

Executive Summary

The experiences of the 2004 Hurricane Season epitomize the importance of better integrating hazard mitigation activities into local comprehensive planning. Residents from all over the state experienced significant damages from Hurricanes Charley, Frances, Jeanne, and Ivan by either winds, tornadoes, surge, or flooding. But this was not the only time that we have experienced natural disaster, nor will it be the last. In 1992, Hurricane Andrew devastated South Florida. In 1998 and 1999, most counties in Florida experienced wildfires. In some cases, despite fire fighters best efforts, the fires advanced through neighborhoods and homes were lost. Every year in Central Florida, new sinkholes emerge swallowing homes and damaging infrastructure. The cost of recovery for these various disasters ranges from hundreds of thousands to billions of dollars, significantly taxing local, state, and federal financial sources. Losses covered through federal funding as a result of the 2004 hurricanes alone could reach as high as \$7 billion. Worst of all, however, are the many lives that, directly or indirectly, are lost due to natural disasters. It is imperative that we reduce the human and financial costs of natural disasters. Through better integration of natural hazard considerations into local comprehensive planning, we can build safer communities.

This profile of Lafayette County has been prepared as part of a statewide effort by the Florida Department of Community Affairs (DCA) to guide local governments on integrating hazard mitigation principles into local comprehensive plans. Through the process outlined in this profile, planners will be able to (1) convey Lafayette County's existing and potential risk to identified hazards; (2) assess how well local hazard mitigation principles have been incorporated into the County's Comprehensive Plan; (3) provide recommendations on how hazard mitigation can better be integrated into the Comprehensive Plan; and (4) determine if any enhancements could be made to the LMS to better support comprehensive planning. Best available statewide level data is provided to convey exposure and risk as well as to illustrate the vulnerability assessment component of the integration process.

Summary of Recommendations

Lafayette County's Comprehensive Plan has good integration of hazard mitigation principles and its LMS has adequate data and goals to support comprehensive planning. There are goals, objectives, and policies that support risk reduction from predominantly flood and sinkhole in the LMS and Comprehensive Plan. However, there are always ways to strengthen such plans, and the following is a summary of options for the County to do so.

Comprehensive Plan Preliminary Recommendations

The following recommendations include hazard mitigation measures through which Lafayette County can continue to reduce or eliminate risks from flood, wildfire, and sinkhole. These recommendations pertain to the use of vacant lands and/or redevelopment practices. Based on the land use tabulations, most of the vacant acreage is susceptible to wildfire. Land use tabulations were not provided for flood as the flood zones are not available in shapefile format. However, flood is considered a high risk according the Lafayette County LMS. Sinkholes were discussed in the LMS, but the risk was considered to be very low for the entire county. The Comprehensive Plan addresses stormwater discharge into sinkholes in Lafayette County, therefore preliminary recommendations are also provided for this hazard. For more information about the methodology and data used for the land use tabulations, please refer to Section 2. Hazard Vulnerability in this hazards profile.

Of the vacant lands, 372 acres are susceptible to wildfire and 58 acres are susceptible to sinkholes.

Flood

The georeferenced data was not available to determine the acreage susceptible to flooding, however the LMS deemed flood to be a high risk. Therefore recommendations are included for this hazard.

- The Comprehensive Plan should continue to include policies pertaining to the Suwannee River System 100-Year Floodplain Special Planning Area.
- The Comprehensive Plan should continue to give priority ranking in the Capital Improvements Element to projects that are needed to protect public health and safety.
- The County should continue to give priority to those projects listed on the LMS project list.
- The County should continue policies pertaining to the preparation of a stormwater master plan to further mitigate the impacts of flooding in the community. This should be listed as a prioritized project on their LMS project list for possible funding sources such as FEMA's Hazard Mitigation Grant Program.
- The Comprehensive Plan should continue the implementation of policies for preserving and enhancing the natural environment (i.e., 100-year floodplain) through the enforcement of land development regulations for floodplain management and stormwater management to maintain the natural functions.
- The Comprehensive Plan should continue to require that the County maintain an inventory of environmentally sensitive areas which shall include 100-year floodplains.
- The County should continue to identify floodplains for acquisition under existing programs.
- The County should continue to adopt or amend land development regulations which limit the density of dwelling units within FEMA designated 100-year floodplains such that existing flood storage is maintained and allowable densities do not create potential flood hazards, or degrade the natural functions of the floodplain.
- The County should continue to require that all structures built in the 100-year floodplain include at least one foot freeboard.
- The Comprehensive Plan should consider prohibiting septic tanks in flood hazard areas or wetlands.
- The County should consider including a policy to not approve variances to required flood elevations.
- The County should consider establishing an impact fee and/or other equitable user-oriented revenue sources for the construction of drainage facilities, either county-wide or in districts of high flooding potential.
- The County should consider requiring areas that have not established base flood elevations to be studied prior to development.
- The County should consider calling for compensating storage calculations in flood hazard areas.

Wildfire

About 12% of the 372 vacant acres that are susceptible to wildfire are to be developed for residential, commercial, industrial uses or public facilities, indicating that these risk reduction strategies should be considered prior to development of this vacant land.

- Where reasonable, the County should consider creating a policy in the Comprehensive Plan to update the Land Development Regulations for the County to include wildfire mitigation principles, such as defensible space buffering surrounding development or multiple exits for large development. This could also include provisions for vegetation maintenance and the required removal of exotic vegetation or land cover that could be conducive to wildfire.
- The County should consider including policies for coordination with area volunteer fire departments to ensure fire protection is provided to all areas of the County.
- The County should consider participating in the Firewise Medal Community program to reduce risks within the wildland urban interface.
- The County should consider a requirement for all new development to include and implement a wildfire mitigation plan specific to that development, subject to review and approval by the County Fire Rescue Department.
- The County should consider increasing public awareness of prescribed burning and require management plans for conservation easements that address reduction in wildfire fuels.

Sinkholes

The LMS has deemed sinkhole hazard to be low risk. However the Comprehensive Plan contains sinkhole goals, objectives, and policies, so recommendations have been provided for this hazard. About 26% of the 56 vacant acres that are susceptible to sinkholes are to be developed for residential, commercial, industrial uses or public facilities, indicating that these risk reduction strategies should be considered prior to development of this vacant land.

- The County should continue to include policies in the Comprehensive Plan that designate sinkholes as environmentally sensitive areas that are protected through land development regulations.
- The County should consider promoting PDR and TDR in areas highly susceptible to sinkholes.
- Through the Comprehensive Plan and/or the overlay zones, promote the use of cluster development to mitigate sinkhole hazards. In this way, the areas highly susceptible to sinkholes could be preserved as open space, while allowing other areas to be developed at a higher density.

General

- Current growth management techniques such as clustering, conservation of floodplains and wetlands, elevating structures in special flood hazard areas and stormwater mitigation policies are employed by the community to protect natural features and to protect areas from flooding. Therefore, the County should update these policies in the Comprehensive Plan, emphasizing the benefits of hazard mitigation.
- The County should determine whether or not the conserved areas in the County have lifetime designations. In North Florida, some areas that were formally designated as uses with low densities are being slated for rural and urban development. It is important to determine if and when, all of the conservation agreements end, in order to determine if additional actions can be taken in the Comprehensive Plan to ensure that the property is protected.

- The Comprehensive Plan should consider including a policy to incorporate recommendations from existing and future interagency hazard mitigation reports into the Comprehensive Plan, and should consider including these recommendations during the Evaluation and Appraisal Report process as determined feasible and appropriate by the Board of County Commissioners.
- Include each hazard layer on the existing and future land use maps to determine where risks are possible to target hazard mitigation strategies.
- The Comprehensive Plan should consider including a policy to incorporate applicable provisions of the Comprehensive Plan into the Comprehensive Emergency Management Plan and the Local Mitigation Strategy.
- Continue educating the public, especially those at high risk from floods and wildfires, and make them aware of proactive steps they can take to mitigate damage.

Local Mitigation Strategy Preliminary Recommendations

The following data and information could be included in an update of the LMS. This information could help convey how and where disasters impact the population and the built environment to support comprehensive planning.

- Include hazard maps with data layers to illustrate population (i.e., density) or property (i.e., value) exposure.
- Include a future land use map with hazard data layers (i.e., one FLUM per hazard) to illustrate which future land use categories are susceptible to each hazard.
- Include loss estimates by land use.
- Reference or include a list and/or map of repetitive loss properties.
- Include a quantitative risk assessment for existing and future development (i.e., loss estimates) or specific critical facilities.

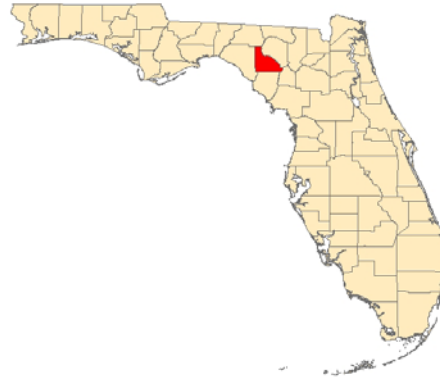
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1. County Overview

Geography and Jurisdictions

Lafayette County is located in the north-central portion of the Florida peninsula. It covers a total of 548 square miles, of which approximately 543 square miles are land and five square miles are water. There is one incorporated municipality within Lafayette County, as shown in Table 1.1. Mayo serves as the county seat.



Population and Demographics

According to the April 1, 2004 population estimate by the University of Florida's Bureau of Economic and Business Research (BEBR), population estimates for all jurisdictions within Lafayette County and the percent change from the 2000 U.S. Census are presented in **Table 1.1**. While some residents live in incorporated jurisdictions approximately 86% live in the county's unincorporated areas. Lafayette County has experienced significant population growth in recent years, a trend that is expected to continue. Between 1990 and 2000, Lafayette County had a growth rate of 25.9%, which is slightly higher than the statewide average of 23.5% for the same time period.

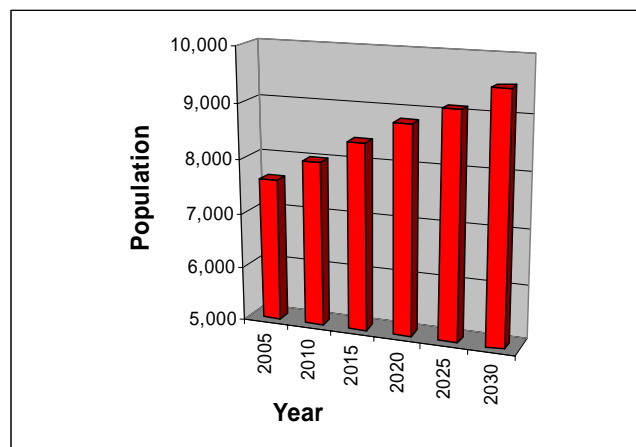
Table 1.1 Population Estimates by Jurisdiction

Jurisdiction	Population (Census 2000)	Population (Estimate 2004)	Percent Change 2000-2004	Percent of Total Population (2004)
Unincorporated	6,034	6,513	7.94%	86.44%
Mayo	988	1,022	3.44%	13.56%
Total	7,022	7,535	7.31%	100.00%

Source: University of Florida, Bureau of Economic and Business Research, 2004

According to BEBR (2004), Lafayette County's population is projected to grow steadily and reach an estimated 9,500 by the year 2030, increasing the average population density of 14 to 17 persons per square mile. **Figure 1.1** illustrates medium growth population projections for Lafayette County based on 2004 calculations.

Figure 1.1 Population Projections for Lafayette County, 2005–2030



Source: University of Florida, Bureau of Economic and Business Research, 2004

Of particular concern within Lafayette County’s population are those persons with special needs or perhaps limited resources such as the elderly, disabled, low-income or language isolated residents. According to the 2000 Census, of the 7,022 persons residing in Lafayette County 12.4% are listed as 65 years old or over, 21.6% are listed as having a disability, 17.5% are listed as below poverty, and 11.3% live in a home where the primary language is other than English.

2. Hazard Vulnerability

Hazards Identification

The highest risk hazards for Lafayette County as identified in the County’s Local Mitigation Strategy (LMS) are tropical cyclone generated high winds, flooding, and wildfires. Sinkholes were discussed in the LMS, but the risk was considered to be very low for the entire county. The LMS also noted that Lafayette County is not subject to storm surge due to its inland location.

Hazards Analysis

The following analysis examines three major hazard types: flood, wildfire and sinkholes. All of the information in this section was obtained through the online Mapping for Emergency Management, Parallel Hazard Information System (MEMPHIS). MEMPHIS was designed to provide a variety of hazard related data in support of the Florida Local Mitigation Strategy DMA 2K project, and was created by Kinetic Analysis Corporation (KAC) under contract with the Florida Department of Community Affairs (DCA). Estimated exposure values were determined using FEMA’s designated 100-year flood zones (A, AE, V, VE, AO, 100 IC, IN, AH) for flood; all medium-to-high risk zones from MEMPHIS for wildfire (Level 5 through Level 9); and high, very high, extreme and adjacent zones for sinkhole based on the KAC analysis. For more details on a particular hazard or an explanation of the MEMPHIS methodology, consult the MEMPHIS Web site (<http://lmsmaps.methaz.org/lmsmaps/index.html>).

Because the Lafayette County LMS considers storm surge to be a negligible hazard and MEMPHIS data indicates that no persons or structures are exposed to surge, no further analysis was conducted for this hazard.

Existing Population at Risk

Table 2.1 presents the population currently exposed to each hazard throughout Lafayette County. Of the 7,022 (U.S. Census 2000) people that reside in Lafayette County, none are exposed to 100-year flooding or sinkhole, and 5.5% are exposed to wildfire.

Table 2.1 Estimated Numbers of Persons Exposed to Selected Hazards

Segment of Population	Wildfire
Total (all persons)*	388
Minority	214
Over 65	28
Disabled	157
Poverty	173
Language-Isolated	0
Single Parent	38

Source: Mapping for Emergency Management, Parallel Hazard Information System

*Note: The “Total” amount does not equal the sum of all segments of the population, but indicates the total population at risk to the selected hazards.

Evacuation and Shelters

As discussed in the previous sections, population growth in Lafayette County has been steady, and the trend is projected to continue. Additionally, storm events requiring evacuation typically impact large areas, often forcing multiple counties to issue evacuation orders simultaneously and placing a greater cumulative number of evacuees on the roadways which may slow evacuation time further. Evacuees from coastal counties will likely evacuate to inland areas, seeking shelter in host counties such as Lafayette County. Thus, it is important to consider evacuation times for all counties in the region as shown in **Table 2.2**. As the population increases in the future, the demand for shelter space and the length of time to evacuate will increase, unless measures are taken now. Also, it should be noted that population that will reside in new housing stock might not be required to evacuate as new construction will be built to higher codes and standards.

Table 2.2 County Clearance Times per Hurricane Category (Hours)
(High Tourist Occupancy, Medium Response)

County	Category 1 Hurricane	Category 2 Hurricane	Category 3 Hurricane	Category 4 Hurricane	Category 5 Hurricane
Alachua	10.25	12	17.75	17.75	17.75
Bradford	18	18	18	18	18
Columbia	<i>Not Available</i>				
Gilchrist	6	6	8	8	10
Hamilton	<i>Not Available</i>				
Lafayette	<i>Not Available</i>				
Madison	8	8	8	8	8
Suwannee	<i>Not Available</i>				
Union	<i>Not Available</i>				

Source: DCA, DEM Hurricane Evacuation Study Database, 2005

Note: This is best available data in 2005, although data is not available for some counties.

Data regarding evacuation clearance times for Lafayette County is not yet available. The data in Table 2.2 was derived from eleven regional Hurricane Evacuation Studies that have been produced by FEMA, the U.S. Army Corps of Engineers, and Florida Regional Planning Councils. The study dates range from 1995 to 2004. These regional studies are updated on a rotating basis with Northeast Florida region scheduled for completion in the fall of 2005.

Similar to most of Florida's coastal counties, Lafayette County currently has a significant shelter deficit. According to Florida's Statewide Emergency Shelter Plan, Lafayette County has an existing shelter capacity of 3,738 people. The 2004 shelter demand for a Category 4 or Category 5 hurricane is 5,636 people, leaving an existing shelter deficit of 1,258. In 2009, the projected shelter demand is 5,636, leaving an anticipated shelter deficit of 1,898. This deficit is likely to be greater due to the influx of evacuees seeking shelter from nearby counties, as Columbia is a host county. Therefore, it is essential that Lafayette County continue to coordinate with nearby counties for evacuation and shelter planning. The opportunity also exists to construct new facilities to standards that will allow them to serve as shelters, and to construct future public facilities outside of floodplain areas.

It is important for counties to maintain or reduce hurricane evacuation times. This could be accomplished by using better data to determine the hazard risk to populations to evaluate which areas to evacuate, and increasing the ability to shelter in place to decrease the number of evacuees. Lafayette County could encourage new homes to be built with saferooms, community centers in mobile home parks or developments to be built to shelter standards (outside of the hurricane vulnerability zones), or require that new schools be built or existing schools be

retrofitted to shelter standards; which would be based on FEMA saferoom and American Red Cross shelter standards. Additionally, the county could establish level of service (LOS) standards that are tied to development.

Existing Built Environment

While the concern for human life is always highest in preparing for a natural disaster, there are also substantial economic impacts to local communities, regions, and even the state when property damages are incurred. To be truly sustainable in the face of natural hazards, we must work to protect the residents and also to limit, as much as possible, property losses that slow down a community’s ability to bounce back from a disaster. **Table 2.3** presents estimates of the number of structures in Lafayette County by occupancy type that are exposed to each of the hazards being analyzed. The estimated exposure of Lafayette County’s existing structures to the flood, wildfire, and sinkhole hazards was determined through MEMPHIS.

Table 2.3 Estimated Numbers of Structures Exposed to Selected Hazards

Occupancy Type	Flood	Wildfire	Sinkhole
Single Family	24	418	96
Mobile Home	16	237	46
Multi-Family	7	58	13
Commercial	9	83	36
Agriculture	9	1,249	25
Gov. / Institutional	9	417	14
Total	74	2,462	230

Source: Mapping for Emergency Management, Parallel Hazard Information System

There are 2,766 structures exposed to at least one of the three hazards. Of these structures, only 2.7% are exposed to flood. There are 74 structures are located within the 100-year floodplain. According to the latest National Flood Insurance Program Repetitive Loss Properties list, as of March 2005, there are 18 repetitive loss properties in Lafayette County. Under the National Flood Insurance Program (NFIP), repetitive loss properties are defined as “any NFIP-insured property that, since 1978 and regardless of any change(s) of ownership during that period, has experienced: a) four or more paid flood losses; or b) two paid flood losses within a 10-year period that equal or exceed the current value of the insured property; or c) three or more paid losses that equal or exceed the current value of the insured property.”

Approximately 89%, or 2,462 structures, are exposed to wildfire, of which approximately 51% are used agriculture and 17% are single family dwellings. Most susceptible areas are generally located at the western and southwestern portions of the unincorporated county (Lafayette County LMS, 2005). There are 230 structures that are within high or adjacent risk zones to sinkholes, with 42% of those being single family homes and 20% are mobile homes.

In addition to understanding exposure, risk assessment results must also be considered for prioritizing and implementing hazard mitigation measures. The risk assessment takes into account the probability (how often) and severity (e.g., flood depth, wildfire duration) of the hazard as it impacts people and property. Risk can be described qualitatively, using terms like high, medium or low; or quantitatively by estimating the losses to be expected from a specific hazard event expressed in dollars of future expected losses. Although people and property are exposed to hazards, losses can be greatly reduced through building practices, land use, and structural hazard mitigation measures. The next section of this report examines the existing and future land use acreage in hazard areas. This information can be useful to consider where to implement risk reducing comprehensive planning measures.

Analysis of Current and Future Vulnerability Based on Land Use

The previous hazards analysis section discussed population and existing structures exposed to flooding, sinkholes, and wildfire according to MEMPHIS estimates. This section is used to demonstrate the County's vulnerabilities to these hazards in both tabular format and spatially, in relation to existing and future land uses. Existing land use data was acquired from County Property Appraisers and the Florida Department of Revenue in 2004 for tabulation of the total amount of acres and percentage of land in identified hazard areas, sorted by existing land use category for the unincorporated areas. The total amount of acres and percentage of land in the identified hazards areas was tabulated and sorted by future land use category according to the local Future Land Use Map (FLUM), as well as the amount of these lands listed as vacant according to existing land use. Lafayette County future land use data was acquired in February 2001 from the North Central Florida Regional Planning Council and might not reflect changes per recent future land use amendments. Maps of existing land use within hazard areas are based on the 2004 County Property Appraiser geographic information system (GIS) shapefiles. Maps of future land uses in hazard areas were developed using the Lafayette County future land use map dated February 2001. A series of maps were created as part of the analysis and are available as attachments to the county profile. All maps are for general planning purposes only.

For the purposes of this profile, the identified hazard areas include flood zones in relation to the 100-year flood, wildfire susceptible areas, and sinkhole susceptible areas.

In **Attachment A**, two maps present the existing and future land uses within a 100-year flood zone. These areas are scattered across the county, particularly along the northern and eastern areas of the County near the Suwannee River. Land use data and shapefiles for flood are not currently available for analysis and are therefore not included in this analysis. Maps were made from scanned images of the flood zones overlaid with the existing land use maps and FLUMs. Data was obtained from the Suwannee River Water Management District.

In **Attachment B**, two maps present the existing and future land uses within wildfire susceptible areas. These areas are scattered across the county. The total amount of land in the wildfire susceptible areas is 18,323.1 acres. As shown in **Table 2.4**, 88.8% are used for agriculture; 3.5% are currently undeveloped and 2.5% are used for single family residential homes. **Table 2.5** shows that of the 371.8 undeveloped acres, 45.4% are designated for agriculture with less than one dwelling unit per five acres; 29% are designated for environmentally sensitive areas with less than one dwelling unit per 10 acres; and 10.6% are designated for agriculture with less than one dwelling unit per 40 acres. The County should continue to take measures to reduce wildfire risk within the urban/rural interface.

In **Attachment C**, two maps present the existing and future land uses within sinkhole susceptible areas. These areas are scattered across the county. The total amount of land in the sinkhole susceptible areas is 1,016.5 acres. As shown in **Table 2.4**, 67.2% are used for agriculture; 13.1% are used for government, institutional, hospitals and education; and 5.6% are used for single family residential homes. **Table 2.5** shows that of the 55.7 undeveloped acres, 48.5% are designated for agriculture with less than one dwelling unit per five acres; 22.8% do not have a designated use; and 14% are designated for commercial use. The County has taken proactive measures in designating lands in sinkhole susceptible areas for predominantly low density uses.

Table 2.4 Total Unincorporated Acres in Hazard Areas by Existing Land Use Category

Existing Land Use Category		Wildfire Susceptible Areas	Sinkhole Susceptible Areas
Agriculture	Acres	9,376.7	683.5
	%	88.8	67.2
Places of Worship	Acres	8.9	2.2
	%	0.1	0.2
Commercial	Acres	2.5	18.9
	%	0.0	1.9
Government, Institutional, Hospitals, Education	Acres	119.3	133.1
	%	1.1	13.1
Industrial	Acres	17.4	4.9
	%	0.2	0.5
Parks, Conservation Areas, Golf Courses	Acres	116.1	0.0
	%	1.1	0.0
Residential Group Quarters, Nursing Homes	Acres	2.5	0.7
	%	0.0	0.1
Residential Multi-Family	Acres	27.6	7.8
	%	0.3	0.8
Residential Mobile Home, or Commercial Parking Lot	Acres	246.3	50.8
	%	2.3	5.0
Residential Single-Family	Acres	264.8	57.3
	%	2.5	5.6
Transportation, Communication, Rights of Way	Acres	7.8	1.6
	%	0.1	0.2
Utility Plants and Lines, Solid Waste Disposal	Acres	1.1	0.0
	%	0.0	0.0
Vacant	Acres	371.8	55.7
	%	3.5	5.5
Total	Acres	10,562.8	1,016.5
	%	100.0	100.0

Source: Department of Community Affairs

Table 2.5 Total Unincorporated Acres in Hazard Areas by Future Land Use Category

Future Land Use Category		Wildfire Susceptible Areas		Sinkhole Susceptible Areas	
		Total	Vacant	Total	Vacant
Agriculture - 1 (<1 d.u. per 40 acres)	Acres	3,621.5	39.5	0.0	0.0
	%	34.3	10.6	0.0	0.0
Agriculture - 2 (<1 d.u. per 10 acres)	Acres	27.4	0.0	0.0	0.0
	%	0.3	0.0	0.0	0.0
Agriculture - 3 (<1 d.u. per 5 acres)	Acres	5,400.5	168.8	631.6	27.0
	%	51.1	45.4	62.1	48.5
Commercial	Acres	7.1	1.3	11.6	7.8
	%	0.1	0.3	1.1	14.0
Conservation	Acres	32.3	1.3	0.0	0.0
	%	0.3	0.3	0.0	0.0
Environmentally Sensitive Areas (< 1 d.u. per 10 acres)	Acres	875.2	107.9	4.2	1.1
	%	8.3	29.0	0.4	2.0
Industrial	Acres	0.0	0.0	13.8	0.0
	%	0.0	0.0	1.4	0.0
None	Acres	78.2	10.3	146.2	12.7
	%	0.7	2.8	14.4	22.8
Public	Acres	8.7	0.0	0.0	0.0
	%	0.1	0.0	0.0	0.0
Recreation	Acres	72.2	0.0	0.0	0.0
	%	0.7	0.0	0.0	0.0
Residential - Low Density (< 1 d.u. per acre)	Acres	223.2	10.5	78.5	3.8
	%	2.1	2.8	7.7	6.8
Residential - Moderate Density (< 2 d.u. per acre)	Acres	158.5	32.1	45.3	2.9
	%	1.5	8.6	4.5	5.2
Unknown	Acres	58.0	0.2	85.4	0.4
	%	0.5	0.1	8.4	0.7
Total	Acres	10,562.9	371.8	1,016.6	55.7
	%	100.0	100.0	100.0	100.0

Source: Department of Community Affairs

The amount of total land and existing vacant land in identified hazard areas was also tabulated for Lafayette County's one incorporated municipality. These amounts are listed in **Table 2.6**. The intent of this table is to show the vacant acreage in hazard zones in each municipality, and to show the percentage of vacant acreage in each hazard zone for each municipality. In the total column for each hazard, the percentage for the municipality is the hazard zone acreage as a percent of total acreage for the municipality. In the vacant column for each hazard, the percentage for each municipality is the percent of area in the hazard zone for the respective municipality. The total municipal percent of vacant acreage is the percent of acreage in the hazard zones for all municipalities.

Mayo has eight vacant acres in wildfire susceptible areas, which is 18.9% of all wildfire susceptible acreage in Mayo. Mayo also has over 13 vacant acres in sinkhole susceptible areas, which is 13.6% to all sinkhole susceptible acreage in Mayo.

Vacant land is often destined to be developed. It is prudent to conduct further analyses of what the vacant lands will be used for, to determine whether they will be populated, and at what level

of intensity/density, to ensure that hazard risks are minimized or eliminated. Each of the municipalities in Lafayette County has vacant lands that are in hazard areas. Since hazards cross jurisdictional boundaries, it is important to consider all hazard areas to collaboratively formulate hazard mitigation strategies and policies throughout the county.

Table 2.6 Total Land and Existing Vacant Land in Hazard Areas by Municipal Jurisdiction

Jurisdiction		Wildfire Susceptible Areas		Sinkhole Susceptible Areas	
		Total	Vacant	Total	Vacant
Mayo	Acres	42.4	8.0	97.0	13.2
	%	100.0	18.9	100.0	13.6
Total Municipal Acres	Acres	42.4	8.0	97.0	13.2
	%	100.0	18.9	100.0	13.6

Source: Department of Community Affairs\

3. Existing Mitigation Measures

Local Mitigation Strategy (LMS) Assessment –

The Local Mitigation Strategy is suited to be a repository for all hazard mitigation analyses (i.e., vulnerability and risk assessment), programs, policies and projects for the county and municipalities. The LMS identifies hazard mitigation needs in a community and alternative structural and nonstructural initiatives that can be employed to reduce community vulnerability to natural hazards. The LMS is multi-jurisdictional and intergovernmental in nature. Communities can reduce their vulnerability to natural hazards by integrating the LMS analyses and mitigation priorities into the local government comprehensive plan.

As noted in DCA’s *Protecting Florida’s Communities Guide*, one significant strategy for reducing community vulnerability is to manage the development and redevelopment of land exposed to natural hazards. Where vacant land is exposed to hazard forces, local government decisions about allowable land uses, and the provision of public facilities and infrastructure to support those uses, can have major impacts on the extent to which the community makes itself vulnerable to natural hazards. Where communities are already established and land is predominately “built out,” local governments can take initiatives to reduce existing levels of vulnerability by altering current land uses both in the aftermath of disasters, when opportunities for redevelopment may arise, and under “blue sky” conditions as part of planned redevelopment initiatives.

Per the *DCA’s Protecting Florida’s Communities Guide*, LMSes prepared pursuant to the state’s guidelines (Florida Department of Community Affairs, 1998) have three substantive components:

Hazard Identification and Vulnerability Assessment (HIVA). This section identifies a community’s vulnerability to natural hazards. Under Florida rules, the HIVA is required to include, at a minimum, an evaluation of the vulnerability of structures, infrastructure, special risk populations, environmental resources, and the economy to any hazard to which the community is susceptible. According to FEMA, LMSes revised pursuant to the Disaster Mitigation Act of 2000 (DMA 2000) criteria must include maps and descriptions of the areas that would be affected by each hazard to which the jurisdiction is exposed, information on previous events, and estimates of future probabilities. Vulnerability should be assessed for the types and numbers of exposed buildings, infrastructure, and critical facilities with estimates of potential dollar losses. Plan updates will be required to assess the vulnerability of future growth and development.

Guiding Principles. This section lists and assesses the community’s existing hazard mitigation policies and programs and their impacts on community vulnerability. This

section typically contains a list of existing policies from the community's Comprehensive Plan and local ordinances that govern or are related to hazard mitigation. Coastal counties frequently include policies from their PDRPs.

Mitigation Initiatives. This component identifies and prioritizes structural and non-structural initiatives that can reduce hazards vulnerability. Proposals for amendments to Comprehensive Plans, land development regulations, and building codes are often included. Structural projects typically address public facilities and infrastructure, and buy-outs of private structures that are repetitively damaged by flood. Many of these qualify as capital improvement projects based on the magnitude of their costs and may also be included in the capital improvements elements of the counties' and cities' Comprehensive Plans.

The Lafayette County LMS (adopted in 2004) was assessed to determine if the hazard analysis and vulnerability assessment (i.e., flood, and wildfire; sinkhole was deemed by the LMS committee to pose a low risk) data can support comprehensive planning, whether the guiding principles include a comprehensive list of policies for the county and municipalities, and whether the LMS goals and objectives support comprehensive planning goals, objectives, and policies (GOP). Future updates to the assessment will include working with Lafayette County to determine if the county's capital improvement projects are included in the LMS hazard mitigation project list.

Hazard Analysis and Vulnerability Assessment (LMS pp. 3 - 59)

The strengths and weaknesses of the Hazard Analysis and Vulnerability Assessment are as follows:

Strengths:

- Provides information about demographic, income, and special needs population.
- Provides information about population and property exposure to certain hazards.
- Provides a hazards analysis and a qualitative vulnerability assessment for the county.
- Includes maps for multi-hazards for the county.
- Includes a list of types and map of critical facilities.
- Includes a qualitative risk assessment for each hazard, along with tabular data showing risks to the county and the municipality.

Weaknesses:

- Hazard maps do not include data layers to illustrate population (i.e., density) or property (i.e, value) exposure.
- Does not include a future land use maps that include hazard data layers to illustrate which future land use categories are susceptible to each hazard.
- Does not include loss estimates by land use or occupancy class.
- Does not provide a list and map of repetitive losses.
- Does not include a quantitative risk assessment for existing and future development (i.e., loss estimates) or specific critical facilities.

Incorporating land use and population data into the risk assessment of the LMS provides a better source of data for planners to use in policy making and policy evaluation of the local comprehensive plan. The LMS also sets a standard for the quality of data that should be used in determining risk and thereby used to determine mitigation policies.

Guiding Principles

The Lafayette County LMS Guiding Principles section contains a list of policies for the county and each municipality. The table located in Appendix E of the LMS includes the category (e.g, public

health, safety, and welfare), source (e.g., comprehensive plan, building code) and location of source, event applicability (e.g. severe weather, fire, geological) and notes on design, implementation and enforcement. The Guiding Principles section is found in most counties' LMSes and is useful in providing the different jurisdictions ideas for enhancing their own plans or providing the LMS committee an analysis of where there may be weaknesses in implementing mitigation strategies.

LMS Goals and Objectives

The Lafayette County LMS has goals that support mitigation principles that are found in the comprehensive plan. A list of the LMS goals pertaining to comprehensive planning can be found in **Attachment D**. An assessment of whether the LMS goals are reflected in the comprehensive plan (and vice versa) is provided in **Table 5.1** as part of the preliminary recommendations. Final recommendations will result from a collaborative process between DCA, Lafayette County, and PBS&J. The following is a summary of the LMS goals that support comprehensive plan GOPs:

Goal 3.1 refers to preventing riverine erosion from increasing by limiting or steering development away from the 100-year floodplain.

Goal 4.1 aims to identify and map sinkhole-susceptible areas and use local government comprehensive plans to steer development away from identified areas.

Goals 6.1 and 6.2 refer to the reduction of the impact of public utility interruptions following a hurricane or coastal storm. Goal 6.3 strives for the reduction of structural vulnerability to high winds associated with hurricanes.

Goal 7.1 endeavors to minimize damage to existing and future development due to flooding.

Goal 8.1 aims to minimize damage to existing and future development due to wildfire.

Maintaining consistent language for outlining goals and objectives in both the LMS and comprehensive plan presents a united front on decreasing risk in the county. While the LMS may not be able to regulate land use as the comprehensive plan does, having these common goals and objectives increases the likelihood of the jurisdictions of Lafayette County adopting and implementing corresponding policies that are legally enforceable.

Comprehensive Emergency Operations Plan (CEMP)

At the time of this writing, only the 1998 Lafayette County CEMP was available for review. This plan pre-dates the LMS, therefore no references to the LMS exist in this document. This analysis will be completed upon receipt of a current copy that is being provided by the County.

Post-Disaster Redevelopment Plan (PDRP)

Lafayette County is not required to develop a PDRP, but it is recommended.

National Flood Insurance Program/Community Rating System

Lafayette County (unincorporated areas) and the municipality of Mayo participate in the National Flood Insurance Program (NFIP). Neither Lafayette County (unincorporated areas) nor the municipality of Mayo participates in the NFIP Community Rating System (CRS).

4. Comprehensive Plan Review

Purpose and Intent

The Lafayette County Comprehensive Plan 2011 (Adopted August 1991) was reviewed for the purpose of developing this profile. This review was undertaken in order to assess what steps Lafayette County has taken to integrate hazard mitigation initiatives from their Local Mitigation Strategy (LMS), and hazard mitigation initiatives in general, into the local planning process. Each Element of the Plan was evaluated to establish the extent to which the principles from the LMS were incorporated into the objectives and policies of the existing Comprehensive Plan.

Approach

This review includes an assessment of the flooding, wildfire and sinkhole hazards. A preliminary list of objectives and policies currently contained in the Plan that pertain to hazard mitigation and any policies related to these hazards is found in **Attachment E**. The following is a discussion of the extent to which the Plan appears to address each of the hazards. Recent policy amendments may not have been available for review, or proposed policies might be in the process of creation, which address these hazards. As a result, this assessment is considered preliminary and subject to input from the local government.

Summary of Findings

The highest risk hazards for Lafayette County as identified in the County's Local Mitigation Strategy (LMS) are floods and wildfires. The LMS risk assessment indicated sinkholes to be a low risk hazard for Lafayette County. However, the Comprehensive Plan included a number of objectives and policies related to sinkhole hazard mitigation, sufficient to warrant a discussion of those policies in this assessment.

Lafayette County Comprehensive Plan primarily focuses on the protection of environmentally sensitive areas including, natural drainage features, wetlands, floodplains and aquifer recharge zones. Policies discuss hazard mitigation to protect sensitive areas, and vulnerable properties and populations through development controls and environmental management. However, references to emergency management are limited in the Plan.

Lafayette County is not a coastal county, so policies are not geared toward coastal management and coastal resource protection. There is an intergovernmental coordination component integrated into the Plan. This element primarily focuses on resource and infrastructure related coordination with surrounding municipalities and the Suwannee River Water Management District.

Flooding

Flooding is addressed from two vantage points, the protection and restoration of natural resources, and protection of vulnerable populations and properties. There are several policies directed at minimizing flooding and stormwater runoff. Suwannee River System 100-year Floodplain Special Planning Area policies are incorporated as a section of the Future Land Use Element. This section of the plan includes policies geared toward the relationship between development and re-development and the protection of the Suwannee River System. Policies also center on locating development outside of the 100-year floodplain, in order to protect life and property from the flood hazard.

Stormwater concurrency requirements are discussed extensively in the Sanitary Sewer, Solid Waste, Drainage, Potable Water and Natural Groundwater Aquifer Recharge Element. There are detailed policies to prevent the exacerbation of stormwater issues brought on by new development. For example, there is a policy in place to ensure that post-development stormwater

runoff is no greater than pre-development stormwater runoff. There are additional buffering and filtering requirements for existing and proposed developments aimed at mitigating for and preventing stormwater runoff.

Flood hazard related policies include elevation requirements within the 100-year floodplain. Non-residential structures in all areas of special flood hazard must either be elevated one (1) foot above base flood elevation, or flood-proofed as certified by a registered professional engineer or architect.

Sheltering

As with many inland counties in Florida, in the event of a hurricane, Lafayette County may receive evacuees from coastal counties. Similar to most of Florida's coastal counties, Lafayette County currently has a significant shelter deficit. According to Florida's Statewide Emergency Shelter Plan, Lafayette County has an existing shelter capacity of 3,738 people. The 2004 shelter demand for a Category 4 or Category 5 hurricane is 5,636 people, leaving an existing shelter deficit of 1,258. In 2009, the projected shelter demand is 5,636, leaving an anticipated shelter deficit of 1,898. This deficit is likely to be greater due to the influx of evacuees seeking shelter from nearby counties, as Columbia is a host county. Therefore, it is essential that Lafayette County continue to coordinate with nearby counties for evacuation and shelter planning. The opportunity also exists to construct new facilities to standards that will allow them to serve as shelters, and to construct future public facilities outside of floodplain areas.

Sinkholes

The Future Land Use Element, Conservation Element, and Sanitary Sewer, Solid Waste, Drainage, Potable Water and Natural Groundwater Aquifer Recharge Elements contain numerous policies that directly relate to sinkhole hazards, karst features, groundwater recharge and aquifer protection. Policies deal with both environmental protection of natural features, as well as mitigation of the risk of sinkholes to people, property and infrastructure.

Numerous Plan policies strive to limit and regulate development in and approximate to prime groundwater recharge areas. Language is also included to protect recharge areas by preventing drainage wells and sinkholes from use for stormwater disposal. In addition, all development near a known sinkhole is required to maintain a minimum fifty (50) foot buffer from such formations.

Wildfire

Policies directly relating to the wildfire hazard were not found during this review. There is one housing policy that includes the requirement for minimum housing standards to address safety to life and property from fire and other hazards.

5. Data Sources

County Overview:

Florida Statistical Abstract – 2004 (38th Edition). Bureau of Economic and Business Research, Warrington College of Business, University of Florida. Gainesville, Florida.

State and County QuickFacts. U.S. Census Bureau. Data derived from 2000 Census of Population and Housing.

State of Florida. 2005 Hurricane Evacuation Study Database. Florida Department of Community Affairs, Division of Emergency Management.

Hazard Vulnerability:

Florida Repetitive Loss List March 05. Florida Department of Community Affairs, Division of Emergency Management, Flood Mitigation Assistance Office. March 2005.

Mapping for Emergency Management, Parallel Hazard Information System (MEMPHIS). Florida Department of Community Affairs, Division of Emergency Management.
<http://lmsmaps.methaz.org/lmsmaps/>

Protecting Florida's Communities – Land Use Planning Strategies and Best Development Practices for Minimizing Vulnerability to Flooding and Coastal Storms. Florida Department of Community Affairs, Division of Community Planning and Division of Emergency Management. September 2004.

State of Florida 2004 Statewide Emergency Shelter Plan. Florida Department of Community Affairs, Division of Emergency Management.

GIS Data:

Flood Zone FLOOD GIS DATA NOT AVAILABLE—ONLY IMAGES

Source: FEMA FIRM maps, supplied by Suwannee River Water Management District (digitized images)

Sinkhole Hazard GIS Data

Source: Kinetic Analysis Corporation web site (2005),
at: http://lmsmaps.methaz.org/lmsmaps/final_cty/

- Areas shown/analyzed are those areas in the "Rawsink1.shp" GIS coverage supplied by KAC, where the value in the field "Gridcode" is 3 to 6, representing "High", or Very High", "Extremely High", or "Adjacent", based on the classification system used in the sinkhole hazard maps found on the website.

Wildfire Susceptibility GIS Data

Source: Florida Department of Agriculture and Consumer Services/Division of Forestry, Florida Fire Risk Assessment System (FRAS) data, 2004.

- Areas shown as "wildfire susceptible areas" and that were analyzed are those areas with a "Wildfire Susceptibility Index" value of greater than 10,000 (in north Florida counties) or greater than 0.1 (in south Florida counties)*, based on the FRAS model, and that are also within areas of forest or shrub vegetation or "low impact urban" land cover, based on the Florida Fish and Wildlife Conservation Commission "Florida Vegetation and Land Cover - 2003" GIS data.

Municipal Boundaries

Source: Boundaries of municipalities were extracted from the U.S. Census 2000 "Places" GIS coverage for the State of Florida.

ATTACHMENT A
Maps of the Existing and Future Land Uses within the 100-year Floodplain

ATTACHMENT B
Maps of the Existing and Future Land Uses within Wildfire Susceptible Areas

ATTACHMENT C
Maps of the Existing and Future Land Uses within Sinkhole Susceptible Areas

ATTACHMENT D
Local Mitigation Strategy Goals and Objectives
Related to Comprehensive Planning

Lafayette County's LMS includes the following goals that are directly related to local comprehensive planning and growth management:

- **Goal 3.1** – *Maintain current levels and rates of riverine erosion by limiting development within, and directing development away from the 100-year floodplains of rivers, streams and creeks.*
- **Goal 4.1** – *Minimize damage to future buildings and infrastructure by identifying and mapping sinkholes and areas of known sinkhole formation and providing policy direction in local government comprehensive plans which limits and/or guides development away from such areas.*
- **Goal 7.1** – *Minimize damage to existing and future buildings and infrastructure as a result of flooding.*
- **Goal 8.1** – *Minimize damage to existing and future buildings and infrastructure as a result of wildfires.*

ATTACHMENT E
Lafayette County Comprehensive Plan Excerpts Related to Hazard Mitigation

FUTURE LAND USE ELEMENT

Objective I.1: The County shall direct future population growth and associated urban development to urban development areas through the establishment of such urban development areas within this Comprehensive Plan upon the adoption of this Comprehensive Plan. The total area of all the County's urban development areas shall be limited to 5 percent of the total acreage within the County.

Policy I.1.4: The County shall, prior to action on a site and development plan, determine the sufficiency of proposed screens and buffers to preserve internal and external harmony and comparability with uses inside and outside the proposed development so that proposed urban development near agricultural or forested areas, or environmentally sensitive areas (including but not limited to wetlands and floodplain areas) avoids adverse impact upon existing land uses.

Policy I.1.6: The County's land development regulations shall be based on and be consistent with the following land use classifications and corresponding standards for densities and intensities within the designated urban development areas of the County.

Environmentally Sensitive Areas are lands within the areas of the 100-year flood, as designated by the Federal Emergency Management Agency, Flood Insurance Rate Map, dated January 16, 1987, which are located in the Suwannee River Corridor, and shall conform with the following densities: Environmentally Sensitive Area-2 | 1 d.u. per 10 acres

Further, provided that within the Environmentally Sensitive Area-2 category, dwelling units may be clustered on smaller lots with no lot being less than 5 acres, if the site is developed as a Planned Residential Development and a density of 1 dwelling unit per 10 acres is maintained on site as follows:

- (a) the development shall maintain 50 percent of the total land area as an undeveloped area;
- (b) the development shall be compact and contiguous and shall not be scattered throughout the development parcel. Building lots shall be located on the highest elevations on the site;

Environmentally Sensitive Areas are lands within the 100-year floodplain, as designated by the Federal Emergency Management Agency, Flood Insurance Rate Map, as amended, which are located in the Suwannee River Corridor Segments I11 and IVY Mallory Swamp and San Pedro Ray as identified within the Appendix of this Comprehensive Plan shall conform with the following densities provided that an average lot size within each designated area of 10 acres is maintained with no lot being less than 5 acres in size, nor having a length to width ratio of greater than 3 to 1. In addition, the County's land development regulations shall prohibit the location of non-residential uses such as industrial activities and commercial uses such as industrial activities and commercial uses within these areas, although resource based activities, such as campgrounds of less than 100 campsites, may be allowed as special exceptions. Also, those areas within the SO-year floodplain of the Suwannee River, as designated by the Suwannee River Water Management District, shall prohibit the location of intensive agriculture (the term intensive agriculture means all areas of concentrated animal density generally associated with milking barns, feedlots, chickenhouses and holding pens), although resource-based activities, such as campgrounds of less than 100 campsites, may be allowed as special exceptions.

Policy I.3.6: National Flood Insurance Program requirements shall be included within the County's land development regulations, to apply to all development within the areas of special flood hazard, floodways, areas of shallow flooding.

Policy I.3.9: The County shall participate in the National Flood Insurance Program and regulate development and the installation of utilities in flood hazard areas in conformance with the program's requirements.

OBJECTIVE I.7: The County shall adopt regulations to protect natural resources and environmentally sensitive lands (including but not limited to wetlands and floodplains) by March 1, 1992.

Policy I.7.3: The County shall protect groundwater aquifer recharge areas by: preventing drainage wells and sinkholes to be used for stormwater disposal; requiring well construction modification and closure to be regulated in conformance with criteria established by the Water Management District and Florida Department of Health and Rehabilitative Services, (in particular, abandoned wells shall be closed in accordance with Chapter 17-28, Florida Administrative Code in effect upon adoption of this Comprehensive Plan); and prohibiting the discharge and requiring protection against accidental releases of hazardous or toxic materials to the soils or groundwater. These provisions will be applied to all Prime Natural Groundwater Aquifer Recharge Areas.

Policy I.7.4: The County's land development regulations shall include stormwater management and land use design provisions which minimize the direct surface run-off into all surface water bodies and especially the following springs: Allen Mill Pond Spring, Blue Spring, Fletcher Spring, Mearson Spring, Owens Spring, Ruth spring, Troy Spring and Turtle Spring.

OBJECTIVE I.10: The County shall adopt regulations by May 1, 1992 which regulate the location of development consistent with United States Department of Interior Geodetic Survey topographic information and soil conditions as identified within the United States Department of Agriculture Soil Conservation Service Soil Survey for the County.

Policy I.10.1: The County's land development regulations shall restrict development within unsuitable areas due to flooding, improper drainage, steep slopes, rock formations and adverse earth formations.

OBJECTIVE I.12: The County shall adopt innovative land development regulations which shall include planned residential development regulations by March 1, 1992. The purpose of the Planned Residential Development regulations is to permit Planned Residential Developments within both the designated urban development areas and rural areas of the County which are intended to (1) encourage the development of land as planned residential developments; (2) encourage flexible and creative concepts of site planning; (3) preserve the natural amenities of the land by encouraging scenic and open areas; (4) accomplish a more desirable environment than would be possible through the strict application of the minimum requirements of zoning and subdivision requirements; (5) provide for an efficient use of land resulting in smaller networks of utilities and streets and thereby lowering development and housing costs; and (6) provide a stable environmental character compatible with surrounding areas.

Policy I.12.1: The County's land development regulations shall contain specific and detailed provisions to manage future growth and development to implement the Comprehensive Plan which shall contain at a minimum the following provisions to: (a) Regulate the subdivision of land; (b) Regulate the use of land and water consistent with this Element and ensure the compatibility of adjacent land uses and provide for open space; (c) Protect environmentally sensitive lands identified within the Conservation Element; (d) Regulate areas subject to seasonal and periodic flooding and provide for drainage and stormwater management; (e) Protect potable water wellfields and aquifer recharge areas; (f) Regulate signage; (g) Ensure safe and convenient onsite traffic flow and vehicle parking needs; and (h) Provide that development orders and permits shall not be issued which result in a reduction of the level of service standards adopted in this Comprehensive Plan.

SUWANNEE RIVER SYSTEM 100-YEAR FLOODPLAIN SPECIAL PLANNING AREA

OBJECTIVE S.1: To help ensure that development proposals and activities wholly or partially within the 100-year floodplain of the Suwannee River system as conducted in accordance with the physical limitations of this environmentally sensitive area, the County shall establish coordination provisions between the County and all agencies with jurisdiction within the 100-year floodplain of the Suwannee River system by March 1, 1992. Such coordination provisions shall provide a mechanism for all such agencies to review and make comment on such proposals or activities.

Policy S.1.1: The County shall request the Suwannee River Management District to provide a complete set of topographic maps delineating the 100-year and 10-year flood elevations within the County's jurisdiction along the Suwannee River system.

Policy S.1.2: The County shall notify the Suwannee River Water Management District of preliminary subdivision plats, site and development plans, rezoning or reclassification of lands, and special exception hearings within the 100- year floodplain of the Suwannee River system. The purpose of such notification is to provide opportunity for the District to coordinate, among appropriate agencies, the review and commenting on the potential impact of such plans or proposals on the natural resources of the Suwannee River system. The review and comment period shall be within the development review timeframes established in the County's land development regulations.

Policy S.1.3: The review of preliminary subdivision plats and site and development plans within the 100-year floodplain of the Suwannee River system shall be based on the best available information regarding the physical characteristics of the site, including floodplain and wetlands delineation, soil conditions, vegetative cover, and critical wildlife habitat areas.

OBJECTIVE S.2: The County shall take the actions identified within the following policies by March 1, 1992 to protect unique natural areas within the Suwannee River system, including but not limited to springs and spring runs, critical habitat areas for fish and wildlife, unique vegetative communities, and public recreation areas.

Policy S.2.1: The County's land development regulations shall provide for the evaluation of unique natural areas within the 100-year floodplain of the Suwannee River system during the development review process. The identification of such areas shall be based on the best available information provided by the Suwannee River Water Management District or other appropriate sources, including but not limited to land cover and vegetative mapping, resource investigations, and special site investigations. Strategies for protecting unique natural areas shall be coordinated with state and regional resource management agencies.

Policy S.2.2: The County shall require a 10 foot undisturbed regulated buffer along the property lines of public lands within the 100-year floodplain of the Suwannee River system for the purposes of visual screening, stormwater runoff and erosion control, public safety, and buffering potentially incompatible land uses. The width of such buffering shall be established using criteria within the land development regulations. Variations in the width of this buffer shall be made only for cases of undue hardship and on a site-specific review.

Policy S.2.3: The County shall participate in the acquisition planning process of state and regional agencies for lands and unique natural areas located within the 100-year floodplain of the Suwannee River system.

Policy S.2.4: The County shall monitor the use of County-owned facilities an or within the 100-year floodplain of the Suwannee River system to ensure that the public use of these facilities does not threaten the facility or adjacent natural resources. Such facilities shall be maintained in

order to prevent any potential adverse impacts to the Suwannee River system such as erosion, release of inadequately treated stormwater or wastewater, or the accumulation of trash and debris.

OBJECTIVE S.3: The County will adopt land development regulations by March 1,1992 that regulate land use types, densities, and intensities for all lands within the 100-year floodplain of the Suwannee River system and will define and provide a mechanism to phase out nonconforming platted subdivisions which are unimproved and undeveloped, discontinue nonconforming uses, and bring nonconforming structures into compliance within the floodplain.

Policy S.3.1: The County hereby designates those lands within the County's jurisdiction lying within the 100-year floodplain of the Suwannee River system as an environmentally sensitive area.

Policy S.3.2: The areas within the 100-year floodplain, as designated by the Federal Emergency Management Agency, Flood Insurance Rate Map, dated January 16, 1987, of the Suwannee River system, which are located outside of the designated urban development areas shall have a minimum lot size of 10 acres and all lots shall have a length to width ratio of no greater than 3 to 1 provided that dwelling units may be clustered on smaller lots with no lot being less than 5 acres if the site is developed as a Planned Residential Development and a density of 1 dwelling unit per 10 acres is maintained on site in accordance with the criteria listed in Policy I.1.2. In addition, the County's land development regulations shall permit normal silvicultural and non-intensive agricultural activities, which are appropriate for soil conditions, but shall prohibit the location of intensive agriculture (the term intensive agriculture means all areas of concentrated animal density generally associated with milking barns, feedlots, chicken houses and holding pens), silvicultural site conversion (change from wetland to upland species), non-residential uses such as industrial activities and commercial uses within these areas (with the exception of water dependent commercial uses and resource-based activities, such as campgrounds of less than 100 campsites may be allowed as special exceptions, provided that such campgrounds within environmentally sensitive areas shall not be located within 5 miles from another campground). All uses not prohibited by this policy or other Suwannee River system regulation shall be allowed.

Policy S.3.3: The County's land development regulations shall contain provisions and schedules which require the vacating or replatting of unimproved, undeveloped subdivisions where such lots of record within the 100-year floodplain of the Suwannee River system do not meet the minimum lot area requirements based upon density standards established in the County's Comprehensive Plan and land development regulations.

OBJECTIVE S.4: The County shall ensure that all development and redevelopment occurring in the 100-year floodplain of the Suwannee River system meet the building and design standards of the National Flood Insurance Program, the County, and the Suwannee River Water Management District.

Policy S.4.11: The County's land development regulations shall conform to the National Flood Insurance Program requirements for construction activities undertaken in the 100-year floodplain of the Suwannee River system.

Policy S.4.12: The County's land development regulations shall require all habitable structures be elevated no less than one foot above the 100-year flood elevation, provided that any such structures located in the floodway of the Suwannee River system shall be elevated without the use of fill materials.

Policy S.4.13: The County's land development regulations shall require all road construction and improvement projects within the 100-year floodplain of the Suwannee River system be designed in such a manner as to avoid any increase in floodway obstruction, any increase in the

peak rate or volume of stormwater runoff, and any increase in pollutant loading to the receiving waters.

HOUSING ELEMENT

Objective III.1: The County shall adopt land development regulations by March 1, 1992 which shall provide for the allocation of at least 25 percent of the land use allocation which permit dwelling units to be provided to permit affordable housing such as mobile homes for the existing and anticipated population.

Policy III.1.2: The County's land development regulations shall permit the construction of government subsidized housing only within areas which are served by public facilities which meet or exceed the adopted level of service standards established in the other elements of this Comprehensive Plan. In addition, government subsidized housing shall be prohibited within areas subject to the 100 year flood, as designated by the Federal Emergency Management Agency, Flood Insurance Rate Map.

OBJECTIVE III.2: The County shall promote the maintenance of a safe and sanitary housing stock and the elimination of substandard housing conditions, as well as the establishment of provisions for the structural and aesthetic improvement of housing through adoption of minimum housing standards by May 1, 1992.

Policy III.2.1: The County, to address the quality of housing and stabilization of neighborhoods, shall include minimum housing standards for structural strength, stability sanitation, adequate light and ventilation and safety to life and property from fire and other hazards incident to the construction, alteration, repair, removal, demolition, use and occupancy of residential buildings within the adopted land development regulations based upon the following criteria:

SANITARY SEWER, SOLID WASTE, DRAINAGE, POTABLE WATER AND NATURAL GROUNDWATER AQUIFER RECHARGE ELEMENT

Objective IV.2: The County shall coordinate the extension of, or increase in the capacity of facilities by scheduling the completion of public facility improvements, upon adoption of this Comprehensive Plan, and requiring that they are concurrent with projected demand beginning on March 1, 1992.

Policy IV.2.8: The County hereby establishes the following level of service standards for drainage facilities: For all projects not exempted from 40B-4 and 17-25, Florida Administrative Code, in effect upon adoption of this Comprehensive Plan within the County, stormwater management systems must be installed such that the peak rate of post-development runoff will not exceed the peak rate of pre-development runoff for storm events up through and including either: 1. A design storm with a 10-year, 24-hour rainfall depth with Soil Conservation Service Type II distribution falling on average antecedent moisture conditions for projects serving exclusively agricultural, forest, conservation or recreational uses; or 2. A design storm with 100-year critical duration rainfall depth for projects serving any land use other than agricultural, silvicultural, conservation, or recreational uses. 3. Facilities which directly discharge into an Outstanding Florida Water shall include an additional level of treatment equal to the runoff of the first 1.5 inches of rainfall from the design storm consistent with Chapter 17-25.025(9), Florida Administrative Code, in effect upon the adoption of this Comprehensive Plan, in order to meet the receiving water quality standards of Chapter 17-302, Florida Administrative Code, in effect upon the adoption of this Comprehensive Plan. Stormwater discharge facilities shall be designed so as not to lower the receiving water quality below the minimum conditions necessary to assure the suitability of water for the designated use of its classification as established in Chapter 17-302, Florida Administrative Code, in effect upon the adoption of this Comprehensive Plan. Any development exempt from Chapter 17-25 or 40B-4 as cited above and which is adjacent to or drains into a surface water, canal, or stream, or which empties into a sinkhole, shall first allow the

runoff to enter a grassed swale or other conveyance designed to percolate 80% of the runoff from a three year, one-hour design storm within 72 hours after a storm event. In addition, any development exempt from Chapter 17-25 or 40B-4, as cited above, which is directly discharged into an Outstanding Florida Water shall include an additional level of treatment equal to the runoff of the first 1.5 inches of rainfall from the design storm consistent with Chapter 17-25.025(9), Florida Administrative Code, in effect upon adoption of this Comprehensive Plan, in order to meet the receiving water quality standards of Chapter 17-302, F.A.C. Stormwater discharge facilities shall be designed so as not to lower the receiving water quality below the minimum condition necessary to assure the suitability of water for the designated use of its classification as established in Chapter 17-302, Florida Administrative Code, in effect upon the adoption of this Comprehensive Plan.

Policy IV.2.9: The County shall prohibit the construction of structures or landscape alterations which would interrupt natural drainage flows, including sheet flow and flow to isolate wetland systems.

Policy IV.2.10: The County shall quantify and assess any deficiencies in its existing stormwater management system, by requesting the Florida Department of Environmental Regulation, to fund and prepare a County-wide stormwater master plan to determine necessary design capacities and hydraulic demands for any needed stormwater management facilities and assess the performance of existing facilities with regard to flood control, water quality treatment and impact on the County's surface water and groundwater. Further, if stormwater management facilities are determined by such study to be needed, the County shall request the Florida Department of Environmental Regulation to fund and construct such needed facilities, and request the Water Management District to operate and maintain such needed facilities.

Objective IV.4: The County shall require that upon adoption of this Comprehensive Plan, no sanitary sewer facility have any discharge into designated prime groundwater recharge areas.

Policy IV.4.1: The County shall require that during the development review process, all development within the drainage basin of any designated priority water body shall be coordinated with the Water Management District and ensure that any proposed development is consistent with any approved management plans within that basin.

Objective IV.5: The County upon adoption of this Comprehensive Plan, shall coordinate with the Water Management District to protect the functions of natural groundwater recharge areas and natural drainage features, by requiring that all developments requiring subdivision approval be reviewed by the Water Management District prior to final approval of the plat.

Policy IV.5.1: The County's land development regulations shall provide for the limitation of development adjacent to natural drainage features to protect the functions of the feature, by establishing a design standard that requires all development to conform to the natural contours of the land and natural drainage ways remain undisturbed. In addition, no development shall be constructed so that such development impedes the natural flow of water from higher adjacent properties across such development.

Policy IV. 5.2: The County shall provide for the limitation of development and associate impervious surfaces in prime groundwater recharge areas designated by the Water Management District to protect the functions of the recharge area through requirement of the following: (a) Stormwater management practices shall include drainage wells and sinkholes for stormwater disposal where recharge is into potable water aquifers. Where development is proposed in areas with existing wells, these wells shall be abandoned, including adequate sealing and plugging according to Chapter 17-28, Florida Administrative Code, in effect upon adoption of this Comprehensive Plan; (b) Well construction, modification, or closure shall be regulated in

accordance with the criteria established by the Water Management District and the Florida Department of Health and Rehabilitative Services; (c) Abandoned wells shall be closed in accordance with the criteria established in Chapter 17-28, Florida Administrative Code, in effect upon adoption of this Comprehensive Plan; (d) No person shall discharge or permit the discharge of a regulated material as listed in Chapter 442, Florida Statutes, in effect upon adoption of this Comprehensive Plan, to the soils, groundwater, or surfacewater; and (e) No person shall tamper or bypass or cause or permit tampering with or bypassing of the containment of a regulated material storage system, except as necessary for maintenance testing of those components.

Objective IV.7: The County, by March 1, 1992, shall include within the land development regulations a requirement that construction activity undertaken shall protect the functions of natural drainage features.

Policy IV.7.1: The County's land development regulations shall include a provision which requires a certification, by the preparer of the permit plans, that all construction activity undertaken shall incorporate erosion and sediment controls during construction to protect the functions of natural drainage features.

CONSERVATION ELEMENT

Objective V.2: The County, in order to meet the quality and quantity of current and projected water sources, hereby establishes a 300 foot wellfield protection areas around community water system wells. In addition, the County in order to protect prime water recharge areas shall limit development in these areas as specified in Policy IV.5.2 of this Comprehensive Plan.

Policy V.2.5: The County shall, by March 1, 1992 through the development review process, require that post-development runoff rates and pollutant loads do not exceed pre-development conditions.

Policy V.2.6: The County's land development regulations shall require all new development to maintain the natural functions of environmentally sensitive areas, including but not limited to wetlands and 100-year floodplains so that the long term environmental integrity and economic and recreational value of these areas is maintained.

Policy V.2.7: The County shall regulate development within 100-year floodplains of the Suwanee River by establishing these areas as Environmentally Sensitive in accordance with Policy I.2.1. In addition, in order to maintain the flood-carrying and flood storage capacities of the floodplains and reduce the risk of property damage and loss of life, by March 1, 1992, the County shall adopt flood damage prevention regulations and in the interim shall continue to enforce the provisions of the National Flood Insurance Program.

Policy V. 2.11: The County shall, as part of the developmental review process, limit development to low density and non-intensive uses in prime groundwater aquifer recharge areas designated by the Water Management District, in order to maintain the natural features of these areas.

Policy V.2.12: The County as part of the development review process shall require the maintenance of the quantity and quality of surface water runoff within freshwater stream to sink watersheds by prohibiting commercial and industrial development within these areas.

Policy V.2.15: The County's land development regulations shall require a 50-foot regulated natural buffer adjacent to all other perennial rivers, and a 35-foot regulated natural buffer adjacent to all other perennial streams and creeks not located within the Suwanee River System (defined as the 100-year floodplain of the Suwanee River in the county) and prohibit the location of residential, commercial and industrial land uses within the buffer areas, but allow agriculture, silviculture and resource-based recreational activities within buffer areas in accordance with the

best management practices manual published by the Florida Department of Agriculture and Consumer Services, Division of Forestry-Revision May 1990, the rules and regulations of the Suwannee River Water Management District and other applicable regulations.

OBJECTIVE V. 4: The County shall, upon adoption of this Comprehensive Plan, identify, as provided in Policy V.4.9, and protect native wildlife and their habitats, including state and federally protected plant and animal species (endangered, threatened and species of special concern), within proposed development sites and protect these natural resources from the impacts of development.

Policy V.4.3: The County shall consult with the Florida Game and Fresh Water Fish Commission prior to the issuance of a development order where there is an indication that such issuance would result in an adverse impact to any endangered or rare species. All new development will maintain the natural functions of environmentally sensitive areas, including but not limited to wetlands and 100-year floodplains so that the long term environmental integrity and economic impact and recreation value of these areas is maintained.

Policy V.4.4: The County shall address during the development review process the mitigation of development activities within environmentally sensitive areas, which include but are not limited to those areas identified as regionally significant areas, within the Appendix of this Comprehensive Plan to ensure that the possible impacts created by the proposed development activity will not significantly alter the natural functions of these significant natural resources. All new development will maintain the natural functions of environmentally sensitive areas, including but not limited to wetlands and 100-year floodplains so that the long term environmental integrity and economic impact and recreation value of these areas is maintained.

INTERGOVERNMENTAL COORDINATION ELEMENT

OBJECTIVE VII.1: The County shall coordinate its comprehensive planning with the School Board, Water Management District, adjacent local government comprehensive plans and other units of local government providing services but not having regulatory authority over the use of the land upon adoption of this Comprehensive Plan.

Policy VII.1.1: The County shall establish a procedure, as part of the Comprehensive Plan review and amendment process, that all plan amendments proposed within the Comprehensive Plan are coordinated with adjacent local governments, the School Board, Water Management District, Regional Planning Council, State and other units of government providing services but not having regulatory authority over the use of land.

Policy VII.1.3: The County shall establish interlocal agreements for the provision of services across jurisdictional boundaries.