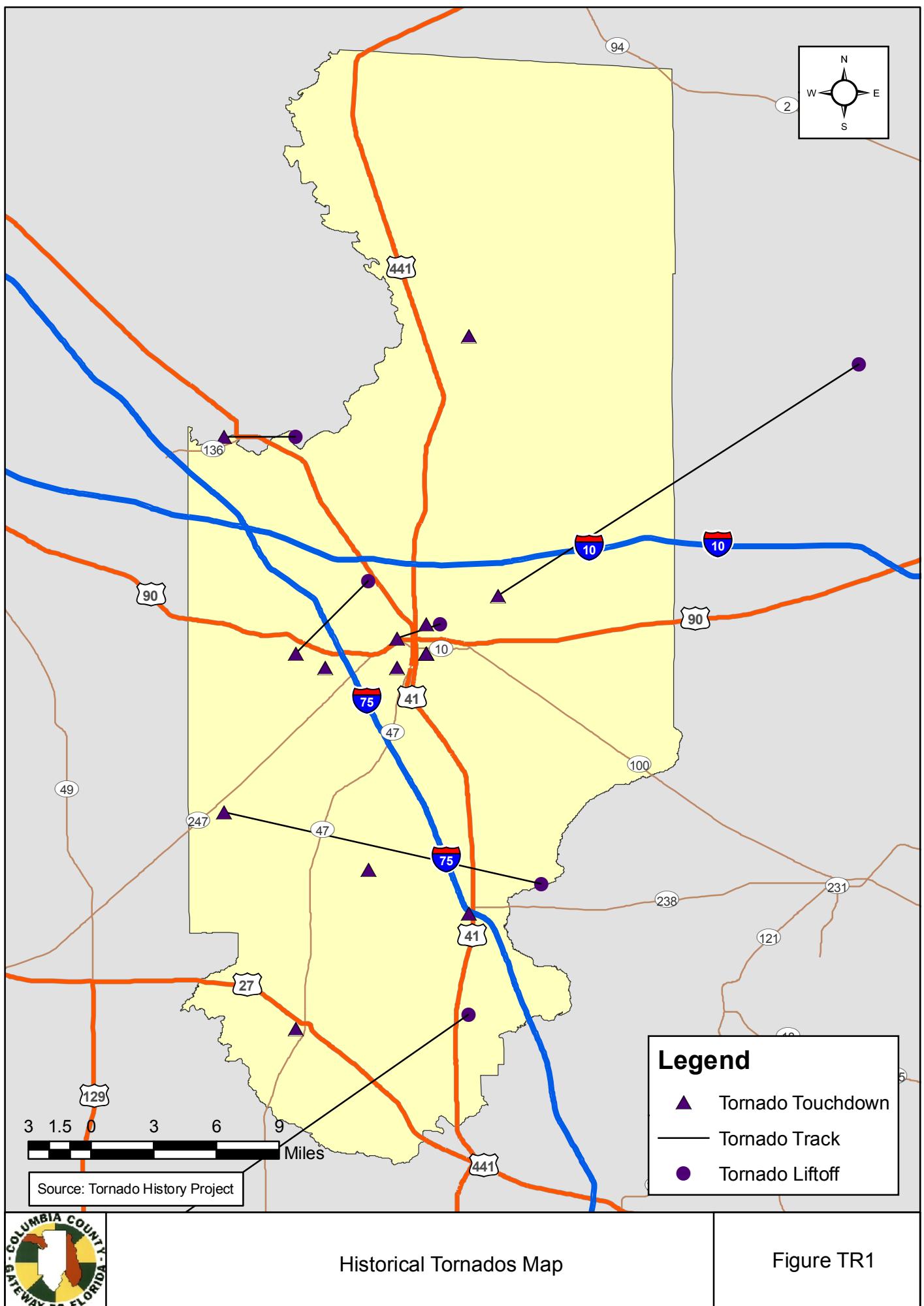
* Historical levels obtained from flood marks

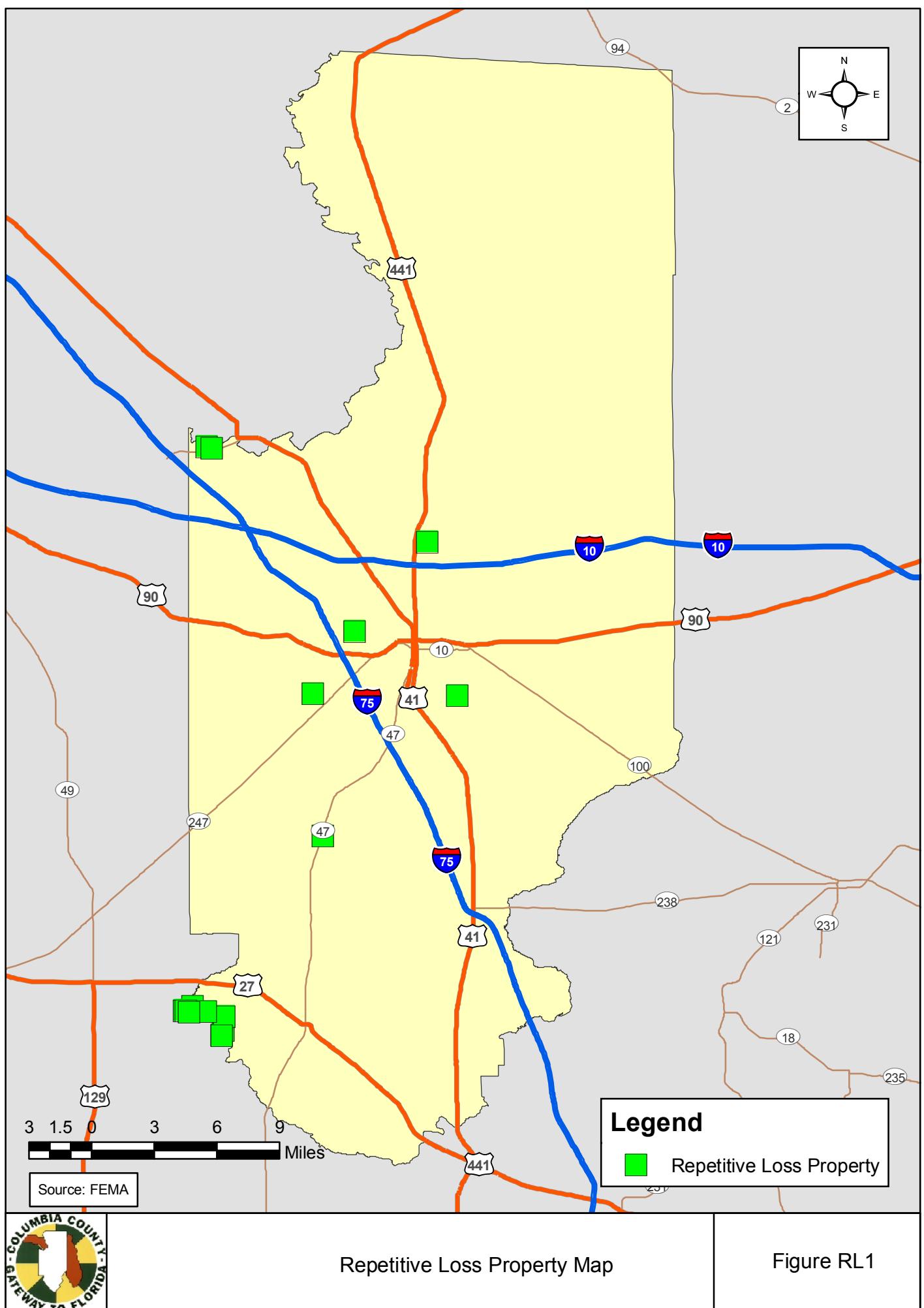
Bold indicates historical peak

** Estimated peak stages obtained from U.S. Army Corps of Engineers, 1974

L Limit of gage







APPENDIX F

Mitigation Initiative List

APPENDIX G

Flood Mitigation Outreach Material



Photographs courtesy of the Columbia County Emergency Operations Center

IMPORTANT INFORMATION REGARDING THE RISK OF FLOODS IN COLUMBIA COUNTY



FEMA

Residence and Property Owners

Floods are the most common and most costly natural disaster. In the past several years, about 60% of all presidentially declared disasters involved flooding. Because more roads, buildings, and parking lots are being constructed where forests and meadows once stood, floods are becoming more severe throughout the U.S. Everyone lives in a flood zone. The different flood zones are determined by the level of risk.



Frances and Jeanne



Flood Events in 2004

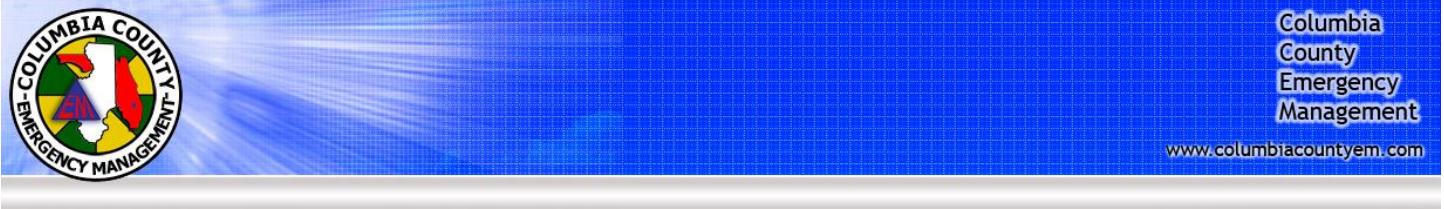
THE LOCAL FLOOD HAZARD

In Columbia County, the primary threat of flooding results from the “ponding” of water during heavy storms and the Suwannee and Santa Fe rivers reaching flood stage. Some flooding can result from overflow of small ditches and streams during significant storm events. Since Columbia County is relatively flat with low-lying areas, storm water sometimes simply overwhelms street drainage and water retention areas. Leaves and other debris can clog storm drains, culverts, and drainage swales, causing water to back up into lower-lying areas. Residents are encouraged not to blow yard waste (i.e. grass clippings, leaves, and small branches) into the street to prevent clogging of the storm water grates, culverts, and other similar devices. County floods of record have occurred in 1928, 1948, 1959, 1964, 1973, 1984, 1986, 1991, and 1998. High water data for these events is available from the Suwannee River Water Management District at **(386) 362-1001**.

THE FLOOD WARNING SYSTEM

In the event of a major storm, Columbia County receives notification from the Emergency Operations Center and certain County departments are put on alert. Local news media sources (radio and television) are notified and distribute instructions to the public. If needed, the Columbia County Fire and Sheriff's Departments may notify area residents by door-to-door personal contact, telephone, and use of sirens and public address systems. During significant storms, the Sheriff's Department and Fire Department monitor storm updates and pass information on to media sources for distribution.

COLUMBIA COUNTY EMERGENCY OPERATIONS CENTER (EOC) www.columbiacountyem.com



Use the Columbia County Emergency Operations Center web site to locate storm information, alerts and helpful information before a disaster happens. Columbia County Emergency Operations Center **(386-758-1126)** works with the National Weather Service and the National Hurricane Center to monitor flood and storm threats and advises the community accordingly. When a storm or flood threatens to impact the County, County staff monitors the event relying on information from various officials and the National Weather Service for detailed and site specific information regarding storm conditions and flood threats. The National Weather Service issues updates, warnings, and evacuation notices.

The following stations service the Columbia County area:

Radio: WDSR-FM 1340, WJTK-FM 96.5, WCJX-FM 106.5, and WNFB-FM 94.3,

Satellite TV Channels: 4, 12, 25, 30, and 47 and **Cable TV Channels:** 6, 8 and WCJB TV20

Report yourself as “Safe and Well” to family and friends...

If you have been affected by a disaster, this website provides a way for you to register yourself as "safe and well". From a list of standard messages, you can select those that you want to communicate to your family members, letting them know of your well-being.

Two main functions:

- *List yourself as Safe and Well:* Person/Family affected by a disaster creates a safe and well registration for them.
- *Search:* Concerned loved ones anywhere search for the messages posted by those who self-registered.

To access the Safe and Well Website go to: www.disastersafe.redcross.org or call 1-866-GET-INFO.

Americans with Disabilities Act Working Group

This information is being provided to you via the ADA Working Group's Clearinghouse on Disability Information. We hope this information is helpful to you.

FLOOD SAFETY MEASURES

You can protect yourself from flood hazards by taking measures to ensure the safety of life and property before, during, and after a flood occurs.

Be prepared before a flood. Copy your most important documents and store originals in a safe place outside the home. Take photos of your most valuable possessions and store copies with other documents. Make an itemized list of other possessions. Store receipts for any expensive household items where they will not be destroyed.



Have an emergency plan. Provide your insurance agent, employer, and family with emergency contact information. Put aside an emergency kit equipped with a large flashlight, batteries, candles, waterproof matches and a battery operated radio. Keep a minimum 3-day supply of non-perishable food and water on hand. Visit www.disasterhelp.gov and www.ready.gov/index.html for more information.

Hurricane Supply Kit

At-Home Kit:

- 2 Flashlights
- A Battery Operated Radio
- Six Extra Sets of Batteries
- Gel Freezer Packs to Keep Food Cold
- A Cooler
- Candles, Matches and a Lighter
- A Tarp
- Towels (3 per person)
- Camera and Film (Video Camera and Blank Video)
- Kitchen utensils, spoons, knives, forks, hand-operated can opener, bottle opener, cooking pans, spatula, etc.
- A camping stove and/or grill with fuel, canned heat, and/or charcoal briquettes and starter fluid
- Fire extinguisher (and a box of baking soda to extinguish a fire)
- If anyone in your family is taking prescription medicines, keep a two-week supply on hand
- A medicine kit with a first-aid book, a two-week supply of over-the-counter medicines: aspirins, stomach antacids, anti-diarrhea medicine, iodine, hydrogen peroxide, anti-bacterial ointment, bandages, insect repellent, scissors, tape, etc. *Check your first aid book for a list of important items.*
- A whistle
- A cell phone (if possible)
- Drinking water in plastic containers (minimum of one gallon of water per person per day for 14 days)
- A water purifying kit
- Non-perishable food in cans or sealed containers (enough for 14 days)
- A box of large, plastic trash bags
- A box of locking top, sealing plastic bags – one gallon size

Evacuation Kit:

- A map and compass
- A can of tire sealer in your trunk
- Sleeping bags and/or blankets for each member of your family
- Air or foam mattresses
- Identification for everyone
- Important Documents
- Extra clothes, shoes, etc.
- Books, games, playing cards, etc., (This may be an extended stay)
- Soap, shampoo, toothpaste, toothbrushes, deodorant, toilet paper, feminine products, and paper towels, etc.
- Cash

Use this information as a start to your own "Family Survival Plan."

Get the whole family involved in making your "Family Survival Plan". The kids will learn and enjoy the experience.

Don't forget to inform those people you have planned to stay with in case of an evacuation.

Stay informed. Turn on a battery operated radio or television to get the latest emergency information. Continue listening to the radio for news about what to do, where to go, and places to avoid.

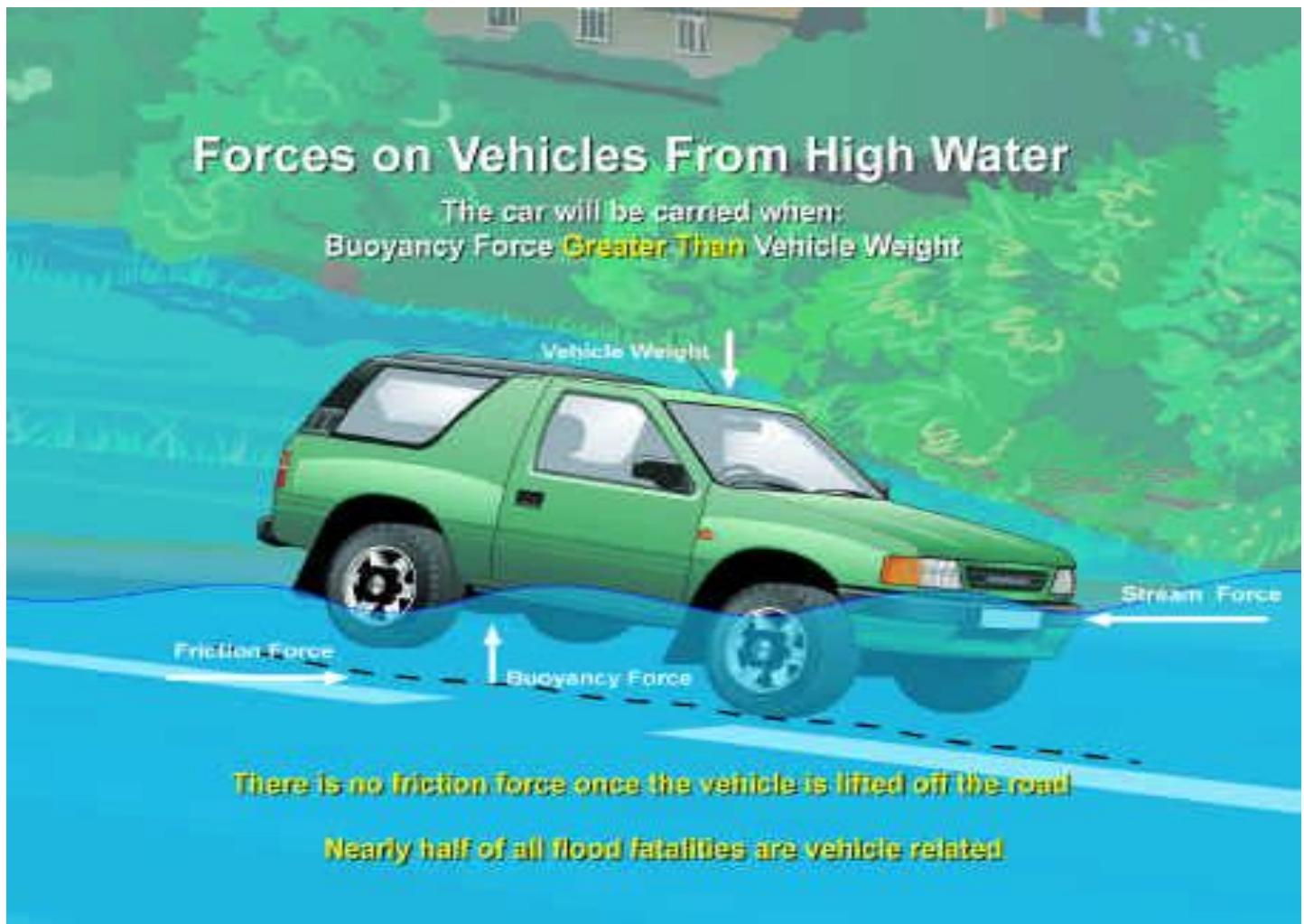
If evacuation becomes necessary, do so immediately. Be sure that you turn off all utility services at the main connection.



Do not walk through flowing water. Drowning is the number one cause of flood deaths, mostly during flash floods. Currents can be deceptive; six inches of moving water can knock you off your feet. If you walk in standing water, use a pole or stick to see how deep the water is.

Do not drive through a flooded area. More people drown in their cars than anywhere else. Do not drive around road barriers; the road or bridges further down the road may be washed out. Two feet of moving water can sweep your car away.

TURN AROUND DON'T DROWN



Stay away from power lines and electrical wires. The number two flood killer after drowning is electrocution. Electric current can travel through water. Report downed power lines to your Power Company or County Emergency Operations Center at **386-758-1126**.

Be alert for gas leaks. Do not smoke or burn candles or lanterns. Gas is easily ignited. In a flood, be sure your gas is turned off by the gas company.

Look out for animals, especially snakes. Small animals may seek shelter in your home.

Don't leave pets behind. If you cannot take your pets with you please contact the Animal Shelter at **386-752-4702** to make arrangements for your pets.

HOME

FLOODING AND FLOOD RISKS

**ABOUT THE NATIONAL
FLOOD INSURANCE PROGRAM**

CHOOSE YOUR COVERAGE

PREPARATION & RECOVERY

ONE-STEP FLOOD RISK PROFILE

How can I get covered?

- Rate your risk
- Estimate your premiums
- Find an agent

Address:

City:

State:

Zip code:

Residential: Yes No

GO

RESOURCES

- > Agent Locator
- > File Your Claim
- > Frequently Asked Questions
- > Glossary
- > Flood Facts
- > Media Resources
- > Toolkits
- >  Email Updates

FLOOD INSURANCE

In all 50 states...on coasts, mountains, along rivers, in the desert, in towns, and cities of every size....floods happen. Your home has a 26% chance of being damaged by a flood over the life of a 30-yr. mortgage.

For many people, their home and its contents represent their greatest investment. Property losses due to flooding are not covered under most standard homeowner's insurance policies. You can protect your home and its contents with flood insurance through the National Flood Insurance Program (NFIP.)

The NFIP is a federal program established by Congress in 1968 which enables property owners to buy flood insurance at reasonable rates in participating communities. In return, participating communities carry out flood management measures designed to protect life and property from future flooding.

The NFIP is administered by the Federal Emergency Management Agency through its Federal Insurance Administration. Columbia County has participated in the NFIP since 1996. The Columbia County NFIP community number is 120070.

Flood insurance from the NFIP puts you in control. You won't have to wait in line to apply for disaster assistance. Homeowners, business owners, and renters all can buy flood insurance, as long as their community participates in the NFIP.

Flood insurance claims are paid even if a disaster is not declared by the President. NFIP claims are paid promptly, so flood victims can recover quickly. If you file a flood insurance claim, you may request an advance partial payment for your immediate needs.

Flood insurance reimburses you for all covered losses. Homeowners can buy up to \$250,000 of coverage. Separate contents coverage is available up to \$100,000 for homeowner's and renters.

To find out more about flood insurance for your property and its contents, contact your insurance agent. There is usually a 30-day waiting period before a flood insurance policy takes effect, so don't wait until a storm threatens before you secure the flood insurance you need. For more information about the NFIP and flood insurance, call **1-800-427-4661**. To assess your risk, visit www.floodsmart.gov.

NATURAL AND BENEFICIAL FUNCTIONS OF THE FLOODPLAIN

These benefits take many forms:

1. Natural flood and erosion control---providing flood storage and conveyance, reduce flood velocity, controls erosion of beachfront or riverfront structures.
2. Water quality---filters nutrients and impurities from runoff.
3. Ground water recharge---reduces frequency and duration of surface flow.
4. Biological resources---supports high rate of plant growth, provides breeding and feeding grounds and enhances water fowl habitat.
5. Societal resources---provides open space and aesthetic pleasures, and in areas of scientific study, provides opportunities for environmental research.

COMMUNITY RATING SYSTEM

Columbia County participates in the Community Rating System (CRS), a part of the National Flood Insurance Program (NFIP), which provides a mechanism for reducing flood insurance premiums to reflect what a community does beyond the NFIP's minimum requirements. The CRS is a voluntary incentive program that rewards community actions that reduce flood risk through discounted flood insurance rates.

PROPERTY PROTECTION MEASURES

Every year, flooding causes more property damage in the United States than any other type of natural disaster. While recent construction practices and regulations have made new homes less prone to flooding, many existing structures remain susceptible. Throughout the country there is a growing interest from property owners to develop practical and cost effective methods for reducing or eliminating exposures to flooding. Several effective ways include acquisition and relocation of a building to a site not subject to flooding, construction of floodwalls or berms to keep water away from the property, or retrofitting structures to make them flood proof. Retrofitting is a different approach from the other ways because the property itself remains subject to flooding while the building is modified to prevent or minimize flooding of habitable space.

There are several recognizable approaches to retrofitting:

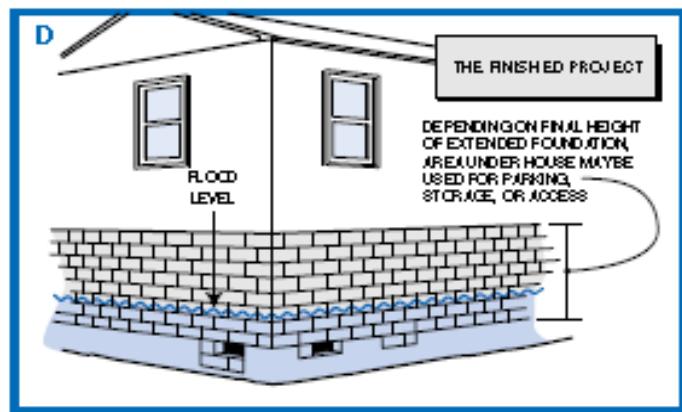
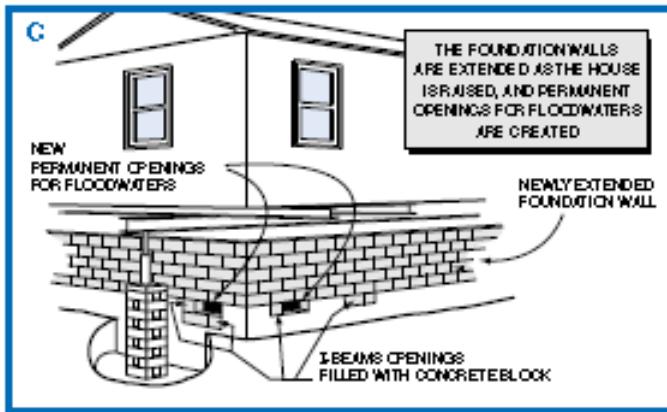
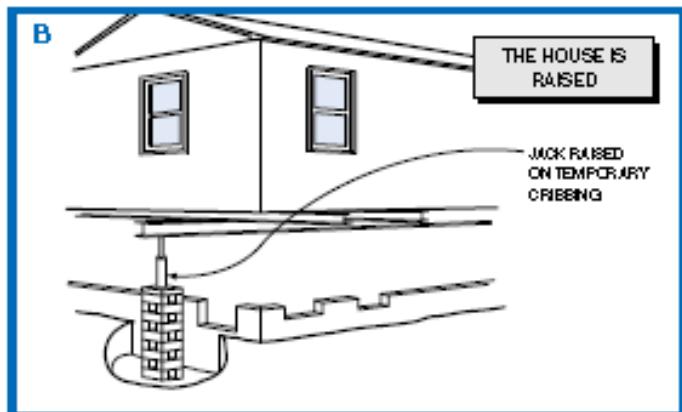
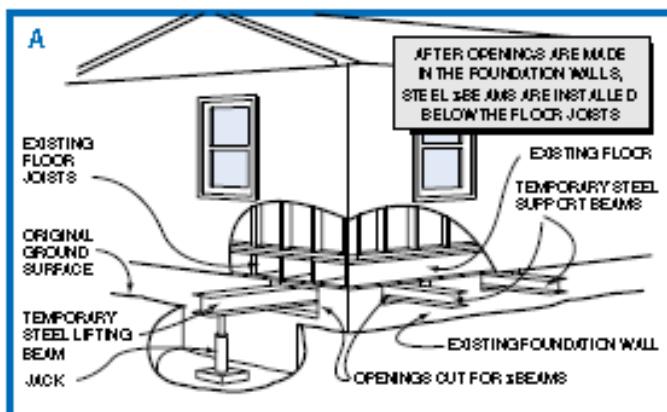
1. Elevation of the structure above flood protection levels.
2. Construction of barriers (floodwalls, berms.)
3. Dry flood proofing (water tight floor and wall systems.)
4. Wet flood proofing (permits entry and passage of flood waters.)



For example, this series of figures from the guide shows how a house on a basement or crawlspace foundation can be elevated above the flood level on extended foundation walls.

In the event of pending flood threats it is always advisable to take the following emergency actions:

1. Sand bagging to reduce erosion and scouring.
2. Elevate furniture above flood protection levels.
3. Create floodway openings in non-habitable areas such as garage doors.
4. Seal off sewer lines to the dwelling to prevent the backflow of sewer waters.



FLOODPLAIN DEVELOPMENT PERMIT REQUIREMENTS

Any development in the floodplain requires a building permit according to Article 8 of Columbia County Land Development Regulations. To obtain a flood zone determination, contact the Columbia County Building and Zoning Department at **386-754-7053**, or online at www.srwmdfloodreport.com. Copies of Elevation Certificates for all buildings constructed in the floodplain since June, 2004 are available in the Building and Zoning Department. If you witness development that has not been permitted please contact Columbia County Code Enforcement at **(386)-719-2038**.

SUBSTANTIAL IMPROVEMENT REQUIREMENTS

Columbia County requires that if the cost of reconstruction, rehabilitation, addition, or other improvements to a building equals or exceeds 50% of the building's value, the building must meet the same construction requirements as a new building. Substantially damaged buildings must also be brought up to the same standards (e.g., a residence damaged where the cost of repairs equals or exceeds 50% of the building's value before it was damaged must be elevated above the base flood elevation.) The building's value shall be determined before the improvement is started, or if the structure has been damaged and is being restored, before the damage or destruction occurred.

DRAINAGE SYSTEM MAINTENANCE

A community can lose a portion of its drainage system carrying or storage capacity due to dumping, debris, soil erosion and sedimentation, and overgrowth of vegetation. When this happens, flooding occurs more frequently and reaches higher elevations, subjecting properties otherwise protected to unnecessary risk of damage. Keep grass clippings and other debris out of storm water drainage systems to prevent clogging and loss of storm water storage and treatment capacity.

If you experience or are aware of any localized drainage problems, including illegal stream dumping, please notify the Columbia County Road Department at **386-758-1019** so that the problem may be corrected.

AFTER THE FLOOD

Protect yourself and your family from the stress, fatigue, and health hazards that follow a flood:

1. Dry out your home. Floodwaters damage most materials and leave mud, silt and unknown contaminants that promote the growth of mold and mildew.
2. Restore the utilities. The rest of your work will be much easier if you have electricity, clean water, and sewage disposal.
3. Clean up. The walls, floors, closets, shelves, contents, and any other flooded parts of your home should be thoroughly washed and disinfected.
4. Rebuild and flood proof. Take your time to rebuild correctly and make improvements that will protect your building from damage by the next flood. Learn how to flood proof your home by elevating it above the flood level (BFE—Base Flood Elevation.)
5. Inquire about available funds to relocate. There are grant programs to mitigate structures in a flood prone area. www.fema.gov.
6. Purchase flood insurance if you don't already have it.

EVERYONE IS AT RISK. GET THE FACTS. BE FLOOD SMART.



Find out if you live in a flood prone area.

Ask whether your property is above or below the flood water level and learn about the history of flooding for your region.

Know before you buy.



What is the National Flood Insurance Program (NFIP)?

The NFIP is a Federal program enabling property owners in participating communities purchase insurance protection against losses from flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods.



Participation in the NFIP is based on an agreement between local communities and the Federal Government that states if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas, the Federal Government will make flood insurance available within the community as a financial protection against flood losses.



**Homeowners insurance
doesn't cover floods.**

WARNING: Floods are America's #1 natural disaster

CREATE YOUR FLOOD RISK PROFILE

Knowing your relative flood risk level can help you assess your risk of financial loss. Once you understand your risks, you can talk with your agent to establish a coverage amount that's right for you.

To determine your flood risk and find an agent serving your area, **enter your location below**. All fields are required.

Street Address:

City:

State:

FL

Zip code:

Residential: Yes No

Submit

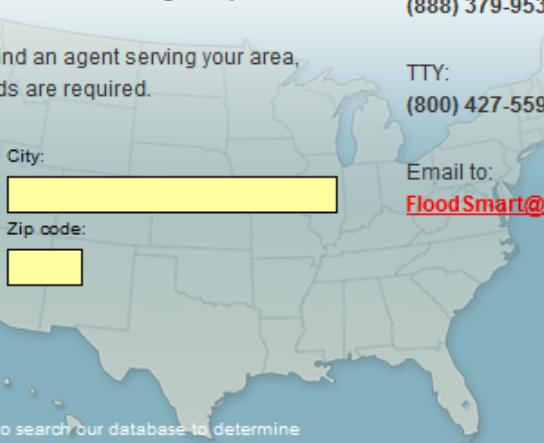
Your property information is used only to search our database to determine your relative risk level.

LEARN MORE FROM THE NATIONAL FLOOD INSURANCE PROGRAM:

Customer Service:
(888) 379-9531

TTY:
(800) 427-5593

Email to:
FloodSmart@dhs.gov



Brought to you by the
Columbia County Building & Zoning Department
135 NE Hernando Ave., Suite B-21, Lake City, FL 32055
PH: 386-754-7053 PH: 386-758-1008 FX: 386-758-2160

APPENDIX H

Flood Ordinances & CAV Report

ARTICLE 8. FLOOD PREVENTION DAMAGE REGULATIONS

SECTION 8.1 STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE, AND OBJECTIVES. The Legislature of the State of Florida has authorized and delegated in Chapter 125 Florida Statutes, the responsibility to local government units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the Board of County Commissioners of Columbia County, Florida does hereby adopt the following floodplain management regulations.

8.1.2 **FINDINGS OF FACT** The flood hazard areas of Columbia County are subject to periodic inundation, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, flood-proofed, or otherwise unprotected from flood damages.

8.1.3 **STATEMENT OF PURPOSE** It is the purpose of this article to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

1. Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, which result in damaging increases in erosion or in flood heights and velocities;
2. Require that uses vulnerable to floods including facilities which serve such uses be protected against flood damage throughout their intended life span;
3. Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters;
4. Control filling, grading, dredging and other development which may increase erosion or flood damage; and
5. Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

8.1.4 **OBJECTIVES** The objectives of this article are to:

1. Protect human life, health and to eliminate or minimize property damage;
2. Minimize expenditure of public money for costly flood control projects;

3. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
4. Minimize prolonged business interruptions;
5. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, roadways, and bridges and culverts located in floodplains;
6. Maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize flood blight areas; and
7. Ensure that potential homebuyers are notified that property is in a flood hazard area.

SECTION 8.2 DEFINITIONS. All words used in this Article, shall carry their customary dictionary meanings, except that the following words, terms and phrases, when used in this Article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Accessory structure (Appurtenant structure) means a structure that is located on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure. Accessory structures should constitute a minimal investment, may not be used for human habitation, and be designed to have minimal flood damage potential. Examples of accessory structures are detached garages, carports, storage sheds, pole barns, and hay sheds.

Appeal means a request for a review of the Floodplain Administrator's interpretation of any provision of this article or a request for a variance.

Area of shallow flooding means a designated AO or AH Zone on the community's Flood Insurance Rate Map (FIRM) with base flood depths from one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Area of special flood hazard is the land in the floodplain within a community subject to a one-percent or greater chance of flooding in any given year. This term is synonymous with the phrase "special flood hazard area."

Base flood means the flood having a one percent chance of being equaled or exceeded in any given year (also called the "100-year flood" and the "regulatory flood"). Base flood is the term used throughout this article.

Base Flood Elevation means the water-surface elevation associated with the base flood.

Basement means that portion of a building having its floor sub-grade (below ground level) on all sides.

Breakaway wall means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system.

Building – see **Structure**.

Coastal high hazard area means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on the FIRM as Zone V1 – V30, VE, or V.

Datum A reference surface used to ensure that all elevation records are properly related. Many communities have their own datum that was developed before there was a national standard. For the purpose of this article, datum shall refer to the North American Vertical Datum (NAVD) of 1988, which is expressed in relation to mean sea level.

Development means any man-made change to improved or unimproved real estate, including, but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or storage of materials or equipment.

Elevated building means a non-basement building built to have the lowest floor elevated above the ground level by foundation walls, posts, piers, columns, pilings, or shear walls.

Encroachment means the advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

Existing Construction means, for the purposes of floodplain management, structures for which “the start of construction” commenced before the date of the initial Flood Insurance Rate Map (FIRM). Existing construction, means for the purposes of determining rates structures for which the “start of construction” commenced before the effective date of the first FIRM. This term may also be referred to as “existing structures”.

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Flood or flooding means:

- a. A general and temporary condition of partial or complete inundation of normally dry land areas from:
 1. The overflow of inland or tidal waters.
 2. The unusual and rapid accumulation or runoff of surface waters from any source.
 3. Mudsides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (a) (2) of this definition and are akin to a river of liquid and flowing mud on the surface of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.
- b. The collapse or subsidence of land along a shore of a lake or other body of water as the result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm or by an unanticipated force of nature, such as a flash flood or an abnormal tidal surge or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (a) (1) of this definition.

Flood Boundary and Floodway Map (FBFM) means the official map of the community on which the Federal Emergency Management Agency (FEMA) has delineated the areas of special flood hazard and regulatory floodways.

Flood Hazard Boundary Map (FHBM) means an official map of the community, issued by FEMA, where the boundaries of the areas of special flood hazard have been identified as only Approximate Zone A.

Flood Insurance Rate Map (FIRM) means an official map of the community, issued by FEMA, which delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

Flood Insurance Study (FIS) is the official hydraulic & hydrologic report provided by FEMA. The study contains an examination, evaluation, and determination of flood hazards, and, if appropriate, corresponding water surface elevations, or an examination, evaluation, and determination of mudslide (i.e., mudflow) and other flood-related erosion hazards. The study may also contain flood profiles, as well as the FIRM, FHBM (where applicable), and other related data and information.

Floodplain means any land area susceptible to being inundated by water from any source (see definition of “flooding”).

Floodplain management means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

Floodplain Administrator is the individual appointed to administer and enforce the floodplain management regulations of the community.

Floodplain management regulations means this article and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as floodplain ordinance, grading ordinance, and erosion control ordinance), and other applications of police power which control development in flood-prone areas. This term describes Federal, State of Florida, or local regulations in any combination thereof, which provide standards for preventing and reducing flood loss and damage.

Floodproofing means any combination of structural and non-structural additions, changes, or adjustments to structures, which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

Floodway fringe means that area of the floodplain on either side of the regulatory floodway where encroachment may be permitted without additional hydraulic and/or hydrologic analysis.

Freeboard means the additional height, usually expressed as a factor of safety in feet, above a flood level for purposes of floodplain management. Freeboard tends to compensate for many unknown factors, such as wave action, bridge openings and hydrological effect of urbanization of the watershed, that could contribute to flood heights greater than the height calculated for a selected frequency flood and floodway conditions.

Functionally dependent use means a use that cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding or ship repair. The term does not include long-term storage, manufacture, sales, or service facilities.

Hardship as related to variances from this article means the exceptional hardship associated with the land that would result from a failure to grant the requested variance. The community requires that the variance is exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one’s neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires

the property owner to build elsewhere or put the parcel to a different use than originally intended.

Highest adjacent grade means the highest natural elevation of the ground surface, prior to the start of construction, next to the proposed walls of a structure.

Historic Structure means any structure that is:

- a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- c) Individually listed on the Florida inventory of historic places, which has been approved by the Secretary of the Interior; or
- d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 1. By the approved Florida program as determined by the Secretary of the Interior, or
 2. Directly by the Secretary of the Interior.

Lowest adjacent grade means the lowest elevation, after the completion of construction, of the ground, sidewalk, patio, deck support, or basement entryway immediately next to the structure.

Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, used solely for parking of vehicles, building access, or storage, in an area other than a basement, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the nonelevation design standards of this article.

Mangrove Stand means an assemblage of mangrove trees which are mostly low trees noted for a copious development of interlacing adventitious roots above ground and which contain one or more of the following species: Black mangrove (*Avicennia Nitida*); red mangrove (*Rhizophora mangle*); white mangrove (*Languncularia Racemosa*); and buttonwood (*Conocarpus Erecta*).

Manufactured home means a building, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers, and similar transportable structures placed on a site for 180 consecutive days or longer and intended to be improved property.

Manufactured home park or subdivision means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Market value means the building value, which is the property value excluding the land value and that of the detached accessory structures and other improvements on site (as agreed to between a willing buyer and seller) as established by what the local real estate market will bear. Market value can be established by an independent certified appraisal (other than a limited or curbside appraisal, or one based on income approach), Actual Cash Value (replacement cost depreciated for age and quality of construction of building), or adjusted tax-assessed values.

Mean Sea Level means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For purposes of this article, the term is synonymous with North American Vertical Datum (NAVD) of 1988.

National Geodetic Vertical Datum (NGVD) of 1929 means a vertical control used as a reference for establishing varying elevations within the floodplain.

New Construction means, for floodplain management purposes, any structure for which the “start of construction” commenced on or after the effective date of the initial floodplain management code, ordinance, or standard based upon specific technical base flood elevation data that establishes the area of special flood hazard – include only one date. The term also includes any subsequent improvements to such structures. For flood insurance rates, structures for which the start of construction commenced on or after the effective date of the date of an initial FIRM or after December 31, 1974, whichever is later – include only one date, and includes any subsequent improvements to such structures.

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of the first floodplain management code, ordinance or standard.

North American Vertical Datum (NAVD) of 1988 means a vertical control used as a reference for establishing varying elevations within the floodplain.

Free of Obstruction means any type of lower area enclosure or other construction element that will obstruct the flow of velocity water and wave action beneath the lowest horizontal structural member of the lowest floor of an elevated building during a base flood event is not allowed. This requirement applies to the structures in velocity zones (V-Zones).

Program deficiency means a defect in the community’s floodplain management regulations or administrative procedures that impairs effective implementation of those floodplain management regulations or of the standards required by the National Flood Insurance Program.

Public safety and nuisance means anything which is injurious to safety or health of the entire community or a neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

Recreational vehicle (RV) as defined in Florida Statutes 320.01(1)(b)1.-8., as amended.

Regulatory floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

Remedy a deficiency or violation means to bring the regulation, procedure, structure or other development into compliance with State of Florida, Federal or local floodplain management regulations; or if this is not possible, to reduce the impacts of its noncompliance. Ways the impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of this article or otherwise deterring future similar violations, or reducing Federal financial exposure with regard to the structure or other development.

Riverine means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

Sand dune means naturally occurring accumulations of sand in ridges or mounds landward of the beach.

Shallow flooding means the same as area of shallow flooding.

Special flood hazard area means the same as area of special flood hazard.

Start of construction For other than new construction or substantial improvements under the Coastal Barrier Resources Act P. L. 97-348, includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main building. For substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Storm cellar means a place below grade used to accommodate occupants of the structure and emergency supplies as a means of temporary shelter against severe tornadoes or similar windstorm activity.

Structure means for floodplain management purposes a walled and roofed building, including gas or liquid storage tank that is principally above ground, as well as a manufactured home.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial improvement means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cumulative cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures that have incurred “substantial damage” regardless of the actual repair work performed. This term does not, however, include any repair or improvement of a structure to correct existing violations of State of Florida or local health, sanitary, or safety code specifications, which have been identified by the local code enforcement official prior to the application for permit for improvement, and which are the minimum necessary to assure safe living conditions.

Substantially improved existing manufactured home parks or subdivisions is where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

Variance is a grant of relief from the requirements of this article.

Violation means the failure of a structure or other development to be fully compliant with the requirements of this article. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this article is presumed to be in violation until such time as that documentation is provided.

Watercourse means a lake, river, creek, stream, wash, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

Water surface elevation means the height, in relation to the North American Vertical Datum (NAVD) of 1988, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

SECTION 8.3 GENERAL PROVISIONS

- 8.3.1 **LANDS TO WHICH THIS ARTICLE APPLIES** This article shall apply to all areas of special flood hazard within the jurisdiction of the Board of County Commissioners of Columbia County, Florida.
- 8.3.2 **BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD** The areas of special flood hazard identified by the Federal Emergency Management Agency in the Flood Insurance Study (FIS) for Columbia County, Florida, dated February 4, 2009, with the accompanying maps and other supporting data, and any subsequent revisions thereto, are adopted by reference and declared to be a part of this article. The Flood Insurance Study and Flood Insurance Rate Map (FIRM) are on file at the Columbia County Building and Zoning Department.
- 8.3.3 **DESIGNATION OF FLOODPLAIN ADMINISTRATOR** The Board of County Commissioners of Columbia County, Florida hereby appoints the Land Development Regulation Administrator to administer and implement the revisions of this article and is herein referred to as the Floodplain Administrator.
- 8.3.4 **ESTABLISHMENT OF DEVELOPMENT PERMIT** A development permit shall be required in conformance with the provisions of this article prior to the commencement of any development activities.
- 8.3.5 **COMPLIANCE** No structure or land shall hereafter be located, extended, converted or structurally altered without full compliance with the terms of this article and other applicable regulations.
- 8.3.6 **ABROGATION AND GREATER RESTRICTIONS** This article is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this article and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
- 8.3.7 **INTERPRETATION** In the interpretation and application of this article all provisions shall be:
1. Considered as minimum requirements;
 2. Liberally construed in favor of the governing body; and
 3. Deemed neither to limit nor repeal any other powers granted under State of Florida statutes.
- 8.3.8 **WARNING AND DISCLAIMER OF LIABILITY** The degree of flood protection required by this article is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods

can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This article does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This article shall not create liability on the part of the Board of County Commissioners of Columbia County, Florida or by any officer or employee thereof for any flood damages that result from reliance on this article or any administrative decision lawfully made thereunder.

8.3.9 **PENALITIES FOR VIOLATION** Violation of the provisions of this article or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall be punishable for a non-criminal violation. Any person who violates this article or fails to comply with any of its requirements shall, upon adjudication therefore, be fined not more than \$500, and in addition, shall pay all costs and expenses involved in the case. Each day such violation Continues, shall be considered a separate offense. Nothing herein contained shall prevent the Floodplain Administrator from taking such other lawful actions as is necessary to prevent or remedy any violation.

SECTION 8.4 ADMINISTRATION

8.4.1 **PERMIT PROCEDURES** Application for a Development Permit shall be made to the Floodplain Administrator on forms furnished by him or her prior to any development activities, and may include, but not be limited to, the following plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, earthen fill, storage of materials or equipment, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

1. Application Stage:
 - a. Elevation in relation to mean sea level of the proposed lowest floor (including basement) of all buildings;
 - b. Elevation in relation to mean sea level to which any non-residential building will be flood-proofed;
 - c. Certificate from a registered professional engineer or architect that the non-residential flood-proofed building will meet the flood-proofing criteria in Section 8.4.1(2), and Section 8.5.2.(2);
 - d. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development; and

- e. Elevation in relation to mean sea level of the bottom of the lowest horizontal structural member of the lowest floor and provide a certification from a registered engineer or architect indicating that they have developed and or reviewed the structural designs, specifications and plans of the construction and certified that are in accordance with accepted standards of practice in Coastal High Hazard Areas.

2. Construction Stage:

Upon placement of the lowest floor, or flood-proofing by whatever construction means, or bottom of the lowest horizontal structural member it shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the NGVD or NAVD elevation of the lowest floor or flood-proofed elevation, or bottom of the lowest horizontal structural member as built, in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. When flood proofing is utilized for a particular building said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The Floodplain Administrator shall review the lowest floor and flood-proofing elevation survey data submitted. The permit holder immediately and prior to further progressive work being permitted to proceed shall correct violations detected by such review. Failure to submit the survey or failure to make said corrections required hereby, shall be cause to issue a stop-work order for the project.

8.4.2 **DUTIES AND RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR** Duties of the Administrator shall include, but are not be limited to:

1. Review permits to assure sites are reasonably safe from flooding;
2. Review all development permits to assure that the permit requirements of this article have been satisfied;
3. Advise permittee that additional Federal, State of Florida, or local permits may be required, and if such additional permits are necessary, especially as it relates to Chapters 161.053; 320.8249; 320.8359; 373.036; 380.05; 381.0065, and 553, Part IV, Florida Statutes, require that copies of such permits be provided and maintained on file with the development permit;
4. Notify adjacent communities, the Department of Community Affairs, Division of Emergency Management, the Suwanne River Water Management District,

the Federal Emergency Management Agency and other Federal and/or State of Florida agencies with statutory or regulatory authority prior to any alteration or relocation of a watercourse;

5. Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is maintained;
6. Verify and record the actual elevation (in relation to mean sea level) of the lowest floor (A-Zones) or bottom of the lowest horizontal structural member of the lowest floor (V-Zones) of all new or substantially improved buildings, in accordance with Section 8.5.2.(1) and (2) and Section 8.5.5.(2), respectively;
7. Verify and record the actual elevation (in relation to mean sea level) to which the new or substantially improved buildings have been flood-proofed, in accordance with Section 8.5.2.(2);
8. Review certified plans and specifications for compliance. When flood-proofing is utilized for a particular building, certification shall be obtained from a registered engineer or architect certifying that all areas of the building below the required elevation are water tight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy in compliance with Section 8.5.2.(2) of this section;
9. Interpret the exact location of boundaries of the areas of special flood hazard. When there appears to be a conflict between a mapped boundary and actual field conditions, the Floodplain Administrator shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article;
10. When base flood elevation data or floodway data have not been provided in accordance with Section 8.3.3, the Floodplain Administrator shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State of Florida, or any other source, in order to administer the provisions of Section 8.5;
11. Coordinate all change requests to the FIS, FIRM and FBFM with the requester, State of Florida, and FEMA, and
12. Where Base Flood Elevation is utilized, obtain and maintain records of lowest floor and floodproofing elevations for new construction and substantial improvements in accordance with Section 8.5.2.(1) and (2), respectively.

SECTION 8.5 PROVISIONS FOR FLOOD HAZARD REDUCTION

8.5.1 **GENERAL STANDARDS** In all areas of special flood hazard, all development sites including new construction and substantial improvements shall be reasonably safe from flooding, and meet the following provisions:

1. New construction and substantial improvements shall be designed or modified and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
2. Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable State of Florida requirements for resisting wind forces;
3. New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage. See the applicable Technical Bulletin or Bulletins for guidance;
4. New construction or substantial improvements shall be constructed by methods and practices that minimize flood damage. See the applicable Technical Bulletin or Bulletins for guidance;
5. Electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities, including duct work, shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
6. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
7. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;
8. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;
9. Any alteration, repair, reconstruction or improvements to a building that is in compliance with the provisions of this article shall meet the requirements of “new construction” as contained in this article;

10. Any alteration, repair, reconstruction or improvements to a building that is not in compliance with the provisions of this article, shall be undertaken only if said non-conformity is not furthered, extended, or replaced;
11. All applicable additional Federal, State of Florida, and local permits shall be obtained and submitted to the Floodplain Administrator. Copies of such permits shall be maintained on file with the development permit. State of Florida permits may include, but not be limited to the following:
 - a. Suwanne River Water Management District(s): in accordance with Chapter 373.036 Florida Statutes, Section (2)(a) – Flood Protection and Floodplain Management.
 - b. Department of Community Affairs: in accordance with Chapter 380.05 F.S. Areas of Critical State Concern, and Chapter 553, Part IV F.S., Florida Building Code.
 - c. Department of Health: in accordance with Chapter 381.0065 F.S. Onsite Sewage Treatment and Disposal Systems.
 - d. Department of Environmental Protection, Coastal Construction Control Line: in accordance with Chapter 161.053 F.S. Coastal Construction and Excavation.
12. Standards for Subdivision Proposals and other Proposed Development (including manufactured homes):
 - a. All subdivision proposals shall be consistent with the need to minimize flood damage;
 - b. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage;
 - c. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.

8.5.2 **SPECIFIC STANDARDS** In all A-Zones where base flood elevation data have been provided (Zones AE, A1–30, and AH), as set forth in Section 8.3.2, the following provisions shall apply:

1. *Residential Construction.* All new construction or substantial improvement of any residential building (including manufactured home) shall have the lowest floor, including basement, elevated to no lower than one foot above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to

facilitate automatic equalization of flood hydrostatic forces on both sides of the exterior walls shall be provided in accordance with standards of Section 8.5.2.3.

2. *Non-Residential Construction.* All new construction or substantial improvement of any commercial, industrial, or non-residential building (including manufactured home) shall have the lowest floor, including basement, elevated to no lower than one foot above the base flood elevation. All buildings located in A-Zones may be flood-proofed, in lieu of being elevated, provided that all areas of the building components below the base flood elevation plus one foot are water tight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied using the FEMA Floodproofing Certificate. Such certification along with the corresponding engineering data, and the operational and maintenance plans shall be provided to the Floodplain Administrator.
3. *Elevated Buildings.* New construction or substantial improvements of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the lowest floor elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.
 - a. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:
 1. Provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
 2. The bottom of all openings shall be no higher than one foot above foundation adjacent interior grade (which must be equal to or higher in elevation than the adjacent exterior grade); and
 3. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided they provide the required net area of the openings and permit the automatic flow of floodwaters in both directions.

- b. Fully enclosed areas below the lowest floor shall solely be used for parking of vehicles, storage, and building access. Access to the enclosed area shall be minimum necessary to allow for parking of vehicles (garage door), limited storage of maintenance equipment used in connection with the premises (standard exterior door), or entry to the living area (stairway or elevator); and
- c. The interior portion of such enclosed area shall not be finished or partitioned into separate rooms.

4. Standards for Manufactured Homes and Recreational Vehicles

- a. All manufactured homes that are placed, or substantially improved within Zones A1-30, AH, and AE, on sites (i) outside of an existing manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred “substantial damage” as the result of a flood, the lowest floor be elevated on a permanent foundation to no lower than one foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
- b. All manufactured homes to be placed or substantially improved in an existing manufactured home park or subdivision within Zones A-1, AH, and AE, that are not subject to the provisions of Section 8.5.2.4.(a) of this Article, must be elevated so that either:
 - 1. The lowest floor of the manufactured home is elevated to no lower than one foot above the base flood elevation, or
 - 2. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least an equivalent strength that are no less than 36 inches in height above the grade and securely anchored to an adequate foundation system to resist flotation, collapse, and lateral movement.
- c. All recreational vehicles placed on sites within Zones A1-30, AH, and AE must either:
 - 1. Be on the site for fewer than 180 consecutive days,

2. Be fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions), or
 3. Meet all the requirements for new construction, including anchoring and elevation requirements in accordance with Section 8.5.2.4 (a) and (b) of this Article.
5. Adequate drainage paths around structures shall be provided on slopes to guide water away from structures.
6. Standards for established Base Flood Elevations, without Regulatory Floodways located within the areas of special flood hazard established in Section 8.3.2 and where streams exist for which base flood elevation data has been provided by the Federal Emergency Management Agency without the delineation of the regulatory floodway (Zones AE and A1-30), the following additional provisions shall also apply.
 - a. Until a regulatory floodway is designated, no new construction, substantial improvements, or other development including fill shall be permitted within the areas of special flood hazard, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point within the community.
 - b. Development activities which increase the water surface elevation of the base flood by more than one foot may be allowed, provided that the developer or applicant first applies – with the community's endorsement – for a conditional FIRM revision, and receives the approval of the Federal Emergency Management Agency.
7. Floodways. Located within areas of special flood hazard established in Section 8.3.2, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and have significant erosion potential, the following additional provisions shall also apply:
 - a. Prohibit encroachments, including fill, new construction, substantial improvements and other developments within

the regulatory floodway unless certification (with supporting technical data) by a registered professional engineer is provided through hydraulic and hydrologic analyses performed in accordance with standard engineering practice demonstrating that encroachments would not result in any increase in flood levels during occurrence of the base flood discharge.

- b. Prohibit the placement of manufactured homes (mobile homes), except in an existing manufactured homes (mobile homes) park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring standards of Section 8.5.1.(2), and the elevation standards of Section 8.5.2.(1) and (2), and the encroachment standards of Section 8.5.2.(7).(a), are met.
- c. Development activities including new construction and substantial improvements that increase the water surface elevation of the base flood by more than one foot may be allowed, provided that the developer or applicant first applies – with the community’s endorsement – for a conditional FIRM revision, and receives the approval of FEMA.
- d. When fill is proposed, in accordance with the permit issued by the Florida Department of Health, within the regulatory floodway, the development permit shall be issued only upon demonstration by appropriate engineering analyses that the proposed fill will not increase the water surface elevation of the base flood in accordance with Section 8.5.7.(a).

8.5.3 SPECIFIC STANDARDS FOR A-ZONES WITHOUT BASE FLOOD ELEVATIONS AND REGULATORY FLOODWAYS Located within the areas of special flood hazard established in Section 8.3.2, where there exist A Zones for which no base flood elevation data and regulatory floodway have been provided or designated by the Federal Emergency Management Agency, the following provisions shall apply:

1. Require standards of Section 8.5.1.
2. The Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State of Florida, or any other source, in order to administer the

provisions of this article. When such data is utilized, provisions of Section 8.5.2, shall apply. The Floodplain Administrator shall:

- a. Obtain the elevation (in relation to the mean sea level) of the lowest floor (including the basement) of all new and substantially improved structures,
 - b. Obtain, if the structure has been floodproofed in accordance with the requirements of Section 8.5.2.2, the elevation in relation to the mean sea level to which the structure has been floodproofed, and
 - c. Maintain a record of all such information.
3. Notify, in riverine situations, adjacent communities, the State of Florida, Department of Community Affairs, NFIP Coordinating Office, and the applicable Water Management District prior to any alteration or relocation of a watercourse, and submit copies of such notifications to FEMA.
 4. Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.
 5. Manufactured homes shall be installed using methods and practices that minimize flood damage. They must be elevated and anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State of Florida and local anchoring requirements for resisting wind forces.
 6. When the data is not available from any source as in paragraph (2) of this Section, the lowest floor of the structure shall be elevated to at least two (2) feet above highest elevation of any adjacent unpaved road, or unpaved access easement; or at least one (1) foot above the highest elevation on any adjacent paved road or paved access easement.
 7. No encroachments, including fill material or structures, shall be located within a distance of the stream bank equal to 2 (two) times the width of the stream at the top of the bank or 50 (fifty) feet each side from the top of the bank, whichever is greater, unless certification by a registered professional engineer is provided demonstrating that such encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge.

8. Require that all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals base flood elevation data.
- 8.5.4 **STANDARDS FOR AO-ZONES** Located within the areas of special flood hazard established in Section 8.3.2, are areas designated as shallow flooding areas. These areas have flood hazards associated with base flood depths of one to three feet, where a clearly defined channel does not exist and the path of flooding is unpredictable and indeterminate; therefore, the following provisions apply:
1. All new construction and substantial improvements of residential structures in all AO Zones shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the Flood Insurance Rate Map. If no flood depth number is specified, the lowest floor, including basement, shall be elevated to no less than two feet above the highest adjacent grade.
 2. All new construction and substantial improvements of non-residential structures shall:
 - a. Have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the Flood Insurance Rate Map. If no flood depth number is specified, the lowest floor, including basement, shall be elevated to at least two feet above the highest adjacent grade, or
 - b. Together with attendant utility and sanitary facilities be completely floodproofed to that level to meet the floodproofing standard specified in Section 8.5.2.2.
 3. Adequate drainage paths around structures shall be provided on slopes to guide water away from structures.

SECTION 8.6 APPEALS AND VARIANCE PROCEDURES.

- 8.6.1 **DESIGNATION OF APPEALS BOARD AND PROCEDURES** The Columbia County, Florida, Board of Adjustment shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the Land Development Regulation Administrator in the enforcement or administration of Article 8 of these land development regulations.
1. Any such appeal shall be in written form and filed within thirty (30) days of the decision of the Land Development Regulation Administrator,

and filed with the Land Development Regulation Administrator. Such appeal shall state the location of the property, the date of the notice of violations, and the number of such notice. The appellant must state the modification requested, the reasons therefor, and the hardship or conditions upon which the appeal is made.

Standing to appeal shall be limited to those property owners affected by the decision of the Land Development Regulation Administrator.

2. Decision. In passing upon such appeal, the Board of Adjustment shall consider all technical evaluations, all relevant factors, and standards specified in Article 9 of these land development regulations.
 - a. Upon consideration of the factors of Article 8 herein the Board of Adjustment may attach such conditions to the granting of modifications to the Land Development Regulation Administrator's determination as it deems necessary to further the purposes of Article 8 of these land development regulations.
3. Any person or persons, jointly or severally, aggrieved by any decision of the Columbia County Board of Adjustment may appeal as set out in Section 12.1.6.6 of these land development regulations.

8.6.2 **DESIGNATION OF VARIANCE BOARD** The Board of County Commissioners Columbia County, Florida shall hear request for variances from the requirements of this article. Any person aggrieved by the decision of the board may appeal such decision to the Circuit Court as set out in Section 12.1.6.6 of these land development regulations.

8.6.3 **VARIANCE PROCEDURES** In acting upon such applications, the Board of County Commissioners shall consider all technical evaluations, all relevant factors, standards specified in other sections of this article, and:

1. The danger that materials may be swept onto other lands to the injury of others;
2. The danger of life and property due to flooding or erosion damage;
3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
4. The importance of the services provided by the proposed facility to the community;
5. The necessity to the facility of a waterfront location, where applicable;

6. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
7. The compatibility of the proposed use with existing and anticipated development;
8. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
9. The safety of access to the property in times of flood for ordinary and emergency vehicles;
10. The expected heights, velocity, duration, rate of rise, and sediment of transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
11. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

8.6.4 CONDITIONS FOR VARIANCES

1. Variances shall only be issued when there is:
 - a. A showing of good and sufficient cause;
 - b. A determination that failure to grant the variance would result in exceptional hardship;
 - c. A determination that the granting of a variance will not result in increased flood heights if certified by a professional engineer registered in the State of Florida; and
 - d. A determination that the granting of a variance will not result in additional threats to public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
2. Variances shall only be issued upon a determination that the variance is the minimum necessary deviation from the requirements of this article.
3. Variances shall not be granted after-the-fact.

4. The Floodplain Administrator shall maintain the records of all variance actions, including justification for their issuance or denial, and report such variances in the community's NFIP Biennial Report or upon request to FEMA and the State of Florida, Department of Community Affairs, NFIP Coordinating Office.

8.6.5 **VARIANCE NOTIFICATION** Any applicant to whom a variance is granted shall be given written notice over the signature of a community official that:

1. Specifying the difference between the base flood elevation and the elevation to which the structure is constructed;
2. The issuance of a variance to construct a structure below the base flood elevation will result in increased premium rates for flood insurance will be commensurate with the increased risk resulting from the reduced lowest ; floor elevation and
3. Such construction below the base flood level increases risks to life and property.

A copy of the notice shall be recorded by the Floodplain Administrator in the Office of the Clerk of Court and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land.

8.6.6 **HISTORIC STRUCTURES** Variances may be issued for the repair or rehabilitation of "historic" structures – meeting the definition in this article upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a "historic" structure.

8.6.7 **STRUCTURES IN REGULATORY FLOODWAY** Variances shall not be issued within any designated floodway if any impact in flood conditions or increase in flood levels during the base flood discharge would result.

APPENDIX I

2010 LMS Update Overview

2010 Update Overview

Section 2 Prerequisites

Element	Analysis	Result
§201.6(c)(5)	Reviewed by LMSWG	As outlined by federal requirements – the County and all jurisdictions will adopt the plan once they receive a letter from FEMA confirming approval pending adoption

Section 3 Planning Process

Element	Analysis	Result
§201.6(a)(4)	Each jurisdiction in Columbia County was solicited to participate in the 2010 update process.	There were no municipalities created or disbanded since the 2005 update. The same 3 jurisdictions from the 2005 plan participated in the 2010 update.
§201.6(b) §201.6(c)(1)	The LMSWG reviewed the planning process from 2005 and reviewed the July 1, 2008 “Local Multi-hazard Mitigation Planning Guidance” to ensure the required planning process was properly captured	The 2010 planning process was similar to the 2005 process and was documented appropriately.

Section 4 Risk Assessment

Element	Analysis	Result
§201.6(c)(2)(i) IDENTIFYING HAZARDS Risk Assessment shall include a description of the type....of all natural hazards that can affect the jurisdiction...	The Working Group reviewed the 2005 data and agreed to add lightning as a hazard that affects the County	Using the 2005 data as a starting point and added lightning
§201.6(c)(2)(i) PROFILING HAZARDS Description of the ...location and extent of all natural hazards that can affect.... Shall include info on previous occurrences...	The Working Group reviewed the 2005 data and determined that most of the info is still current but needed stronger definitions	Used some of the 2005 info and strengthened/updated where needed
§201.6(c)(2)(ii) ASSESSING VULNERABILITY Description of vulnerability to hazards in section (c)(2)(i)....	The Working Group reviewed the 2005 data and determined that no significant change had occurred in the prevailing hazard analysis. The LMSWG did conclude that the data modeling process would be better served by utilizing the more current data provided by the Hazus MH modeling process over the formerly utilized TAOS modeling process.	The Working Group reorganized and combined several requirements (vulnerability, historical, probability, etc.) by hazard to deliver a clearer holistic view of hazards throughout entire county.

§201.6(c)(2)(ii) ASSESSING VULNERABILITY: RLP ...address NFIP insured structures that have been repetitively damaged by floods.	New element not an update	Obtained data from the State Floodplain Manager and County and City Floodplain Administrators
§201.6(c)(2)(ii)(A) ASSESSING VULNERABILITY: IDENTIFYING STRUCTURES SHOULD describe vulnerability in terms of the types and numbers...	The Working Group reviewed and analyzed the 2005 data	The Working Group utilized more current data provided by the Tax Assessors Office and Hazus MH modeling process over the formerly utilized TAOS modeling process.
§201.6(c)(2)(ii)(B) ASSESSING VULNERABILITY: ESTIMATING POTENTIAL LOSSES SHOULD give an estimate of the potential dollar losses to vulnerable structures identified....	The Working Group reviewed and analyzed the 2005 data	The Working Group utilized more current data provided by the Tax Assessors Office and Hazus MH modeling process over the formerly utilized TAOS modeling process.
§201.6(c)(2)(ii)(C) ASSESSING VULNERABILITY: ANALYZING DEVELOPMENT TRENDS SHOULD provide a general description of land uses and development trends within the community....	The Working Group reviewed the 2005 data/information and determined it needed to be completely updated.	This section was updated using the more recent Comprehensive Plan Evaluation Appraisal Report, BEBR and Census 2000 data
C§201.6(c)(2)(iii) MULTI-JURISDICTIONAL RISK ASSESSMENT Must assess each jurisdiction's risks where they vary from entire planning area.	The Working Group reviewed the 2005 data to determine if updates were necessary.	New or updated data was integrated or replaced as appropriate keeping the assessment on a county wide basis.

Section 5 Mitigation Strategy

Element	Analysis	Result
§201.6(c)(3)(i)	The Working Group reviewed the goals and objectives to determine their appropriateness with respect to any changing situations in the County, as well as changes in policy, and to ensure they are addressing current and expected future conditions.	The Working Group felt that to better serve the needs of the communities, the G&O needed to be better defined. The G&O were restructured and organized to first by most the 3 prevalent hazards with the remaining being listed under Multi-hazard.

§201.6(c)(3)(ii)	LMSWG members reviewed each project on the LMS project list.	See Appendix F The status of each project was reported including percent of completion to date. New projects were considered and added if approved. Completed, deleted, and deferred projects were also identified.
§201.6(c)(3)(ii) NFIP	New – not update	The NFIP program overview for all participating jurisdictions are included.
§201.6(c)(3)(iii) / §201.6(c)(3)(iv)	The LMSWG members reviewed the 2005 process	After careful consideration, the LMSWG voted to continue the project implementation process and update the prioritization process.

Section 6 Plan Maintenance

Element	Analysis	Result
§201.6(c)(4)(i)	The Planning Process including Plan Maintenance, monitoring, evaluation, and update sections were reviewed and suggestion/changes were taken from group members.	The group voted upon and approved to continue the existing Plan Maintenance schedule of bi-annual meetings and as needed.
§201.6(c)(4)(ii)	The LMSWG reviewed all areas of the 2005 plan that contained information relevant to this element	The LMSWG included discussion in this section about how and where the LSM is incorporated.
§201.6(c)(4)(iii)	Was reviewed by the LMSWG to ensure compliance with state, local, and federal requirements	The LMSWG voted and approved to the existing procedures described below.