# North Central Florida
# Strategic Regional Policy Plan

August 2018

North Central Florida
Regional Planning Council

North Central Florida Regional Planning Council

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# Strategic Regional Policy Plan Summary

## Regional Goals and Policies
## Regionally Significant Facilities and Resources
## Maps of Natural Resources of Regional Significance

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# Introduction

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# Introduction

## A. What is a Strategic Regional Policy Plan?

The North Central Florida Strategic Regional Policy Plan is a long-range guide for the physical, economic, and social development of a planning region which identifies regional goals and policies. It is not just a plan for the regional planning council. It is a plan for the region. The plan contains regional goals and policies designed to promote a coordinated program of regional actions directed at resolving problems identified in the trends and conditions statements contained within each strategic regional subject area. The required strategic regional subject areas are affordable housing, economic development, emergency preparedness, natural resources of regional significance, and regional transportation. The plan must also identify and address significant regional resources and facilities that could be adversely affected by development activities.

The Strategic Regional Policy Plan is intended to be strategic rather than comprehensive in nature and scope. Rule 27E-5.002(9), Florida Administrative Code, defines "strategic" as proactive, future and result-oriented with a focus on important long-term priorities, needs and problems of the region. It is not required to address all the goals in the State Comprehensive Plan (Chapter 187, Florida Statutes); however, it must nevertheless be consistent with and further the State Comprehensive Plan.

The regional plan is not a regulatory document, nor does it create regulatory authority. According to state law, the regional plan may not establish binding level of service standards for public facilities and services provided or regulated by local governments; however, this limitation does not limit the authority of regional planning councils to propose objections, recommendations, or comments on local plans or plan amendments (Chapter 186.507(14) Florida Statutes).

## B. Purpose of the Strategic Regional Policy Plan

The regional plan serves as a basis for the review of the resources and facilities found in local government comprehensive plans originating in the region. Other purposes, as described in 27E-5.001(1), Florida Administrative Code, include:

(1) To implement and further the goals and policies of the State Comprehensive Plan with regard to the strategic regional subject areas and other components addressed in the plan;

(2) To provide long-range policy guidance for the physical, economic, and social development of the region;

(3) To establish public policy for the resolution of disputes over regional problems, needs, or opportunities through the establishment of regional goals and policies and to provide a regional basis and perspective for the coordination of governmental activities and the resolution of problems, needs, and opportunities that are of regional concern or scope;

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(4) To establish goals and policies, in addition to other criteria established by law, that provide a basis for regional review of federally assisted projects and other activities of the regional planning council. Standards included in strategic regional policy plans shall be used for planning purposes only and not for permitting or regulatory purposes. A regional planning council shall not adopt a planning standard that differs materially from a planning standard adopted by rule by a state or regional agency when such rule expressly states the planning standard is intended to preempt action by the regional planning council;

(5) To establish goals and policies to assist the state and the Council in the determination of consistency of local comprehensive plans with strategic regional policy plans and the State Comprehensive Plan. Strategic Regional Policy Plans shall serve as a basis to review the resources and facilities found in local government comprehensive plans;

(6) To establish land development and transportation goals and policies in a manner that fosters region-wide transportation systems;

(7) To serve as a basis for decisions by the regional planning council;

(8) To guide the administration of federal, state, regional, and local agency programs and activities in the region to the extent provided by law;

(9) To identify significant regional resources and facilities, infrastructure needs, or other problems, needs, or opportunities of importance to the region;

(10) To identify natural resources of regional significance and promote the protection of those resources;

(11) To set forth economic development goals and policies that promote regional economic growth and improvement; and

(12) To set forth goals and policies that address the affordable housing and emergency preparedness problems and needs for the region.

The mission of the North Central Florida Regional Planning Council is to improve the quality of life of the Region's citizens by enhancing public safety, protecting regional resources, promoting economic development and providing technical services to local governments. The North Central Florida Strategic Regional Policy Plan implements its mission statement by balancing sustainable economic development with the protection of Natural Resources of Regional Significance. It is the intent of the regional plan to allow economic activities within and near Natural Resources of Regional Significance to the extent that such economic activities do not significantly and adversely affect the functions of the resource. The type and extent of economic activity which can occur without significantly and adversely impacting a Natural Resource of Regional Significance is framed by the goals and policies of the regional plan. The regional plan calls for the protection of the functions and qualities of Natural Resources of Regional Significance, but leaves the specifics of the protection measures to local governments and state regulatory agencies. Furthermore, the scope of regional plan goals and policies are generally limited to Natural Resources of Regional Significance and regional facilities which are specifically identified and mapped in the regional plan, as well as the extent to which the plans and actions of one local government may affect other local governments.

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# C. Consistency of Local Government Comprehensive Plans with the Strategic Regional Policy Plan

Section 163.3184, Florida Statutes, requires that each local government comprehensive plan in the region be consistent with the regional plan. Consistency is defined by this regional policy plan, as being compatible with and furthering the regional plan. The term "compatible" means that the local plan is not in conflict with the regional plan. The term "furthers" means to take action in the direction of realizing goals or policies of the regional plan. For purposes of determining consistency of the local plan with the regional plan, the regional plan shall be construed as a whole and no specific goal and policy shall be construed or applied in isolation from the other goals and policies in the plan.

# D. Strategic Regional Planning Process

The procedures used to formulate the regional plan are set forth in Rule 27E-5.001, Florida Administrative Code. The Council's procedures in developing the regional plan are summarized below.

## 1. Public Participation

Public input and participation were invited during the initial formulation of the Strategic Regional Policy Plan through a well-publicized public hearing held at the beginning of the planning process and at ensuing Regional Planning Committee meetings where audience input was solicited. Public input will be received at public hearings to be held in the region during the review phase of the draft plan.

## 2. Local Government Participation

Local government participation has occurred primarily through the county commissioners and municipal officials serving on the Council. Council members were directly involved in the preparation of the strategic regional policy plan through their participation on the Regional Planning Committee, which was charged with developing a draft of the regional plan. In addition, local government planning staff regularly received and commented on draft strategic regional subject area chapters

## 3. Participation by Other Agencies

Copies of the draft strategic regional subject area chapters were circulated to various agencies for review and comment during the formulation of the plan. These included the Suwannee River Water Management District, St. Johns River Water Management District, Southwest Florida Water Management District, the Florida Department of Economic Opportunity, the Florida Department of Environmental Protection, the Florida Department of Transportation, the Florida Fish and Wildlife Conservation Commission and the Florida Department of Health.

## 4. Existing Plans

Existing plans and regulations affecting the strategic regional subject areas were reviewed to provide an overall planning and regulatory framework for the trends and conditions analysis for each strategic regional subject area.

## 5. Data and Analysis

The data utilized in the plan was assembled from various sources. These sources are identified as footnotes located throughout the document. Data utilized in this plan are available for public inspection at the office of the North Central Florida Regional Planning Council in Gainesville.

# E. Plan Organization

The content and format of the regional plan is set forth in Rule 27E-5.004, Florida Administrative Code. The organization and content of this plan are summarized below.

## 1. Executive Summary

The Executive Summary briefly describes strategic regional subject areas and selected goals and policies of specific concern to the region. It also summarizes important conditions and trends that exist in the region.

## 2. Coordination Outline

The Coordination Outline provides an overview of the Council's cross-acceptance, dispute resolution, public participation, and related regional planning and coordination activities. The outline is presented for information purposes only to describe how local governments and citizens are involved in developing, implementing, and updating the plan, and how the Council will help resolve inconsistencies between local, state, and regional plans.

# 3. Strategic Regional Subject Areas

The North Central Florida Strategic Regional Policy Plan addresses five strategic regional issue areas: Affordable Housing, Economic Development, Emergency Preparedness, Natural Resources of Regional Significance, and Regional Transportation. Strategic regional subject areas are subject areas that, when viewed from a regional perspective, have the potential to affect the region's significant physical characteristics and/or its quality of life. Each subject area is comprised of a trends and conditions statement; which contains an analysis of factors that describe current conditions and future related trends; regional goals as well as associated regional indicators and policies; and identification of regional facilities and/or resources. A subsection of the trends and conditions statement, entitled "Problems, Needs, and Opportunities" identifies the problems, needs, and opportunities associated with growth and development in the region.[1] The identified problems, needs, and opportunities are derived from the trends and conditions statement. Maps of natural resources of regional significance are included in the plan. These maps are available from the Council at a scale of 1:100,000.

Goals are long term ends toward which programs and activities should be ultimately directed. The goals are derived from the problems, needs, and opportunities section of the trends and conditions statements. Furthermore, goals must be consistent with and further the State Comprehensive Plan. Each regional goal is accompanied by one or more Regional Indicators. Regional Indicators are statements of baseline information against which progress towards achieving the goal can be measured in the region's five-year evaluation and appraisal report. Policies promote activities and programs in furtherance of implementation of regional goals. Regional goals and policies must also be consistent with and in furtherance of the State Comprehensive Plan.

# 4. Regional Facilities and Resources

Each strategic regional subject area chapter identifies regional resources and/or facilities pertaining to the particular chapter. Regional facilities and/or resources which are not pertinent to one of the plans five strategic regional subject area chapters are identified in this chapter.

# 5. Glossary of Terms

A glossary section is included which defines key terms appearing in the text.

[1]The "Problems, Needs, and Opportunities" section is the only part of the regional plan which identifies problems, opportunities, and needs as required by Rule 27E-5.002(11), Florida Administrative Code.

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# Executive Summary

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# Executive Summary

## A. Affordable Housing

The region's housing affordability issues can best be understood in the context of regional housing trends generally, including trends in new construction, tenure, mobile home occupancy, housing quality, and affordability. The Affordable Housing Element examines the region's housing trends generally with an emphasis on the housing affordability issues of very low-, low-, and moderate-income households.[1]

Most of the tables reported in Affordable Housing Element are derived from the Bureau of the Census. The data portrays a mixed picture for housing affordability for north central Florida between 2000 and 2015. On the one hand, housing prices rose at a significantly faster rate than incomes. On the other, north central Florida monthly mortgage payments increased at a substantially lower rate than incomes during this time period. At the same time, the percentage of lower-income north central Florida renters spending 30 percent or more of their annual household income on rent has also decreased. Finally, the percentage of renters has increased since 2015 while the percentage of homeowners has decreased during this time period. The numbers suggest that, while the monthly mortgage payment may be more affordable, fewer lower-income households are able to save enough money for a down payment.

**REGIONAL GOAL 1.1.** Reduce the percentage of the region's very low-, low-, and moderate-income households spending 30.0 percent or more of their annual household income on housing.

[1] Affordable housing is commonly defined as housing for which annual costs (including utilities, taxes, maintenance, and other associated costs) represent no more than 30 percent of the residing household's annual income. Moderate income refers to household income between 80.0 and 120.0 percent of the median household income. Low-income refers to household income between 50.0 percent and 80.0 percent of the median household income. Very low-income refers to household income below 50.0 percent of the median household income.

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# B. Economic Development

In January 1978, the North Central Florida Regional Planning Council received its designation as the North Central Florida Economic Development District. The 12 counties in this region include: Alachua, Bradford, Columbia, Dixie, Gilchrist, Hamilton, Lafayette, Levy, Madison, Suwannee, Taylor and Union counties. All of these counties, with the exception of Alachua because it is an urban county, are located within the North Central Florida Rural Area of Opportunity and have developed a strategic plan to improve the economic environment of the rural parts of the region.

The following information identifies regional trends in population, industry clusters, infrastructure, financial resources and external forces that affect the regional economy. It reports data contained in the North Central Florida Comprehensive Economic Development Strategy, 2018 - 2022 which, in turn, uses the Florida Chamber Foundation's Six Pillars of Florida's Future Economy as the organizing framework. The Six Pillars are: Talent Supply and Education; Innovation and Economic Development; Infrastructure and Growth Leadership; Business Climate and Competitiveness; Civic and Governance Systems; and Quality of Life and Quality Places.

The North Central Florida Regional Planning Council region includes 52 county and municipal governments. The 12 counties include Alachua, Bradford, Columbia, Dixie, Gilchrist, Hamilton, Lafayette, Levy, Madison, Suwannee, Taylor and Union. The 40 municipalities include (by County): Alachua - Alachua, Archer, Gainesville, Hawthorne, High Springs, LaCrosse, Micanopy, Newberry and Waldo; Bradford - Brooker, Hampton, Lawtey and Starke; Columbia - Fort White and Lake City; Dixie - Cross City and Horseshoe Beach; Gilchrist - Bell, Fanning Springs and Trenton; Hamilton - Jasper, White Springs and Jennings; Lafayette - Mayo; Levy – Bronson, Cedar Key, Chiefland, Inglis, Otter Creek, Williston and Yankeetown; Madison - Greenville, Lee and Madison; Suwannee - Live Oak and Branford; Taylor - Perry; Union - Lake Butler, Raiford and Worthington Springs.

The North Central Florida Economic Development District has a total of 7,869 square miles and is bordered on the west by the Gulf of Mexico and on the north by the Florida-Georgia state line. With the exception of Alachua County, the region is primarily rural, with a 2015 Bureau of Economic and Business Research-estimated population of just over 540,000. Just under one-half of the population, 271,732, resides in the Gainesville Metropolitan Statistical Area, which consists of Alachua and Gilchrist Counties. Gainesville is home to the University of Florida, a land grant university, which is the primary economic driver of the region. Unlike many other regions of the state, north central Florida does not have beaches or theme parks, though it has a growing nature and eco-tourism base that takes advantage of the abundant presence of springs and rivers that flow through the region.

The regional climate is very temperate with summer high temperatures averaging in the low to mid nineties and winter low temperatures averaging in the low to mid forties. Record high temperatures have reached the low hundreds. Hard freezes are infrequent, with record low temperatures in the low teens. Average annual rainfall is approximately 50 inches. Hurricanes are a major source of concern throughout Florida. The remote coastal communities of the region are at the greatest risk for storm surge related flooding. However, the primary hurricane threats to most of the population centers of the region are from wind damage and rain induced local flooding.

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While largely rural, the region benefits from an extensive transportation network. Interstate 75 is the primary north/south transportation artery that connects the region to central and south Florida, as well as the Southeastern U.S. and Midwest U.S. to the north. Interstate 10 is the east/west transportation artery that connects the region to Jacksonville on the east and the Florida panhandle and Alabama to the west. Rail service in the region is provided by CSX Transportation, Norfolk Southern and other providers. Although the region is not home to a deepwater port, Columbia County will be host to an inland port facility that will be part of the Port of Jacksonville's international trade zone. There are numerous airport facilities in the region with substantial runway infrastructure. Currently, the Gainesville Regional Airport is the only airport with scheduled commercial service.

The economy of the region has proven relatively stable in relation to other areas of the state and nation. While the region has been negatively affected by the national economic downturn, overall it has fared better than many other areas, with lower unemployment rates, rising trade exports and steadily rising Gross Domestic Product. State and local government, especially in education and prisons, remains a significant though declining share of employment in the region. Health care is the second largest employment cluster in the region, followed by retail trade.

The region is rapidly becoming known as an innovation center due to the success of the Sid Martin Biotechnology Incubator in Alachua and the emergence of the Florida Innovation Hub at the University of Florida in Gainesville. A 2006 study by the Milken Institute identified the University of Florida as the top performing public institution at transferring its research to the marketplace, and fifth in the nation overall. Companies launched at the Sid Martin Biotechnology Incubator have attracted over one-half billion dollars in private investments, contracts and grants. An estimated 16 percent of all biotech companies in Florida got their start at the Sid Martin facility.

**Regional Goal 2.1.** Connect and align education and workforce development programs to develop the region's current and future talent supply chain and meet employer needs.

**Regional Goal 2.2.** Expand access to education and training programs for talent in distressed markets (e.g., rural, urban core) throughout the region.

**Regional Goal 2.3.** Grow, sustain and integrate efforts related to research and development, technology commercialization, and seed capital, to create, nurture and expand regional innovation businesses.

**Regional Goal 2.4.** Increase the number of regional businesses engaged in selling goods and services internationally and the diversification of the markets they serve.

**Regional Goal 2.5.** Brand and market the north central Florida region as the best location for business.

**Regional Goal 2.6.** Promote the continued viability of military installations in close proximity to the region.

**Regional Goal 2.7.** Modernize the transportation, telecommunications, energy, water and wastewater systems of the region to meet future demand and respond to changing business needs.

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**Regional Goal 2.8.** Improve coordination of economic development, land use, infrastructure, water, energy, natural resources, workforce and community development decision-making and investments at the regional level.

**Regional Goal 2.9.** Streamline permitting, development and other regulatory processes at the local level to meet changing business needs and provide a predictable legal and regulatory environment in the region.

**Regional Goal 2.10.** Ensure local government agencies provide collaborative, seamless, consistent and timely customer service to regional businesses.

**Regional Goal 2.11.** Expand opportunities for access to capital for businesses throughout their life cycle.

**Regional Goal 2.12.** To enhance the resilience of the north central Florida economy in the face of natural disasters and changes to the national and state economies through increased awareness and preparation by businesses for environmental risks.

**Regional Goal 2.13.** Support and sustain regional partnerships to accomplish the region's economic and quality of life goals.

**Regional Goal 2.14.** Ensure future growth and development decisions maintain a balance between sustaining the region's environment and enhancing the region's economy and quality of life.

**Regional Goal 2.15.** Promote, develop and leverage the region's natural and cultural assets in a sustainable manner.

# C. Emergency Preparedness

## 1. Hurricanes

At the time of 1993's Storm of the Century, no weather buoys or other government-owned weather monitoring instruments were located in the Gulf of Mexico off the Big Bend coastline. Weather buoys provide valuable information regarding temperature, wind speed, wind direction and barometric pressure. Meteorologists run computer models that predict storm surge height based upon these factors.

Storm surge increases in height as it nears land. A need exists for additional buoys or other meteorological instruments located at intervals of 50 and ten miles offshore to help meteorologists more accurately predict storm surges as coastal storms move landward. As of 2015, one Coastal-Marine Automated Network coastal weather station is located in Keaton Beach, no weather buoys are located in the Gulf of Mexico between 10 and 50 miles of Steinhatchee, three weather buoys are located between 51 and 100 miles of Steinhatchee, two weather buoys are located between 101 and 150 miles of Steinhatchee, and four weather buoys are located in the Gulf of Mexico between 151 to 175 miles of Steinhatchee.

Dixie Levy and Taylor counties have six small coastal communities: the unincorporated coastal communities of Jena-Steinhatchee, Dekle Beach-Keaton Beach, Suwannee, and the incorporated municipalities of Cedar Key, Horseshoe Beach and Yankeetown. Warning sirens can be useful means of notifying community residents of storm warnings and evacuation orders when other forms of communication fail. During the Storm of the Century, none of these communities had warning sirens. As of 2010 2015, six north central Florida coastal communities (Cedar Key, Horseshoe Beach, Dekle Beach, Keaton Beach, Steinhatchee and Yankeetown) had emergency warning sirens. The unincorporated communities of Suwannee and Jena do not have sirens.

North central Florida National Oceanic and Atmospheric Administration weather radio signals coverage has been significantly expanded since the Storm of the Century. Computer-generated National Oceanic and Atmospheric Administration weather radio coverage maps developed by the National Oceanic and Atmospheric Administration suggest that, with the exception of a small area parallel to Interstate 10 in Madison County, all of north central Florida is covered by at least one weather radio station.

# 2. Hazardous Materials Releases

Under contract with the Florida Division of Emergency Management, the North Central Florida Regional Planning Council serves as staff to the North Central Florida Local Emergency Planning Committee. The North Central Florida Local Emergency Planning Committee was established in 1988 in response to the federal Emergency Planning and Community Right-to-Know Act which requires the preparation of local emergency response plans for hazardous materials releases which, for the State of Florida, have been developed utilizing the regional planning council districts.[3] The North Central Florida Local Emergency Planning Committee is composed of representatives of 17 different occupational categories. Membership is also distributed geographically to assure that each of the region's counties has at least one resident serving as a member. Committee members are appointed by the State Emergency Response Committee.

The local emergency response plan for north central Florida was adopted by the Committee on June 9, 1989, is updated annually. The North Central Florida Local Emergency Planning Committee emergency response plan identifies locations of possible hazardous materials releases based upon known locations of hazardous materials. The plan also delineates vulnerable zones.[4]

In addition to the emergency response plan, the North Central Florida Local Emergency Planning Committee is also involved in establishing training programs, conducting emergency response exercises, providing public information campaigns, and other activities aimed at minimizing risks from hazardous materials releases.

When a hazardous materials release occurs, a local fire department or other local government personnel arrive at the scene and determine if local resources can deal with the release. If the incident requires greater than local resources, the local government contacts one of the region's regional response teams.

[3]Although referred to as a local plan, it is, in fact, a regional plan which addresses all north central Florida counties.

[4]Vulnerable zones are areas where the estimated chemical concentration from an accidental release is at a level where people's health could be adversely impacted during a worst-case release.

No regional hazardous materials response team is located within a 60-minute response time of Perry or Greenville. North Central Florida Regional Hazardous Materials Response Team members are located in Alachua, Lake City, Gainesville, Starke and Fanning Springs. Response times to all eleven counties by at least one of the regional hazardous materials response teams is 60 to 90 minutes. The District 2 Regional Domestic Security Task Force has hazmat response capabilities located in Tallahassee that also provide coverage to Madison and Perry. However, the response times to Perry and Greenville are still in excess of 60 minutes.

There are areas of north central Florida where the closest hazardous materials response team is in either Valdosta, Georgia or Dothan, Alabama. The Local Emergency Planning Committee has been working to establish a tri-state hazardous materials mutual aid agreement.

# 3. Mutual Aid Agreements

As of January 2016 all of the region's local governments had adopted the Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery. The statewide agreement allows for reimbursement to assisting local governments for most incurred costs from the Emergency Management Preparedness and Assistance Trust Fund as well as from the requesting local government. The agreement also establishes a supervision and control structure for assisting local government personnel and resources at the scene of the emergency, formalizes procedures for making emergency assistance requests, and resolves other mutual aid issues.

**REGIONAL GOAL 3.1.** Improve emergency preparedness for coastal storms in the region.

**REGIONAL GOAL 3.2.** Participation by all north central Florida local governments in the National Flood Insurance Program.

**REGIONAL GOAL 3.3.** Reduce response times of regional hazardous materials response teams to 60 minutes for hazardous materials emergencies in Perry, and Greenville.

**REGIONAL GOAL 3.4.** Improve the ability of emergency response teams to respond to hazardous materials emergences.

**REGIONAL GOAL 3.5.** All north central Florida local governments are signatories to the Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery.

# D. Natural Resources of Regional Significance

Natural resources of regional significance are natural resources or systems of interrelated natural resources, which due to their function, size, rarity, or endangerment, provide benefits of regional significance to the natural or human environment.[5] They consist of both coastal and inland wetlands, rivers and their associated floodplains, large forested areas, lakes, springs, the Floridan Aquifer, and land areas with the potential to adversely affect the water quality of the aquifer (stream-to-sink watersheds and high recharge areas). High priority habitat of listed species is also recognized as a Natural Resources of Regional Significance.[6]

Regionally significant natural resources play important roles in the region's economy and quality of life. Drinking water for most residents is drawn from the Floridan Aquifer. The Suwannee-Santa Fe river system and fresh water wetlands serve a valuable role in regulating surface water runoff and flooding. The salt marsh provides a valuable breeding ground for many varieties of commercial seafood. Commercial forest lands play an important role in the regional economy, while public lands provide valuable resource-based recreation for north central Florida residents. Both private and public lands provide important habitats for the survival of native plant and animal species. Nearly all identified Natural Resources of Regional Significance play, or can play, an important role in the region's budding ecotourism industry.

The regional plan balances economic development with the protection of Natural Resources of Regional Significance. It seeks the protection of the functions and qualities of Natural Resources of Regional Significance. Therefore, the plan allows development and economic activity within and near Natural Resources of Regional Significance to the extent that such development and economic activity does not significantly and adversely affect the functions of the resource.

Furthermore, the scope of the regional plan goals and policies is limited to Natural Resources of Regional Significance and regional facilities which are specifically identified and mapped in the regional plan, as well as the extent to which the plans of one local government effect other local governments. The type and extent of economic activity which can occur without significantly and adversely impacting a Natural Resource of Regional Significance is framed by the goals and policies of the regional plan.

Although mapped as discrete geographic units, Natural Resources of Regional Significance are really parts of an interconnected natural system extending across and beyond the region. Actions in one part of the system can have significant adverse consequences elsewhere. For example, the Big Bend Seagrass Beds and the fishery it supports are dependent upon fresh water flows from the Suwannee and other coastal rivers. The rivers are in turn dependent upon headwater swamps for their base flows of fresh water. Dredging and filling headwater swamps, such as the Okefenokee Swamp in Georgia and north central Florida's San Pedro Bay and Mallory Swamp, could have negative impacts upon the seagrass beds and

[5]North central Florida regionally significant facilities and resources, as defined in Rule 27-E.005, Florida Administrative Code, consist of Regionally Significant Emergency Preparedness Facilities identified in Table 3.4, Natural Resources of Regional Significance identified in Table 4.1, Regionally Significant Transportation Facilities identified in Table 5.8, and Regionally Significant Facilities and Resources, identified in Section VI.

[6] Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50 Code of Federal Regulations Part 17.

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coastal fishery. One purpose of the regional plan is to identify Natural Resources of Regional Significance and include strategies to minimize potential adverse impacts to these resources while promoting economic activities such as agriculture and silviculture within these areas, especially where such resources are in private ownership.

# 1. Floridan Aquifer

North central Florida has a much higher reliance on ground water than the rest of the state. In 2012, 70.1 percent of all north central Florida water withdrawn for human use came from ground water sources, compared with 29.3 percent statewide. North central Florida water consumption by type of user is similar to statewide usage. The region's reliance on groundwater sources is even higher than suggested by this number as it includes the one-time pass-through use of river water for cooling Florida Power Corporation's Suwannee River electrical generation station. When Suwannee County is excluded, groundwater comprises 99.2 percent of the water withdrawals of the remaining 11-county area.

Approximately 82.6 percent of north central Florida water withdrawals are used for industrial, agriculture and thermoelectric uses. Only 16.6 percent of north central Florida water withdrawals are used for public and domestic uses. Agricultural use accounts for approximately 32.6 percent of the region's total 2010 water use, which is higher than the statewide percentage of 17.0. Agricultural water uses are not routinely reported as agricultural water use metering is not required in north central Florida.

**REGIONAL GOAL 4.1.** Use the natural resources of the region in a sustainable manner.

**REGIONAL GOAL 4.2.** Preserve Big Bend coastal and marine resources identified as Natural Resources of Regional Significance for future generations of residents in recognition of their economic and ecological importance to the region.

**REGIONAL GOAL 4.3.** Maintain an adequate supply of high-quality groundwater to meet the needs of north central Florida residents, in recognition of its importance to the continued growth and development of the region.

**REGIONAL GOAL 4.4.** Protect all sources of recharge to the Floridan aquifer from all activities which would impair these functions or cause a degradation in the quality of the water being recharged in recognition of the importance of maintaining adequate supplies of high-quality groundwater for the region.

**REGIONAL GOAL 4.5.** Protect all listed species within the Regional Ecological Greenways Network.[7]

**REGIONAL GOAL 4.6.** Protect Natural Resources of Regional Significance identified in this plan as "Planning and Resource Management Areas."

**REGIONAL GOAL 4.7.** Maintain the quantity and quality of the region's surface water systems in recognition of their importance to the continued growth and development of the region.

[7] Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50 Code of Federal Regulations Part 17.

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# E. Regional Transportation

Regionally significant transportation facilities are those facilities used to provide transportation between cities located both within and outside the region and other specially designated facilities. They include one airport, two interstate highways, 10 U.S. highways, 28 state roads, and six public transit system providers.

## 1. Regional Road Network

The regional road network is comprised of interstate highways, U.S. highways and state roads. Overall, the regional road network consists of 1,698.1 miles of roadways, of which 177.2 miles are comprised of interstate highways and 1,672.3 miles are U.S. highways and state roads. Additionally, 504.4 miles of the regional road network are designated as part of the Strategic Intermodal System.

**REGIONAL GOAL 5.1.** Mitigate the impacts of development to the Regional Road Network as well as adverse extrajurisdictional impacts while encouraging development within urban areas.

**REGIONAL GOAL 5.2.** Coordinate with and assist state agencies, transportation planning organizations and local governments to implement an energy-efficient, interagency coordinated transportation system.

**REGIONAL GOAL 5.3.** Mitigate adverse impacts to regional transportation facilities associated with enrollment growth at the University of Florida.

**REGIONAL GOAL 5.4.** Maximize the use of the Gainesville Regional Airport before developing a new regional airport.

**REGIONAL GOAL 5.5.** Include rail lines and railroads as part of an integrated regional transportation system consisting of the Regional Road Network, regional airports and transit service providers.

**REGIONAL GOAL 5.6.** Reduce the unmet General Trip demand of the north central Florida Transportation Disadvantaged population.

**REGIONAL GOAL 5.7.** Increase the percentage of north central Florida residents using public transportation as a primary means of transportation.

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# Chapter I
# Affordable Housing

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

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# Chapter I: Affordable Housing

## A. Conditions and Trends

### 1. Introduction

The region's housing affordability issues can best be understood in the context of regional housing trends generally, including trends in new construction, tenure, mobile home occupancy, housing quality, and affordability. This element of the regional plan examines the region's housing trends generally with an emphasis on the housing affordability issues of very low-, low-, and moderate-income households.[1]

Most of the tables reported in the Affordable Housing Element are derived from the U. S. Bureau of the Census. The data portrays a mixed picture for housing affordability for north central Florida between 2000 and 2015. On the one hand, housing prices rose at a significantly faster rate than incomes. On the other, north central Florida monthly mortgage payments increased at a substantially lower rate than incomes during this time period. At the same time, the percentage of lower-income north central Florida renters spending 30 percent or more of their annual household income on rent has also decreased. Finally, the percentage of renters has increased since 2015 while the percentage of homeowners has decreased during this time period. The numbers suggest that, while the monthly mortgage payment may be more affordable, fewer lower-income households are able to save enough money for a down payment.

### 2. Number of Units Constructed

As reported in Table 1.1, the region added 41,114 new residential dwelling units between 2000 and 2015, for a total of 241,069 dwelling units in 2015. This represents a 20.6 percent increase over the 2000 total of 199,955 units. The number of owner-occupied units increased by 4.7 percent, from 120,630 in 2000 to 126,287 in 2015, while the number of renter-occupied units increased by 24.9 percent, from 57,329 in 2000 to 71,580 in 2015. North central Florida counties experiencing the largest percentage increases in housing units during this period were Levy (43.6%) Dixie (24.9%) and Gilchrist (22.8%). Counties experiencing the smallest percentage increases were Madison (7.8%), Taylor (13.1%) and Bradford (13.8%). The region experienced a below-average percentage increase in new dwelling units during this time period. The region's 20,6 percent rate of growth was lower than the 24.5 percent increase reported statewide.

[1] Affordable housing is commonly defined as housing for which annual costs (including utilities, taxes, maintenance, and other associated costs) represent no more than 30 percent of the residing household's annual income. Moderate income refers to household income between 80.0 and 120.0 percent of the median household income. Low-income refers to household income between 50.0 percent and 80.0 percent of the median household income. Very low-income refers to household income below 50.0 percent of the median household income.

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 1.1

## CHANGE IN NUMBER OF NORTH CENTRAL FLORIDA DWELLING UNITS, 2000 - 2015

| Area | 2000 | | | 2010 | | | 2015 | | | Percentage Change, 2000-2010 | | | Percentage Change, 2000-2015 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Units | Owner Occupied Units | Renter Occupied Units | Total Units | Owner Occupied Units | Renter Occupied Units | Total Units | Owner Occupied Units | Renter Occupied Units | Total Units | Owner Occupied Units | Renter Occupied Units | Total Units | Owner Occupied Units | Renter Occupied Units |
| **Alachua** | 95,113 | 48,085 | 39,424 | 112,766 | 54,768 | 45,748 | 113,659 | 51,448 | 45,255 | 18.6% | 13.9% | 16.0% | 19.5% | 7.0% | 14.8% |
| **Bradford** | 9,605 | 6,709 | 1,788 | 11,011 | 7,235 | 2,244 | 10,926 | 6,477 | 2,293 | 14.6% | 7.8% | 25.5% | 13.8% | -3.5% | 28.2% |
| **Columbia** | 23,579 | 16,146 | 4,779 | 28,636 | 18,213 | 6,728 | 28,392 | 16,917 | 6,791 | 21.4% | 12.8% | 40.8% | 20.4% | 4.8% | 42.1% |
| **Dixie** | 7,362 | 4,498 | 707 | 9,319 | 5,193 | 1,123 | 9,192 | 4,769 | 1,282 | 26.6% | 15.5% | 58.8% | 24.9% | 6.0% | 81.3% |
| **Gilchrist** | 5,906 | 4,331 | 690 | 7,307 | 5,131 | 990 | 7,253 | 5,006 | 1,181 | 23.7% | 18.5% | 43.5% | 22.8% | 15.6% | 71.2% |
| **Hamilton** | 4,966 | 3,220 | 941 | 5,778 | 3,434 | 1,183 | 5,733 | 3,423 | 1,265 | 16.4% | 6.6% | 25.7% | 15.4% | 6.3% | 34.4% |
| **Lafayette** | 2,660 | 1,726 | 416 | 3,328 | 1,955 | 625 | 3,239 | 2,001 | 492 | 25.1% | 13.3% | 50.2% | 21.8% | 15.9% | 18.3% |
| **Levy** | 13,867 | 11,591 | 2,276 | 20,123 | 13,155 | 3,249 | 19,917 | 11,899 | 3,617 | 45.1% | 13.5% | 42.8% | 43.6% | 2.7% | 58.9% |
| **Madison** | 7,836 | 5,194 | 1,435 | 8,481 | 5,187 | 1,798 | 8,448 | 5,186 | 1,428 | 8.2% | -0.1% | 25.3% | 7.8% | -0.2% | -0.5% |
| **Suwannee** | 15,679 | 10,892 | 2,568 | 19,164 | 12,003 | 3,950 | 18,927 | 10,752 | 4,897 | 22.2% | 10.2% | 53.8% | 20.7% | -1.3% | 90.7% |
| **Taylor** | 9,646 | 5,725 | 1,451 | 11,004 | 6,059 | 1,861 | 10,906 | 5,862 | 1,743 | 14.1% | 5.8% | 28.3% | 13.1% | 2.4% | 20.1% |
| **Union** | 3,736 | 2,513 | 854 | 4,508 | 2,885 | 1,163 | 4,477 | 2,547 | 1,336 | 20.7% | 14.8% | 36.2% | 19.8% | 1.4% | 56.4% |
| **Region** | 199,955 | 120,630 | 57,329 | 241,425 | 135,218 | 70,662 | 241,069 | 126,287 | 71,580 | 20.7% | 12.1% | 23.3% | 20.6% | 4.7% | 24.9% |
| **w/o Alachua** | 104,842 | 72,545 | 17,905 | 128,659 | 80,450 | 24,914 | 127,410 | 74,839 | 26,325 | 22.7% | 10.9% | 39.1% | 21.5% | 3.2% | 47.0% |
| **Florida** | 7,302,947 | 4,441,799 | 1,896,130 | 8,989,580 | 4,998,979 | 2,421,823 | 9,094,999 | 4,765,260 | 2,535,234 | 23.1% | 12.5% | 27.7% | 24.5% | 7.3% | 33.7% |

Sources: U.S. Census Bureau, Census 2000 Summary File 1, Matrices H3, H4, H5, H6, H17, and H16, Washington, D.C., 2002.
United States Census Bureau, 2010 Census, General Population and Housing Characteristics.
United States Census Bureau, 2015 American Community Survey, Selected Housing Characteristics.

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

# 3. Home Ownership

North central Florida home ownership rates increased slightly between 2000 and 2015. In 2000, 62.4 percent of the region's occupied year-round housing units were owner occupied, compared to 63.8 percent in 2015. Alachua County, with its large student population, downwardly skews the region's home ownership rate. Excluding Alachua County, 74.0 percent of the region's 2015 occupied year-round housing units were owner occupied. This figure represents an increase over the 59.1 percent rate posted in 2000. The region's 2015 rate of home ownership is less than the statewide rate of 65.3 percent. The statewide rate is up slightly from 62.2 percent in 2000.

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018


**TABLE 1.2**

**PERCENTAGE OF OCCUPIED HOUSING UNITS BY TENURE, 2000, 2010 AND 2015**

| Area | 2000 | | 2010 | | 2015 | |
|---|---|---|---|---|---|---|
| | Owner Occupied Units | Renter Occupied Units | Owner Occupied Units | Renter Occupied Units | Owner Occupied Units | Renter Occupied Units |
| **Alachua** | 66.4% | 33.6% | 56.6% | 47.3% | 53.2% | 46.8% |
| **Bradford** | 58.9% | 41.1% | 82.5% | 25.6% | 73.9% | 26.1% |
| **Columbia** | 59.4% | 40.6% | 76.8% | 28.4% | 71.4% | 28.6% |
| **Dixie** | 62.1% | 37.9% | 85.8% | 18.6% | 78.8% | 21.2% |
| **Gilchrist** | 57.7% | 42.3% | 82.9% | 16.0% | 80.9% | 19.1% |
| **Hamilton** | 60.7% | 39.3% | 73.3% | 25.2% | 73.0% | 27.0% |
| **Lafayette** | 60.6% | 39.4% | 78.4% | 25.1% | 80.3% | 19.7% |
| **Levy** | 54.5% | 45.5% | 84.8% | 20.9% | 76.7% | 23.3% |
| **Madison** | 60.1% | 39.9% | 78.4% | 27.2% | 78.4% | 21.6% |
| **Suwannee** | 59.0% | 41.0% | 76.7% | 25.2% | 68.7% | 31.3% |
| **Taylor** | 62.8% | 37.2% | 79.7% | 24.5% | 77.1% | 22.9% |
| **Union** | 59.8% | 40.2% | 74.3% | 30.0% | 65.6% | 34.4% |
| **Region** | 62.4% | 37.6% | 68.3% | 35.7% | 63.8% | 36.2% |
| **w/o Alachua** | 59.1% | 40.9% | 79.5% | 24.6% | 74.0% | 26.0% |
| **Florida** | 62.2% | 37.8% | 68.5% | 33.2% | 65.3% | 34.7% |

Sources: U.S. Census Bureau, Census 2000 Summary File 1, Matrices H3, H4, H5, H6, H17 and H16, Washington, D.C. 2002.
United States Census Bureau, 2010 Census, General Population and Housing Characteristics.
United States Census Bureau, 2015 American Community Survey, Selected Housing Characteristics.

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# 4. Mobile Homes

A high percentage of the north central Florida housing stock is comprised of mobile homes. At least in partial response to the high price of conventionally-built housing, many north central Florida households have turned to mobile homes as an affordable alternative to conventionally-built, detached, single-family residential homes.

The region experienced an increase in mobile homes between 2000 and 2015. As can be seen in Table 1.3, the number of mobile homes in the region increased from 58,389 in 2000 to 63,919 in 2015, an increase of 5,530 units, or 9.5 percent.

North central Florida counties experiencing the largest percentage increases in mobile homes during between 2000 and 2015 were Suwannee (37.2%), Levy (17.8%) and Union (16.2%). North central Florida counties noting the smallest percentage increases were Madison (5.3%) and Bradford (5.6%). Alachua County experienced a 15.9 percent decline in mobile homes during this time period. Suwannee County experienced the largest increase in the absolute number of mobile homes during this time period with an additional 2,774 units.

Statewide, the number of mobile homes has been declining. Between 2000 and 2015, the number of mobile homes decreased by 2.5 percent statewide.

Growth in the region's supply of mobile homes has caused a discernible shift in the percentage of total housing units comprised of mobile homes. In 2000, mobile homes accounted for 28.8 percent of the region's housing stock. By 2015 mobile homes accounted for 32.3 percent of the region's housing stock. When Alachua County is removed from consideration, mobile homes comprised 54.1 percent of the remaining region's housing stock in 2015. North central Florida counties with the highest percentage of mobile homes in 2015 were Dixie (75.5%), Suwannee (65.4%) and Levy (64.7%) counties.

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018


## TABLE 1.3

## NUMBER OF MOBILE HOMES AND MOBILE HOMES AS A PERCENTAGE OF TOTAL HOUSING UNITS, 2000, 2010 AND 2015

| Area | 2000 | | | 2010 | | | 2015 | | | Change in Mobile Homes | | | | 2010 | | | 2015 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mobile Homes | | | Mobile Homes | | | Mobile Homes | | 2000-2010 | | 2000-2015 | | | Mobile Homes | | | Mobile Homes | |
| | Total Housing Units | Number | Percent of Total | Total Housing Units | Number | Percent of Total | Total Housing Units | Number | Percent of Total | Number | Percent | Number | Percent | Total Housing Units | Number | Percent of Total | Total Housing Units | Number | Percent of Total |
| Alachua | 95,113 | 10,973 | 11.5% | 100,516 | 9,703 | 9.7% | 96,703 | 9,228 | 9.5% | (1,270) | -11.6% | (1,745) | -15.9% | 100,516 | 9,703 | 9.7% | 96,703 | 9,228 | 9.5% |
| Bradford | 9,605 | 3,294 | 34.3% | 9,479 | 3,259 | 34.4% | 8,770 | 3,478 | 39.7% | (35) | -1.1% | 184 | 5.6% | 9,479 | 3,259 | 34.4% | 8,770 | 3,478 | 39.7% |
| Columbia | 23,759 | 9,273 | 39.0% | 24,941 | 10,818 | 43.4% | 23,708 | 9,995 | 42.2% | 1,545 | 16.7% | 722 | 7.8% | 24,941 | 10,818 | 43.4% | 23,708 | 9,995 | 42.2% |
| Dixie | 7,362 | 3,981 | 54.1% | 6,316 | 4,631 | 73.3% | 6,051 | 4,578 | 75.7% | 650 | 16.3% | 597 | 15.0% | 6,316 | 4,631 | 73.3% | 6,051 | 4,578 | 75.7% |
| Gilchrist | 5,906 | 3,367 | 57.0% | 6,121 | 3,701 | 60.5% | 6,187 | 3,694 | 59.7% | 334 | 9.9% | 327 | 9.7% | 6,121 | 3,701 | 60.5% | 6,187 | 3,694 | 59.7% |
| Hamilton | 4,966 | 2,225 | 44.8% | 4,617 | 2,378 | 51.5% | 4,688 | 2,443 | 52.1% | 153 | 6.9% | 218 | 9.8% | 4,617 | 2,378 | 51.5% | 4,688 | 2,443 | 52.1% |
| Lafayette | 2,660 | 1,072 | 40.3% | 1,955 | 1,399 | 71.6% | 2,493 | 1,253 | 50.3% | 327 | 30.5% | 181 | 16.9% | 1,955 | 1,399 | 71.6% | 2,493 | 1,253 | 50.3% |
| Levy | 16,570 | 8,530 | 51.5% | 16,404 | 9,000 | 54.9% | 15,516 | 10,046 | 64.7% | 470 | 5.5% | 1,516 | 17.8% | 16,404 | 9,000 | 54.9% | 15,516 | 10,046 | 64.7% |
| Madison | 7,836 | 2,954 | 37.7% | 6,985 | 2,971 | 42.5% | 6,614 | 3,110 | 47.0% | 17 | 0.6% | 156 | 5.3% | 6,985 | 2,971 | 42.5% | 6,614 | 3,110 | 47.0% |
| Suwannee | 15,679 | 7,460 | 47.6% | 15,953 | 9,104 | 57.1% | 15,649 | 10,234 | 65.4% | 1,644 | 22.0% | 2,774 | 37.2% | 15,953 | 9,104 | 57.1% | 15,649 | 10,234 | 65.4% |
| Taylor | 9,646 | 3,517 | 36.5% | 7,920 | 4,063 | 51.3% | 7,605 | 3,835 | 50.4% | 546 | 15.5% | 318 | 9.0% | 7,920 | 4,063 | 51.3% | 7,605 | 3,835 | 50.4% |
| Union | 3,736 | 1,743 | 46.7% | 4,048 | 1,568 | 38.7% | 3,883 | 2,025 | 52.2% | (175) | -10.0% | 282 | 16.2% | 4,048 | 1,568 | 38.7% | 3,883 | 2,025 | 52.2% |
| Region | 202,838 | 58,389 | 28.8% | 205,255 | 62,595 | 30.5 | 197,867 | 63,919 | 32.3 | 4,206 | 7.2% | 5,530 | 9.5% | 205,255 | 62,595 | 30.5 | 197,867 | 63,919 | 32.3 |
| w/o Alachua | 107,725 | 47,416 | 44.0% | 104,739 | 52,892 | 50.5 | 101,164 | 54,691 | 54.1 | 5,476 | 11.5% | 7,275 | 15.3% | 104,739 | 52,892 | 50.5 | 101,164 | 54,691 | 54.1 |
| Florida | 7,302,947 | 849,304 | 11.6% | 7,420,802 | 864,762 | 11.7% | 7,300,494 | 828,485 | 11.3% | 15,458 | 1.8% | (20,819) | -2.5% | 7,420,802 | 864,762 | 11.7% | 7,300,494 | 828,485 | 11.3% |

Sources: U.S. Census Bureau, Census 2000 Summary File 3, Matrices H1, H23, H24, H30, H34, H25, H41, H47, and H50, Washington, D.C. 2002.
United States Census, American Community Survey, Selected Housing Characteristics, 2006 - 2010.
United States Census, American Community Survey, Selected Housing Characteristics, 2011-2015.

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

As illustrated in Table 1.4, many of the region's mobile homes are located outside of incorporated communities. In 2015, 88.5 percent of the region's mobile homes were located outside of incorporated communities. The percentage is higher when Alachua County is excluded from the region, rising to 91.3 percent. The percentage of county-wide mobile homes located in unincorporated areas was consistently high in every north central Florida county, ranging from a low of 72.0 percent in Alachua County to a high of 97.4 percent in Columbia County.

Even more telling is the percentage of total housing stock located in unincorporated areas which is comprised of mobile homes. In 2015, 39.2 percent of the region's housing stock located outside of incorporated areas was comprised of mobile homes, compared to 50.4 percent for conventionally-built, detached single-family units. When Alachua County is removed from consideration, the percentage of rural housing comprised of mobile homes jumps to 50.4 percent while conventional single-family units comprise 46.5 percent. Mobile homes out-number conventional single-family units in the unincorporated portions of Dixie, Gilchrist, Hamilton, Levy, Suwannee, and Union counties and comprise over 50.0 percent of the housing stock in the unincorporated areas of Dixie, Gilchrist and Levy counties.

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 1.4

## NUMBER AND PERCENTAGE OF MOBILE HOMES AND CONVENTIONAL DETACHED SINGLE FAMILY RESIDENTIAL DWELLING UNITS BY INCORPORATED AND UNINCORPORATED LOCATION, 2015

| Area | Total | | | |
|---|---|---|---|---|
| | Mobile Homes | Single Family Residences, Detached | Mobile Homes & Single Family Residences Detached | Total Housing Units |
| Alachua County, Total | 9,228 | 57,769 | 66,997 | 113,659 |
| Percent of Total Housing Units | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 2,580 | 30,994 | 33,574 | 68,294 |
| Percent | 28.0 | 53.7 | 50.1 | 493.0 |
| Unincorporated | 6,648 | 26,775 | 33,423 | 45,365 |
| Percent | 72.0 | 46.3 | 49.9 | 39.9 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated Areas | - | - | - | 14.7 |
| Precent of Total Housing Units Comprised of Single Family Residences, Unincorporated Areas | - | - | - | 59.0 |
| Bradford County, Total | 3,478 | 6,442 | 9,920 | 10,926 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 424 | 2,117 | 2,541 | 3,249 |
| Percent | 12.2 | 32.9 | 25.6 | 29.7 |
| Unincorporated | 3,054 | 4,325 | 7,379 | 7,677 |
| Percent | 87.8 | 67.1 | 74.4 | 70.3 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated Areas | - | - | - | 39.8 |
| Precent of Total Housing Units Comprised of Single Family Residences, Unincorporated Areas | - | - | - | 56.3 |
| Columbia County, Total | 9,995 | 15,351 | 25,346 | 28,392 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 262 | 3,674 | 3,936 | 5,807 |
| Percent | 2.6 | 23.9 | 15.5 | 20.5 |
| Unincorporated | 9,733 | 11,677 | 21,410 | 22,585 |
| Percent | 97.4 | 76.1 | 84.5 | 79.5 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated Areas | - | - | - | 43.1 |
| Precent of Total Housing Units Comprised of Single Family Residences, Unincorporated Areas | - | - | - | 51.7 |

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## TABLE 1.4 (Continued)

## NUMBER AND PERCENTAGE OF MOBILE HOMES AND CONVENTIONAL DETACHED SINGLE FAMILY RESIDENTIAL DWELLING UNITS BY INCORPORATED AND UNINCORPORATED LOCATION, 2015

| Area | Total | | | |
|---|---|---|---|---|
| | Mobile Homes | Single Family Residences, Detached | Mobile Homes & Single Family Residences Detached | Total Housing Units |
| Dixie County, Total | 4,578 | 4,325 | 8,903 | 9,192 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 278 | 882 | 1,160 | 1,300 |
| Percent | 6.1 | 20.4 | 13.0 | 14.1 |
| Unincorporated | 4,300 | 3,443 | 7,743 | 7,892 |
| Percent | 93.9 | 79.6 | 87.0 | 85.9 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated Areas | - | - | - | 54.5 |
| Precent of Total Housing Units Comprised of Single Family Residences, Unincorporated Areas | - | - | - | 43.6 |
| Gilchrist County, Total | 3,694 | 3,350 | 7,044 | 7,253 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 644 | 717 | 1,361 | 1,524 |
| Percent | 17.4 | 21.4 | 19.3 | 21.0 |
| Unincorporated | 3,050 | 2,633 | 5,683 | 5,729 |
| Percent | 82.6 | 78.6 | 80.7 | 79.0 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated Areas | - | - | - | 53.2 |
| Precent of Total Housing Units Comprised of Single Family Residences, Unincorporated Areas | - | - | - | 46.0 |
| Hamilton County, Total | 2,443 | 2,967 | 5,410 | 5,733 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 217 | 877 | 1,094 | 1,279 |
| Percent | 8.9 | 29.6 | 20.2 | 22.3 |
| Unincorporated | 2,226 | 2,090 | 4,316 | 4,454 |
| Percent | 91.1 | 70.4 | 79.8 | 77.7 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated Areas | - | - | - | 50.0 |
| Precent of Total Housing Units Comprised of Single Family Residences, Unincorporated Areas | - | - | - | 46.9 |

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## TABLE 1.4 (Continued)

## NUMBER AND PERCENTAGE OF MOBILE HOMES AND CONVENTIONAL DETACHED SINGLE FAMILY RESIDENTIAL DWELLING UNITS BY INCORPORATED AND UNINCORPORATED LOCATION, 2015

| Area | Total | | | |
|---|---|---|---|---|
| | Mobile Homes | Single Family Residences, Detached | Mobile Homes & Single Family Residences Detached | Total Housing Units |
| Lafayette County, Total | 1,253 | 1,807 | 3,060 | 3,239 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 165 | 247 | 412 | 540 |
| Percent | 13.2 | 13.7 | 13.5 | 16.7 |
| Unincorporated | 1,088 | 1,560 | 2,648 | 2,699 |
| Percent | 86.8 | 86.3 | 86.5 | 83.3 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated | - | - | - | 40.3 |
| Precent of Total Housing Units Comprised of Single Family Residences, | - | - | - | 57.8 |
| Levy County, Total | 10,046 | 8,596 | 18,642 | 19,917 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 961 | 2,847 | 3,808 | 4,790 |
| Percent | 9.6 | 33.1 | 20.4 | 24.0 |
| Unincorporated | 9,085 | 5,749 | 14,834 | 15,127 |
| Percent | 90.4 | 38.0 | 98.1 | 100.0 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated Areas | - | - | - | 60.1 |
| Precent of Total Housing Units Comprised of Single Family Residences, Unincorporated Areas | - | - | - | 38.0 |
| Madison County, Total | 3,110 | 4,732 | 7,842 | 8,448 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 310 | 1,178 | 1,488 | 1,985 |
| Percent | 10.0 | 24.9 | 19.0 | 23.5 |
| Unincorporated | 2,800 | 3,554 | 6,354 | 6,463 |
| Percent | 90.0 | 90.0 | 96.6 | 100 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated Areas | - | - | - | 43.3 |
| Precent of Total Housing Units Comprised of Single Family Residences, Unincorporated Areas | - | - | - | 55.0 |

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 1.4 (Continued)

## NUMBER AND PERCENTAGE OF MOBILE HOMES AND CONVENTIONAL DETACHED SINGLE FAMILY RESIDENTIAL DWELLING UNITS BY INCORPORATED AND UNINCORPORATED LOCATION, 2015

| Area | Total | | | |
|---|---|---|---|---|
| | Mobile Homes | Single Family Residences, Detached | Mobile Homes & Single Family Residences Detached | Total Housing Units |
| Suwannee County, Total | 10,234 | 7,628 | 17,862 | 18,927 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 743 | 2,063 | 2,806 | 3,434 |
| Percent | 7.3 | 27.0 | 15.7 | 18.1 |
| Unincorporated | 9,491 | 5,565 | 15,056 | 15,493 |
| Percent | 92.7 | 73.0 | 84.3 | 81.9 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated Areas | - | - | - | 61.3 |
| Precent of Total Housing Units Comprised of Single Family Residences, Unincorporated Areas | - | - | - | 35.9 |
| Taylor County, Total | 3,835 | 6,341 | 10,176 | 10,906 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 369 | 2,414 | 2,783 | 3,216 |
| Percent | 9.6 | 38.1 | 27.3 | 29.5 |
| Unincorporated | 3,466 | 3,927 | 7,393 | 7,690 |
| Percent | 90.4 | 61.9 | 72.7 | 70.5 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated Areas | - | - | - | 45.1 |
| Precent of Total Housing Units Comprised of Single Family Residences, Unincorporated Areas | - | - | - | 51.1 |
| Union County, Total | 2,025 | 2,107 | 4,132 | 4,477 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 399 | 562 | 961 | 1225 |
| Percent | 19.7 | 26.7 | 23.3 | 27.4 |
| Unincorporated | 1,626 | 1,545 | 3,171 | 3,252 |
| Percent | 80.3 | 73.3 | 76.7 | 72.6 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated | - | - | - | 50.0 |
| Precent of Total Housing Units Comprised of Single Family Residences, | - | - | - | 47.5 |

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 1.4 (Continued)

## NUMBER AND PERCENTAGE OF MOBILE HOMES AND CONVENTIONAL DETACHED SINGLE FAMILY RESIDENTIAL DWELLING UNITS BY INCORPORATED AND UNINCORPORATED LOCATION, 2015

| Area | Total | | | |
|---|---|---|---|---|
| | Mobile Homes | Single Family Residences, Detached | Mobile Homes & Single Family Residences Detached | Total Housing Units |
| Region, Total | 63,919 | 121,415 | 185,334 | 241,069 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 7,352 | 48,572 | 55,924 | 96,643 |
| Percent | 11.5 | 40.0 | 30.2 | 40.1 |
| Unincorporated | 56,567 | 72,843 | 129,410 | 144,426 |
| Percent | 88.5 | 60.0 | 69.8 | 59.9 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated | - | - | - | 39.2 |
| Precent of Total Housing Units Comprised of Single Family Residences, | - | - | - | 50.4 |
| Region w/o Alachua, Total | 54,691 | 63,646 | 118,337 | 127,410 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 |
| Total Incorporated | 4,772 | 17,578 | 22,350 | 28,349 |
| Percent | 8.7 | 27.6 | 18.9 | 22.3 |
| Unincorporated | 49,919 | 46,068 | 95,987 | 99,061 |
| Percent | 91.3 | 72.4 | 81.1 | 77.7 |
| Precent of Total Housing Units Comprised of Mobile Homes, Unincorporated Areas | - | - | - | 50.4 |
| Precent of Total Housing Units Comprised of Single Family Residences, Unincorporated Areas | - | - | - | 46.5 |

Source: U.S. Census Bureau, American Community Survey 2011-2015.

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

# 5. Housing Quality

## a. Plumbing Facilities

Census data reveals a reduction in the percentage of north central Florida housing units with inadequate plumbing between 2000 and 2015 (see Table 1.5). In 2000, 1.3 percent of all dwelling units in the region lacked some or all plumbing facilities. In 2015, the percentage was just 0.4 percent.

North central Florida housing quality is comparable to the state average when measured in terms of the percentage of housing units lacking some or all plumbing facilities. As illustrated in Table 1.5, the percentage of north central Florida units lacking plumbing facilities in 2015 was 0.4 percent compared to the statewide rate 0.3 percent. When Alachua County is removed from consideration, the remaining region's percentage of total 2015 units lacking some or all plumbing facilities rises to 0.5 percent. Counties with the highest incidence of housing with inadequate plumbing facilities in 2015 were Dixie (0.9%), Columbia (0.7%) and Lafayette (0.6%).

## b. Overcrowding

Another measure of housing quality is overcrowding, which is commonly defined as a dwelling unit with more than 1.0 person (resident) per room. As can be seen in Table 1.6, the region's 2015 percentage of households with more than 1.0 person per room was 2.3 percent. This figure is lower than the region's 2000 rate of 3.9 percent and is less than the 2000 statewide rate of 6.5 percent. North central Florida counties experiencing the largest percentage declines during this period were Taylor (66.2%), Alachua (43.5%) and Bradford (39.5%).

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 1.5

## NUMBER AND PERCENTAGE OF TOTAL DWELLING UNITS LACKING COMPLETE PLUMBING FACILITIES, 2000, 2010 AND 2015

| | 2000 | | | 2010 | | | 2015 | | | Change, 2000 - 2010 | | Change, 2000 - 2015 | | 2010 | | | 2015 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Lacking Complete Plumbing Facilities | | | Lacking Complete Plumbing Facilities | | | Lacking Complete Plumbing Facilities | | Lacking Complete Plumbing Facilities | | Lacking Complete Plumbing Facilities | | | Lacking Complete Plumbing Facilities | | | Lacking Complete Plumbing Facilities | |
| Area | Total Units | Number | Percent | Total Units | Number | Percent | Total Units | Number | Percent | Number | Percent | Number | Percent | Total Units | Number | Percent | Total Units | Number | Percent |
| Alachua | 95,113 | 561 | 0.6% | 100,516 | 515 | 0.5% | 96,703 | 310 | 0.3% | (46) | -8.2% | (251) | -44.7% | 100,516 | 515 | 0.5% | 96,703 | 310 | 0.3% |
| Bradford | 9,605 | 187 | 1.9% | 9,479 | 72 | 0.8% | 8,770 | 24 | 0.3% | (115) | -61.5% | (163) | -66.7% | 9,479 | 72 | 0.8% | 8,770 | 24 | 0.3% |
| Columbia | 23,579 | 158 | 0.7% | 24,941 | 142 | 0.6% | 23,708 | 155 | 0.7% | (16) | -10.1% | (3) | 9.2% | 24,941 | 142 | 0.6% | 23,708 | 155 | 0.7% |
| Dixie | 7,362 | 199 | 2.7% | 6,316 | 76 | 1.2% | 6,051 | 57 | 0.9% | (123) | -61.8% | (142) | -25.0% | 6,316 | 76 | 1.2% | 6,051 | 57 | 0.9% |
| Gilchrist | 5,906 | 47 | 0.8% | 6,121 | 34 | 0.6% | 6,187 | 23 | 0.4% | (13) | -27.7% | (24) | -32.4% | 6,121 | 34 | 0.6% | 6,187 | 23 | 0.4% |
| Hamilton | 4,966 | 154 | 3.1% | 4,617 | 0 | 0.0% | 4,688 | 0 | 0.0% | (154) | -100.0% | (154) | 0.0% | 4,617 | 0 | 0.0% | 4,688 | 0 | 0.0% |
| Lafayette | 2,660 | 80 | 3.0% | 1,955 | 4 | 0.2% | 2,493 | 14 | 0.6% | (76) | -95.0% | (66) | 250.0% | 1,955 | 4 | 0.2% | 2,493 | 14 | 0.6% |
| Levy | 16570 | 161 | 1.0% | 16404 | 45 | 0.3% | 15516 | 58 | 0.4% | (116) | -72.0% | (103) | 28.9% | 16404 | 45 | 0.3% | 15516 | 58 | 0.4% |
| Madison | 4,204 | 205 | 4.9% | 6,985 | 67 | 1.0% | 6,614 | 5 | 0.1% | (138) | -67.3% | (200) | -92.5% | 6,985 | 67 | 1.0% | 6,614 | 5 | 0.1% |
| Suwannee | 15,679 | 535 | 3.4% | 15,953 | 49 | 0.3% | 15,649 | 94 | 0.6% | (486) | -90.8% | (441) | 91.8% | 15,953 | 49 | 0.3% | 15,649 | 94 | 0.6% |
| Taylor | 9,646 | 317 | 3.3% | 7,920 | 46 | 0.6% | 7,605 | 32 | 0.4% | (271) | -85.5% | (285) | -30.4% | 7,920 | 46 | 0.6% | 7,605 | 32 | 0.4% |
| Union | 3,736 | 49 | 1.3% | 4,048 | 0 | 0.0% | 3,883 | 14 | 0.4% | (49) | -100.0% | (35) | 0.0% | 4,048 | 0 | 0.0% | 3,883 | 14 | 0.4% |
| Region | 199,026 | 2,653 | 1.3% | 205,255 | 1,050 | 0.5% | 197,867 | 786 | 0.4% | (1,603) | -60.4% | (1,867) | -25.1% | 205,255 | 1,050 | 0.5% | 197,867 | 786 | 0.4% |
| w/o Alachua | 103,913 | 2,092 | 2.0% | 104,739 | 535 | 0.5% | 101,164 | 476 | 0.5% | (1,557) | -74.4% | (1,616) | -11.0% | 104,739 | 535 | 0.5% | 101,164 | 476 | 0.5% |
| Florida | 7,302,947 | 43809 | 0.6% | 7,420,802 | 30,766 | 0.4% | 7,300,494 | 22347 | 0.3% | (13,043) | -29.8% | (21,462) | -27.4% | 7,420,802 | 30,766 | 0.4% | 7,300,494 | 22347 | 0.3% |

Sources: U.S. Census Bureau, Census 2000 Summary File 3, Matrices H1, H23, H24, H30, H34, H35, H41, H47, and H50.
United States Census, American Community Survey, Selected Housing Characteristics, 2006 - 2010.
United States Census, American Community Survey, Selected Housing Characteristics, 2011-2015.

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018


## TABLE 1.6
## OVERCROWDING. NUMBER AND PERCENTAGE OF OCCUPIED YEAR-ROUND HOUSING WITH 1.01 OR MORE PERSONS PER ROOM 2000, 2010 AND 2015

| Area | Housing Units by Persons per Room | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number | | | | | | Percent | | | Pct. Change 1.01+ | |
| | 2000 | | 2010 | | 2015 | | 200 | 2010 | 2015 | | |
| | 0-1.00 | 1.01 + | 0-1.00 | 1.01 + | 0-1.00 | 1.01+ | 1.01 + | 1.01 + | 1.01+ | 2000 -10 | 2000 - 15 |
| **Alachua** | 84,482 | 3,027 | 95,809 | 1,731 | 94,994 | 1,709 | 3.5 | 1.8 | 1.8 | -42.8% | -43.5% |
| **Bradford** | 8,241 | 256 | 8,674 | 257 | 8,615 | 155 | 3.0 | 2.9 | 1.8 | 0.4% | -39.5% |
| **Columbia** | 20,046 | 861 | 23,449 | 728 | 22,931 | 777 | 4.1 | 3.0 | 3.3 | -15.4% | -9.8% |
| **Dixie** | 4,983 | 222 | 4,868 | 41 | 5,869 | 182 | 4.3 | 0.8 | 3.0 | -81.5% | -18.0% |
| **Gilchrist** | 4,822 | 199 | 5,761 | 215 | 6,065 | 122 | 4.0 | 3.6 | 2.0 | 8.0% | -38.7% |
| **Hamilton** | 3,977 | 184 | 4,358 | 174 | 4,545 | 143 | 4.4 | 3.8 | 3.1 | -5.4% | -22.3% |
| **Lafayette** | 2,011 | 131 | 2,285 | 22 | 2,405 | 88 | 6.1 | 1.0 | 3.5 | -83.2% | -32.8% |
| **Levy** | 14,045 | 585 | 15,299 | 515 | 15,135 | 381 | 4.0 | 3.3 | 2.5 | -12.0% | -34.9% |
| **Madison** | 6,342 | 287 | 6,528 | 248 | 6,360 | 254 | 4.3 | 3.7 | 3.8 | -13.6% | -11.5% |
| **Suwannee** | 12,675 | 785 | 14,737 | 246 | 15,168 | 481 | 5.8 | 1.6 | 3.1 | -68.7% | -38.7% |
| **Taylor** | 6,913 | 263 | 7,553 | 171 | 7,516 | 89 | 3.7 | 2.2 | 1.2 | -35.0% | -66.2% |
| **Union** | 3,153 | 214 | 3,477 | 44 | 3,720 | 163 | 6.4 | 1.2 | 4.2 | -79.4% | -23.8% |
| **Region** | 171,690 | 7,014 | 192,798 | 4,392 | 193,323 | 4,544 | 3.9 | 2.2 | 2.3 | -37.4% | -35.2% |
| **w/o Alachua** | 87,208 | 3,987 | 96,989 | 2,661 | 98,329 | 2,835 | 4.4 | 2.7 | 2.8 | -33.3% | -28.9% |
| **Florida** | 5,927,582 | 410,347 | 6,975,682 | 177,162 | 7,092,458 | 208,036 | 6.5 | 2.5 | 2.8 | -56.8% | -49.3% |

Sources: U.S. Census Bureau, Census 2000, Summary File 3, Table DP-4. Washington, D.C., 2002.
United States Census, American Community Survey, Selected Housing Characteristics, 2006 - 2010.
United States Census, American Community Survey, Selected Housing Characteristics, 2011-2015.

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

# 6. Affordability

Tables 1.7 and 1.8 identify the percentage of north central Florida households spending 30 percent or more of their annual household incomes on housing cross-tabulated by household income range. In 2015, the region's percentage of renters earning less than $20,000 per year spending in excess of 30 percent of their annual income on rent (92.6%) was similar to the state average (93.6%).

In the case of renter households earning less than $20,000, as indicated in Table 1.7, Alachua County had the highest percentage of any north central Florida county at 94.9 percent in 2015. Alachua County also has the highest percentage of homeowners earning under $20,000 per year spending 30 percent or more of their annual income on housing at 74.3 percent (see Table 1.8). With regard to homeowners, the percentage of the region's homeowners earning less than $20,000 annually spending 30 percent or more of their income on housing (59.4%) was significantly lower than the statewide (75.5%).


## TABLE 1.7
## PERCENTAGE OF 2015 RENTER HOUSEHOLDS BY PERCENTAGE OF 2014 HOUSEHOLD INCOME SPENT ON GROSS RENT

| Area | Percentage of Rental Households by Annual Income | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Less than $20,000 | | $20,000 to $34,999 | | $35,000 to $49,999 | | $50,000 to $74,999 | | $75,000 or More | |
| | 0 to 29% | 30% + | 0 to 29% | 30% + | 0 to 29% | 30% + | 0 to 29% | 30% + | 0 to 29% | 30%+ |
| **Alachua** | 5.1% | 94.9% | 21.5% | 78.5% | 62.7% | 37.3% | 85.8% | 14.2% | 98.4% | 1.6% |
| **Bradford** | 5.9% | 94.1% | 31.1% | 68.9% | 84.6% | 15.4% | 100.0% | 0.0% | 100.0% | 0.0% |
| **Columbia** | 9.0% | 91.0% | 40.0% | 60.0% | 85.1% | 14.9% | 99.5% | 0.5% | 100.0% | 0.0% |
| **Dixie** | 2.4% | 97.6% | 45.2% | 54.8% | 84.5% | 15.5% | 100.0% | 0.0% | 100.0% | 0.0% |
| **Gilchrist** | 10.6% | 89.4% | 33.5% | 66.5% | 68.6% | 31.4% | 98.1% | 1.9% | 100.0% | 0.0% |
| **Hamilton** | 9.1% | 90.9% | 35.3% | 64.7% | 88.1% | 11.9% | 100.0% | 0.0% | 100.0% | 0.0% |
| **Lafayette** | 38.2% | 61.8% | 87.2% | 12.8% | 100.0% | 0.0% | 100.0% | 0.0% | 100.0% | 0.0% |
| **Levy** | 13.1% | 86.9% | 27.8% | 72.2% | 88.1% | 11.9% | 100.0% | 0.0% | 100.0% | 0.0% |
| **Madison** | 8.0% | 92.0% | 21.3% | 78.7% | 100.0% | 0.0% | 100.0% | 0.0% | 100.0% | 0.0% |
| **Suwannee** | 14.2% | 85.8% | 56.9% | 43.1% | 60.7% | 39.3% | 97.9% | 2.1% | 100.0% | 0.0% |
| **Taylor** | 9.3% | 90.7% | 42.5% | 57.5% | 100.0% | 0.0% | 100.0% | 0.0% | 100.0% | 0.0% |
| **Union** | 27.4% | 72.6% | 59.1% | 40.9% | 80.6% | 19.4% | 100.0% | 0.0% | 100.0% | 0.0% |
| **Region** | 7.4% | 92.6% | 29.0% | 71.0% | 70.4% | 29.6% | 90.6% | 9.4% | 98.8% | 1.2% |
| **w/o Alachua** | 11.7% | 88.3% | 42.6% | 57.4% | 84.1% | 15.9% | 99.3% | 0.7% | 100.0% | 0.0% |
| **Florida** | 6.4% | 93.6% | 14.9% | 85.1% | 49.2% | 50.8% | 77.9% | 22.1% | 94.6% | 5.4% |

Note: Percentages may not add to 100 as data was unavailable for all surveyed occupied housing units. Alachua County data may be skewed due to students attending the University of Florida. Further analysis may be warranted to determine the exact impact and need for affordable housing in Alachua County.
Source: U.S. Census Bureau, 2011-15 American Community Survey 5-Year Estimates, Financial Characteristics.

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018


## TABLE 1.8
## PERCENTAGE OF 2015 HOMEOWNER HOUSEHOLDS BY SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF 2014 HOUSEHOLD INCOME

| Area | Percentage of Homeowner Households by Annual Income | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Less than $20,000 | | $20,000 to $34,999 | | $35,000 to $49,999 | | $50,000 to $74,999 | | $75,000 or More | |
| | 0 to 29% | 30% + | 0 to 29% | 30% + | 0 to 29% | 30% + | 0 to 29% | 30% + | 0 to 29% | 30%+ |
| Alachua | 25.7% | 74.3% | 52.1% | 47.9% | 69.0% | 31.0% | 83.8% | 16.2% | 83.3% | 16.7% |
| Bradford | 39.0% | 61.0% | 75.8% | 24.2% | 85.8% | 14.2% | 90.8% | 9.2% | 98.9% | 1.1% |
| Columbia | 41.8% | 58.2% | 92.1% | 7.9% | 80.7% | 19.3% | 91.4% | 8.6% | 96.9% | 3.1% |
| Dixie | 58.9% | 41.1% | 66.4% | 33.6% | 85.1% | 14.9% | 94.3% | 5.7% | 95.0% | 5.0% |
| Gilchrist | 56.7% | 43.3% | 69.4% | 30.6% | 91.5% | 8.5% | 86.7% | 13.3% | 96.3% | 3.7% |
| Hamilton | 38.2% | 61.8% | 69.7% | 30.3% | 85.4% | 14.6% | 93.0% | 7.0% | 98.7% | 1.3% |
| Lafayette | 37.4% | 62.6% | 61.4% | 38.6% | 88.7% | 11.3% | 93.3% | 6.7% | 99.2% | 0.8% |
| Levy | 53.3% | 46.7% | 65.5% | 34.5% | 85.4% | 14.6% | 90.3% | 9.7% | 97.7% | 2.3% |
| Madison | 41.1% | 58.9% | 65.9% | 34.1% | 84.3% | 15.7% | 90.7% | 9.3% | 96.7% | 3.3% |
| Suwannee | 37.8% | 62.2% | 70.9% | 29.1% | 79.8% | 20.2% | 89.3% | 10.7% | 97.8% | 2.2% |
| Taylor | 50.2% | 49.8% | 74.1% | 25.9% | 84.7% | 15.3% | 98.1% | 1.9% | 98.7% | 1.3% |
| Union | 46.0% | 54.0% | 57.4% | 42.6% | 66.7% | 33.3% | 95.6% | 4.4% | 97.8% | 2.2% |
| Region | 40.6% | 59.4% | 75.7% | 24.3% | 78.6% | 21.4% | 87.3% | 12.7% | 93.4% | 6.6% |
| w/o Alachua | 45.7% | 54.3% | 81.8% | 18.2% | 83.3% | 16.7% | 91.4% | 8.6% | 97.5% | 2.5% |
| Florida | 24.5% | 75.5% | 49.8% | 50.2% | 61.9% | 38.1% | 75.3% | 24.7% | 91.4% | 8.6% |

Note: Percentages may not add to 100 as data was unavailable for all surveyed occupied housing units.
Source: U.S. Census Bureau, 2011-15 American Community Survey 5-Year Estimates, Financial Characteristics.

Adopted May 23, 1996. Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

Tables 1.9 through 1.12 examine changes in housing affordability for homeowners within the region between 2000 and 2015. As indicated in Table 1.9, the region experienced and 81.8 percent increase in housing costs between 2000 and 2015, as measured by change in the median sales prices of single-family dwelling units. Although the rate of increase was slightly lower than the 89.9 percent increase experienced statewide, the year 2000 median sales price in the region of $66,450 was substantially lower than the year 2015 statewide median sales price of $120,808.

**TABLE 1.9**

**MEDIAN SALES PRICE BY YEAR**
**SINGLE FAMILY RESIDENCES, 2000 - 2015**

| Area | Year | | | | Percent Change 200 - 2015 |
|---|---|---|---|---|---|
| | 2000 | 2005 | 2010 | 2015 | |
| **Alachua** | $105,000 | $184,900 | $184,500 | $185,000 | 76.2% |
| **Bradford** | 65,000 | 120,250 | 136,000 | 132,500 | 103.8% |
| **Columbia** | 75,000 | 138,900 | 125,000 | 142,550 | 90.1% |
| **Dixie** | 57,000 | 125,000 | 71,700 | 95,000 | 66.7% |
| **Gilchrist** | 67,650 | 140,000 | 125,000 | 152,500 | 125.4% |
| **Hamilton** | 55,000 | 85,000 | 97,750 | 74,750 | 35.9% |
| **Lafayette** | 64,750 | 127,500 | 134,500 | 89,000 | 37.5% |
| **Levy** | 66,500 | 117,950 | 130,000 | 122,150 | 83.7% |
| **Madison** | 49,500 | 80,000 | 91,500 | 79,000 | 59.6% |
| **Suwannee** | 69,000 | 128,450 | 117,000 | 130,250 | 88.8% |
| **Taylor** | 65,000 | 103,750 | 88,050 | 112,000 | 72.3% |
| **Union** | 58,000 | 89,900 | 112,500 | 135,000 | 132.8% |
| **Region** | 66,450 | 120,133 | 117,792 | 120,808 | 81.8% |
| **w/o Alachua** | 62,945 | 114,245 | 111,727 | 114,973 | 82.7% |
| **Florida** | 119,000 | 225,900 | 159,000 | 215,000 | 80.7% |

Source: North Central Florida Regional Planning Council, July 2017. Derived from Florida Housing Data Clearinghouse, Regional and Local Profiles (http://flhousingdata.shimberg.ufl.edu/a/profiles).

Table 1.10 tracks changes in average annual wage per north central Florida employee between 2000 and 2015. As can be seen, the regionwide percentage increase in wages did not keep pace with the regionwide percentage increase in the price of single-family dwelling units. North central Florida wages increased by 44.4 percent during this time period, whereas the cost of a single family dwelling unit increased by 81.8 percent. The relatively high percentage increase in the cost of single-family dwelling units compared to the percentage increase in average annual wages may suggest that north central Florida housing is becoming increasingly unaffordable for its residents.

**TABLE 1.10**

**AVERAGE ANNUAL WAGE BY COUNTY**
**2000 - 2015**

| Area | Year | | | | Percent Change, 2000-2015 |
|---|---|---|---|---|---|
| | 2000 | 2005 | 2010 | 2015 | |
| **Alachua** | $26,155 | $33,134 | $39,670 | $43,597 | 66.7% |
| **Bradford** | 25,425 | 29,653 | 30,762 | 35,783 | 40.7% |
| **Columbia** | 25,738 | 30,181 | 33,986 | 35,620 | 38.4% |
| **Dixie** | 22,632 | 27,251 | 28,551 | 32,110 | 41.9% |
| **Gilchrist** | 21,834 | 26,670 | 29,933 | 32,263 | 47.8% |
| **Hamilton** | 29,867 | 35,591 | 39,133 | 39,650 | 32.8% |
| **Lafayette** | 20,759 | 24,445 | 28,134 | 29,543 | 42.3% |
| **Levy** | 21,020 | 24,976 | 27,616 | 30,116 | 43.3% |
| **Madison** | 19,942 | 24,157 | 29,119 | 32,053 | 60.7% |
| **Suwannee** | 20,951 | 25,839 | 25,539 | 31,341 | 49.6% |
| **Taylor** | 27,394 | 30,070 | 35,624 | 40,717 | 48.6% |
| **Union** | 27,049 | 30,778 | 33,411 | 34,306 | 26.8% |
| **Region** | 22,213 | 26,365 | 29,344 | 32,085 | 44.4% |
| **w/o Alachua** | 25,893 | 30,543 | 33,741 | 36,872 | 42.4% |
| **Florida** | 30,566 | 36,804 | 42,312 | 46,240 | 51.3% |

Source: North Central Florida Regional Planning Council, August 2017. Derived from Annual Summary Reports, Quarterly Census of Employment and Wages, Florida Agency for Workforce Innovation, (http://www.labormarketinfo.com/library/qcew.htm)

Table 1.11 takes into account the effect of changes in mortgage rates on monthly mortgage payments. Lower mortgage interest rates result in lower monthly mortgage payments which could allow home buyers to afford homes which are substantially higher priced than might otherwise be expected.

In 2000, the nationwide average interest rate on a 30-year mortgage was 8.05 percent. In 2015, the nationwide average interest rate on a 30-year mortgage had declined to 3.85 percent.[2] Since mortgage rates were higher in 2000 than in 2015, a drop in mortgage interest rates results in lower monthly mortgage payments, thereby increasing the range of housing prices which are affordable to home buyers. It is possible that north central Florida home buyers can afford higher-priced homes in 2015 than in 2000 as a result of a combination of increased wages and reductions in mortgage interest rates.

As can be seen in Table 1.11, reductions in mortgage interest rates helped reduce the impact of increases in the cost of single-family dwelling units during this time period. As can be seen in the table, the region experienced a 15.6 percent increase in the cost of monthly mortgage payments, which is substantially less than the 81.8 percent increase in average sales price reported in Table 1.9. When taking into account reductions in monthly mortgage payments as a result of lower interest rates, north central Florida homes appear to be more affordable in 2015 compared to 2000 as annual wages increased by 44.4 percent during this time period as indicated in Table 1.10, where monthly mortgage payments increased by only 15.6 percent during this period as indicated in Table 1.11.

[2]As determined by FreddieMac, www.freddiemac.com/pmms/pmms30.html.

**TABLE 1.11**

**ESTIMATED MONTHLY MORTGAGE PAYMENT
FOR A SINGLE FAMILY RESIDENTIAL DWELLING UNIT, 2000 - 2015**

| Area | Year | | | | Percent Change, 2000-2015 |
|---|---|---|---|---|---|
| | 2000 | 2005 | 2010 | 2015 | |
| **Alachua** | $697 | $984 | $860 | $781 | 12.1% |
| **Bradford** | 431 | 640 | 634 | 559 | 29.7% |
| **Columbia** | 498 | 739 | 665 | 601 | 20.7% |
| **Dixie** | 378 | 665 | 334 | 401 | 6.1% |
| **Gilchrist** | 449 | 745 | 583 | 643 | 43.2% |
| **Hamilton** | 365 | 452 | 456 | 315 | -13.7% |
| **Lafayette** | 430 | 718 | 627 | 376 | -12.6% |
| **Levy** | 441 | 628 | 606 | 515 | 16.8% |
| **Madison** | 328 | 426 | 427 | 333 | 1.5% |
| **Suwannee** | 458 | 683 | 545 | 550 | 20.1% |
| **Taylor** | 431 | 552 | 411 | 473 | 9.7% |
| **Union** | 385 | 478 | 525 | 570 | 48.1% |
| **Region** | 441 | 643 | 504 | 510 | 15.6% |
| **w/o Alachua** | 418 | 611 | 471 | 485 | 16.2% |
| **Florida** | 790 | 1,202 | 741 | 1,203 | 52.3% |

Source: North Central Florida Regional Planning Council, July 2017.

Notes: The applicable national average mortgage interest rate is applied to the County median sales price of single family residential dwelling units identified in Table 1.9 to determine monthly mortgage payments. Excludes insurance and taxes. Assumes a 10.0 percent down payment and zero points. Assumes year 2000 and 2005 nationwide annual average mortgage interest rates for year 2000, 2005, 2010 and 2015 of 8.05, 5.87, 4.69 and 3.85 percent, respectively, as published by www.freddiemac.com/pmms/pmms30.html.

Table 1.12 provides information on housing costs by household income range for the year 2015. The table presents household income range in terms of percent of County median income. The table provides the following four income ranges, or classes: Households with incomes of 30 percent or less of the countywide average median income, households with incomes between 30.01 and 50 percent of the countywide median income, households with incomes between 50.01 and 80 percent of the countywide median income, and households with incomes over 80 percent of the countywide median income. A total figure is also reported. For each income range, the table reports the percentage of households who are spending 30 percent or less of their annual incomes on housing as well as the percentage of households spending more than 30 percent of their 2015 annual income on housing.

While Table 1.12 is not directly comparable to year 2015 housing costs by income range as reported in Tables 1.7 and 1.8, it nevertheless suggests that housing costs continue to be unaffordable for most lower-income households. It also notes that the region is generally comparable to the statewide average for households earning less than 50 percent of the average median income. It suggests that housing affordability is somewhat worse in Alachua County for lower income households than in the rest of the region. When Alachua County is removed from consideration, the percentage of remaining north central Florida households earning less than 30 percent of the county median income who are spending 30 percent or more of their annual incomes on housing drops from 87.3 percent to 77.7 percent. Similarly, for households earning between 30 and 50 percent of the county median income when Alachua County is removed from consideration, the percentage of households spending 30 percent or more of their annual income on housing drops from 67.9 percent to 58.0 percent.

## TABLE 1.12

## PERCENT OF HOUSEHOLDS BY INCOME AND HOUSING COST BURDEN, 2015

| Area | Percantage of Households by Annual Household Income Range Paying Either Less than or More than 30 Percent of Annual Household Income on Housing | | | | | | | | Total Households | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-30% of Adjusted Median Income | | 30.01 - 50% of Adjusted Median Income | | 50.01 - 80% of Adjusted Median Income | | 80.01% + of Adjusted Median Income | | | |
| | 0-30% | 30.%+ | 0-30% | 30%+ | 0-30% | 30%+ | 0-30% | 30%+ | 0-30% | 30%+ |
| **Alachua** | 7.0% | 93.0% | 22.0% | 78.0% | 43.3% | 56.7% | 86.2% | 13.8% | 56.2% | 43.8% |
| **Bradford** | 21.6% | 78.4% | 35.6% | 64.4% | 62.6% | 37.4% | 89.2% | 10.8% | 68.9% | 31.1% |
| **Columbia** | 17.0% | 83.0% | 34.6% | 65.4% | 52.8% | 47.2% | 88.6% | 11.4% | 79.6% | 20.4% |
| **Dixie** | 15.5% | 84.5% | 59.7% | 40.3% | 69.1% | 30.9% | 86.0% | 14.0% | 73.7% | 26.3% |
| **Gilchrist** | 36.9% | 63.1% | 55.7% | 44.3% | 75.8% | 24.2% | 90.3% | 9.7% | 73.7% | 26.3% |
| **Hamilton** | 28.0% | 72.0% | 53.9% | 46.1% | 49.2% | 50.8% | 90.6% | 9.4% | 71.4% | 28.6% |
| **Lafayette** | 23.7% | 76.3% | 38.4% | 61.6% | n/a | n/a | 93.0% | 7.0% | 70.1% | 29.9% |
| **Levy** | 23.1% | 76.9% | 48.8% | 51.2% | 60.7% | 39.3% | 88.5% | 11.5% | 70.9% | 29.1% |
| **Madison** | 22.5% | 77.5% | 37.9% | 62.1% | 52.0% | 48.0% | 89.1% | 10.9% | 68.6% | 31.4% |
| **Suwannee** | 24.8% | 75.2% | 40.5% | 59.5% | 64.0% | 36.0% | 88.4% | 11.6% | 71.5% | 28.5% |
| **Taylor** | 4.1% | 95.9% | 29.1% | 70.9% | 60.5% | 39.5% | 92.6% | 7.4% | 70.8% | 29.2% |
| **Union** | 28.6% | 71.4% | 53.9% | 46.1% | 54.2% | 45.8% | 87.9% | 12.1% | 72.0% | 28.0% |
| **Region** | 12.7% | 87.3% | 32.1% | 67.9% | 52.3% | 47.7% | 87.7% | 12.3% | 64.5% | 35.5% |
| **w/o Alachua** | 22.3% | 77.7% | 42.0% | 58.0% | 59.7% | 40.3% | 89.0% | 11.0% | 72.9% | 27.1% |
| **Florida** | 10.6% | 89.4% | 22.9% | 77.1% | 40.2% | 59.8% | 79.8% | 20.2% | 58.3% | 41.7% |

n/a = Information not available.

Source: North Central Florida Regional Planning Council, August 2007. Derived from Regional and Local Profiles, "Households by Income and Cost Burden, 2015", Shimberg Center for Affordable Housing, July 2017 (http://flhousingdata.shimberg.ufl.edu/a/profiles).

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## c. Affordable Housing and Local Government Comprehensive Plans

Chapter 163.3177(6)(f)1.d., Florida Statutes, requires local government comprehensive plans to provide adequate sites for future housing for very low-, low-, and moderate-income families

Every local government comprehensive plan within the north central Florida region has been found by the Florida Department of Economic Opportunity to be in compliance with the requirements of Chapter 163, Florida Statutes. None of the region's local government comprehensive plans mandate the construction of low- and/or moderate-income housing or the establishment of additional fees for the future construction of such units. Local governments in all ten rural north central Florida counties primarily rely on the private market for the provision of affordable housing units. This is accomplished chiefly by local government comprehensive plan policies which call for, and Future Land Use Map classifications which establish, higher densities of residential development within urban areas and the allowance of mobile homes within specified land use classifications.

Within Alachua County, both the City of Gainesville and Alachua County comprehensive plans contain policy direction consistent with regional plan Policy 1.1.2 which calls for the provision of incentives, such as density bonuses to private builders who construct 10.0 percent or more of their units which are affordable to either very low-, low-, or moderate-income households. The Housing Element of the Alachua County Comprehensive Plan contains policy direction calling for the creation of incentives in the land development regulations to promote the construction of dwelling units affordable to either low- or very low-income households. The County Comprehensive Plan promotes opportunities for various housing types to meet the needs of diverse population groups and households across a range of income levels. These include policies for urban residential land use categories based on overall gross density with no minimum size requirements, and provisions for residential development consisting of various housing types including conventional site built, attached structures and townhouses, zero-lot line, multifamily, modular, manufactured or mobile homes and accessory dwelling units. recently adopted policies in the County Comprehensive Plan also enable "Cottage Neighborhoods" in the Urban Cluster as infill with densities that are double the densities allowed within the underlying future land use category. County Comprehensive Plan policies also promote Traditional Neighborhood Developments and Transit Oriented Developments in the Urban Cluster with densities potentially as high as 24 dwelling units per acre. The County Plan also has policies that promote rural clustered subdivisions in the Rural/Agriculture land use category which can include residential units on lots as small as one acre as part of clustered developments that maintain 50 percent or more of the development as open space, potentially lessening costs per unit of internal infrastructure such as roads.

The City of Gainesville Housing Element contains policy direction promoting the use of zero lot lines and cluster subdivisions as incentives for the construction of low income housing. The City Housing Element also includes policy direction calling for the City to work with the County in developing land development regulations which promote the creation of a county-wide "fair share" housing ordinance for the dispersal of affordable housing units throughout their jurisdictions. Local comprehensive plan policies encouraging the construction of affordable housing is particularly important in urban areas. North central Florida urban areas, in contrast to its rural areas, as suggested by the data contained in the Affordable Housing Element of the regional plan, are experiencing greater difficulty in providing an adequate supply of affordable housing for their residents. In rural areas, affordable housing demand is typically met by the placement of mobile homes on individual lots.

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# B. Problems, Needs and Opportunities

The Council identifies the following affordable housing problems, needs, and opportunities:

1. A need exists to reduce the percentage of the region's very low-, low-, and moderate-income households who spend more than 30 percent of their annual household income on housing.

# C. Regional Goals and Policies

**REGIONAL GOAL 1.1.** Reduce the percentage of the region's very low-, low-, and moderate-income households spending 30.0 percent or more of their annual household income on housing.

**Regional Indicators**

1. 92.6 percent of north central Florida year 2015 renter households with 2014 annual incomes of less than $20,000 per year spent 30.0 percent or more of their 2014 annual income on gross rent.

2. 71.0 percent of north central Florida year 2015 renter households with 2014 annual incomes between $20,000 and 34,999 per year spent 30.0 percent or more of their 2014 annual income on gross rent.

3. 59.0 percent of north central Florida year 2015 homeowner households with 2014 annual incomes of less than $20,000 per year spent 30.0 percent or more of their 2014 annual income on housing.

4. 24.3 percent of north central Florida year 2015 homeowner households with 2014 annual incomes between $20,000 and $34,999 per year spent 30.0 percent or more of their ~~1999~~ annual income on housing.

**Policy 1.1.1.** Encourage the development of policies within local government comprehensive plans which provide incentives or otherwise provide for the construction of affordable housing units in a manner which results in a dispersal of affordable housing units throughout the urban areas of the local government's jurisdiction.

**Policy 1.1.2.** Provide incentives, such as density bonuses, to private builders of residential dwelling units who construct 10.0 percent or more of their units for very low-, low-, and moderate-income households within urban areas.

**Policy 1.1.3.** Provide technical assistance to local governments for the revision of Housing Elements contained in local government comprehensive plans.

**Policy 1.1.4.** Provide assistance to local governments in the development of Community Development Block Grant housing applications.

# Chapter II
# Economic Development

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018


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# Chapter II: Economic Development

## A. Conditions and Trends

### 1. Introduction

In January 1978, the North Central Florida Regional Planning Council received its designation as the North Central Florida Economic Development District. The 12 counties in this region include: Alachua, Bradford, Columbia, Dixie, Gilchrist, Hamilton, Lafayette, Levy, Madison, Suwannee, Taylor and Union counties. All of these counties, with the exception of Alachua because it is an urban county, are located within the North Central Florida Rural Area of Opportunity and have developed a strategic plan to improve the economic environment of the rural parts of the region.

The following information identifies regional trends in population, industry clusters, infrastructure, financial resources and external forces that affect the regional economy. It reports data contained in the North Central Florida Comprehensive Economic Development Strategy, 2018 - 2022 which, in turn, uses the Florida Chamber Foundation's Six Pillars of Florida's Future Economy as the organizing framework. The Six Pillars are: Talent Supply and Education; Innovation and Economic Development; Infrastructure and Growth Leadership; Business Climate and Competitiveness; Civic and Governance Systems; and Quality of Life and Quality Places.

The North Central Florida Regional Planning Council region includes 52 county and municipal governments. The 12 counties include Alachua, Bradford, Columbia, Dixie, Gilchrist, Hamilton, Lafayette, Levy, Madison, Suwannee, Taylor and Union. The 40 municipalities include (by County): Alachua - Alachua, Archer, Gainesville, Hawthorne, High Springs, LaCrosse, Micanopy, Newberry and Waldo; Bradford - Brooker, Hampton, Lawtey and Starke; Columbia - Fort White and Lake City; Dixie - Cross City and Horseshoe Beach; Gilchrist - Bell, Fanning Springs and Trenton; Hamilton - Jasper, White Springs and Jennings; Lafayette - Mayo; Levy – Bronson, Cedar Key, Chiefland, Inglis, Otter Creek, Williston and Yankeetown; Madison - Greenville, Lee and Madison; Suwannee - Live Oak and Branford; Taylor - Perry; Union - Lake Butler, Raiford and Worthington Springs.

The North Central Florida Economic Development District has a total of 7,869 square miles and is bordered on the west by the Gulf of Mexico and on the north by the Florida-Georgia state line. With the exception of Alachua County, the region is primarily rural, with a 2015 Bureau of Economic and Business Research-estimated population of just over 540,000. Just under one-half of the population, 271,732, resides in the Gainesville Metropolitan Statistical Area, which consists of Alachua and Gilchrist Counties. Gainesville is home to the University of Florida, a land grant university, which is the primary economic driver of the region. Unlike many other regions of the state, north central Florida does not have beaches or theme parks, though it has a growing nature and eco-tourism base that takes advantage of the abundant presence of springs and rivers that flow through the region.

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The regional climate is very temperate with summer high temperatures averaging in the low to mid nineties and winter low temperatures averaging in the low to mid forties. Record high temperatures have reached the low hundreds. Hard freezes are infrequent, with record low temperatures in the low teens. Average annual rainfall is approximately 50 inches. Hurricanes are a major source of concern throughout Florida. The remote coastal communities of the region are at the greatest risk for storm surge related flooding. However, the primary hurricane threats to most of the population centers of the region are from wind damage and rain induced local flooding.

While largely rural, the region benefits from an extensive transportation network. Interstate 75 is the primary north/south transportation artery that connects the region to central and south Florida, as well as the Southeastern U.S. and Midwest U.S. to the north. Interstate 10 is the east/west transportation artery that connects the region to Jacksonville on the east and the Florida panhandle and Alabama to the west. Rail service in the region is provided by CSX Transportation, Norfolk Southern and other providers. Although the region is not home to a deepwater port, Columbia County will be host to an inland port facility that will be part of the Port of Jacksonville's international trade zone. There are numerous airport facilities in the region with substantial runway infrastructure. Currently, the Gainesville Regional Airport is the only airport with scheduled commercial service.

The economy of the region has proven relatively stable in relation to other areas of the state and nation. While the region has been negatively affected by the national economic downturn, overall it has fared better than many other areas, with lower unemployment rates, rising trade exports and steadily rising Gross Domestic Product. State and local government, especially in education and prisons, remains a significant though declining share of employment in the region. Health care is the second largest employment cluster in the region, followed by retail trade.

The region is rapidly becoming known as an innovation center due to the success of the Sid Martin Biotechnology Incubator in Alachua and the emergence of the Florida Innovation Hub at the University of Florida in Gainesville. A 2006 study by the Milken Institute identified the University of Florida as the top performing public institution at transferring its research to the marketplace, and fifth in the nation overall. Companies launched at the Sid Martin Biotechnology Incubator have attracted over one-half billion dollars in private investments, contracts and grants. An estimated 16 percent of all biotech companies in Florida got their start at the Sid Martin facility.

The economy of the region is vulnerable to both natural and man-made disasters. Natural disasters include coastal storms, flooding, tornadoes and wildfires. Since over 95 percent of the drinking water source for the region is the Floridan Aquifer, the region is also susceptible to hazardous materials releases.

However, the most significant potential natural disaster facing the region is hurricanes and tropical storms. The 2011 North Central Florida Economic and Disaster Resiliency Study completed by the North Central Florida Regional Planning Council indicates that a Category 5 hurricane striking the region from the Gulf of Mexico could potentially result in a 46.6 percent loss to regional capital structure (building damage), a 38.8 percent regionwide job loss and a 34.0 percent population loss.

Each local government within the region has adopted a Comprehensive Emergency Management Plan which provides a detailed description of the process to be followed at the local level whenever an emergency or disaster occurs as a result of natural or manmade causes.

Under contract with the Florida Division of Emergency Management, the North Central Florida Regional Planning Council serves as staff to the North Central Florida Local Emergency Planning Committee. The Committee is responsible for the preparation of local emergency response plans for hazardous materials releases for the district. In addition to the emergency response plan, the North Central Florida Local Emergency Planning Committee is also involved in establishing training programs, conducting emergency response exercises, providing public information campaigns and other activities aimed at minimizing risks from hazardous materials releases.

# 2. Analysis of Economic Development Problems and Opportunities

## a. Talent Supply and Education

The region is beginning to face an emerging talent gap - a critical shortage in human capital that represents a vast and growing unmet need for a highly skilled and educated workforce. In the coming years, new products and services will be developed to address the most pressing environmental, medical, and transportation challenges of the world. Communities that are home to those breakthroughs will reap the economic rewards of leadership. Education and training are essential to the future workforce of the region.

## b. Average Annual Wages

As shown in Table 2.1, average annual wages in the region as a whole lag significantly behind average annual wages for the state. In 2015, Alachua County, which as the largest economy of any county in the region and with average annual wages over $43,500, is nearly $3,000 lower than state averages. In 2015, Lafayette County, with the lowest average annual wages in the region at just over $29,500, has a nearly $17,000 disparity with state average wages.

## Table 2.1

### Average Wages per Job
### North Central Florida Region and State
### 2006 to 2015

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | $34,759 | $37,164 | $37,463 | $39,071 | $39,670 | $40,207 | $40,773 | $41,589 | $42,701 | $43,598 |
| Bradford | $29,423 | $30,031 | $30,662 | $30,873 | $30,762 | $30,831 | $31,467 | $32,678 | $34,198 | $35,783 |
| Columbia | $31,357 | $31,780 | $32,135 | $32,920 | $33,986 | $33,275 | $33,535 | $34,054 | $34,897 | $35,621 |
| Dixie | $27,305 | $27,371 | $28,080 | $27,941 | $28,551 | $28,641 | $29,191 | $29,422 | $32,077 | $32,110 |
| Gilchrist | $27,370 | $27,827 | $29,789 | $30,172 | $29,933 | $29,737 | $30,018 | $31,090 | $31,880 | $32,263 |
| Hamilton | $36,515 | $35,631 | $36,723 | $41,628 | $39,133 | $39,119 | $40,287 | $40,587 | $41,824 | $39,651 |
| Lafayette | $25,730 | $26,770 | $27,378 | $28,135 | $28,134 | $27,687 | $28,781 | $28,856 | $29,648 | $29,543 |
| Levy | $26,158 | $26,810 | $27,639 | $27,264 | $27,616 | $27,892 | $28,491 | $28,878 | $29,233 | $30,116 |
| Madison | $26,050 | $27,245 | $27,966 | $28,694 | $29,119 | $29,237 | $29,605 | $29,841 | $31,476 | $32,053 |
| Suwannee | $27,131 | $27,492 | $28,365 | $27,637 | $28,141 | $28,245 | $28,871 | $29,720 | $30,421 | $31,341 |
| Taylor | $30,931 | $33,077 | $33,198 | $33,701 | $35,624 | $36,470 | $36,491 | $37,593 | $37,217 | $40,717 |
| Union | $31,609 | $31,773 | $31,993 | $33,539 | $33,411 | $33,075 | $33,744 | $34,060 | $34,270 | $34,233 |
| Region | $32,754 | $34,391 | $34,890 | $34,771 | $36,588 | $36,882 | $37,456 | $38,210 | $39,228 | $40,102 |
| Florida | $38,510 | $39,775 | $40,583 | $40,989 | $41,572 | $42,312 | $43,210 | $43,651 | $44,810 | $46,236 |

Source: Florida Department of Economic Opportunity, Quarterly Census of Employment and Wages, 2006 - 2015 Annual Files
<ttp://www.floridajobs.org/labor-market-information/data-center/statistical-programs/quarterly-census-of-employment-and-wages>

## c. High School Graduation Rates

As shown in Table 2.2, the regional High School Graduation Rate peaked in 2010-11 and gradually has declined ever since. Prior to the 2010-11 school year, graduation rates for the region were consistently higher than the state average. However, since the 2010-11 peak, graduations rates have trailed that of the state. In 2015, eight of the 12 counties in the region fell below the overall state rate, with only four counties exceeding state rates.

**Table 2.2**

**High School Graduation Rates**
**North Central Florida Region and State**
**School Years 2005-06 to 2014-15**

| Area | School Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| Alachua | 69.8% | 68.2% | 68.3% | 77.1% | 76.6% | 78.1% | 68.7% | 72.6% | 72.2% | 74.3% |
| Bradford | 69.5% | 70.7% | 75.4% | 78.4% | 71.1% | 73.3% | 73.7% | 67.5% | 71.3% | 76.9% |
| Columbia | 67.4% | 74.1% | 77.6% | 87.8% | 88.5% | 87.2% | 64.8% | 65.7% | 61.0% | 71.0% |
| Dixie | 70.0% | 70.5% | 66.5% | 72.0% | 69.0% | 78.2% | 77.1% | 82.4% | 87.8% | 96.9% |
| Gilchrist | 43.9% | 53.3% | 56.1% | 64.2% | 63.4% | 67.6% | 85.9% | 89.7% | 95.4% | 94.0% |
| Hamilton | 83.8% | 85.1% | 89.1% | 89.5% | 96.2% | 95.8% | 55.0% | 55.5% | 78.6% | 73.7% |
| Lafayette | 53.5% | 64.2% | 57.5% | 62.8% | 51.6% | 58.0% | 65.8% | 87.5% | 80.0% | 87.0% |
| Levy | 76.2% | 79.0% | 81.2% | 81.0% | 80.2% | 85.8% | 72.2% | 77.8% | 69.1% | 81.6% |
| Madison | 89.7% | 90.7% | 95.9% | 93.8% | 91.2% | 84.0% | 66.3% | 64.0% | 75.7% | 58.1% |
| Suwannee | 65.1% | 74.4% | 71.6% | 72.4% | 74.5% | 68.5% | 59.5% | 59.5% | 76.6% | 67.5% |
| Taylor | 78.3% | 77.4% | 74.0% | 75.1% | 74.7% | 77.8% | 63.5% | 62.4% | 49.5% | 64.7% |
| Union | 76.7% | 81.7% | 71.4% | 80.7% | 76.4% | 93.2% | 70.4% | 79.0% | 82.8% | 77.7% |
| Region | 70.8% | 73.1% | 73.9% | 78.5% | 78.0% | 80.8% | 68.1% | 70.9% | 71.5% | 74.3% |
| Florida | 67.9% | 69.0% | 71.6% | 71.9% | 71.0% | 72.4% | 75.4% | 78.6% | 80.7% | 81.2% |

Source: Florida Department of Education, Data Publications and Reports: Students
<ww.fldoe.org/eias/eiaspubs/pubstudent.asp and https://edstats.fldoe.org>

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## d. 8th Grade Math Performance

As shown in Table 2.3, eighth grade math performance on the Florida Comprehensive Assessment Test in the region has declined over the 2006 to 2015 time frame, and has been consistently below the state performance levels for the period. The decline has been most pronounced from 2010 to 2015. In 2015, five school districts, Columbia, Dixie, Gilchrist, Taylor and Union, exceeded state levels. Given the growing demands of employers for workers proficient in science, technology, engineering and mathematics, this is a critical indicator for the region as it focuses on becoming more competitive with other regions in Florida and the southeastern U.S.

**Table 2.3**
**Eighth Grade Math Performance**
**Percent of Students Scoring at or Above Level 3 of 5 on**
**Florida Comprehensive Assessment Test**
**North Central Florida Region and State, 2006 to 2015**

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | 57% | 61% | 67% | 62% | 65% | 59% | 56% | 39% | 56% | 40% |
| Bradford | 42% | 55% | 57% | 50% | 52% | 40% | 45% | 11% | 5% | 10% |
| Columbia | 53% | 56% | 55% | 60% | 57% | 45% | 48% | 31% | 43% | 48% |
| Dixie | 42% | 53% | 51% | 63% | 56% | 50% | 65% | 45% | 53% | 50% |
| Gilchrist | 28% | 39% | 40% | 42% | 49% | 70% | 68% | 60% | 55% | 61% |
| Hamilton | 63% | 70% | 63% | 62% | 67% | 31% | 21% | 29% | 23% | 11% |
| Lafayette | 37% | 45% | 30% | 34% | 41% | 45% | 55% | 75% | 34% | 21% |
| Levy | 68% | 71% | 71% | 68% | 71% | 63% | 58% | 44% | 38% | 44% |
| Madison | 55% | 53% | 62% | 63% | 79% | 23% | 38% | 17% | 16% | 11% |
| Suwannee | 56% | 57% | 58% | 63% | 61% | 41% | 45% | 44% | 49% | 31% |
| Taylor | 65% | 69% | 64% | 72% | 64% | 50% | 61% | 54% | 58% | 50% |
| Union | 59% | 58% | 62% | 66% | 66% | 52% | 60% | 57% | 49% | 65% |
| Region | 57% | 61% | 63% | 63% | 64% | 52% | 53% | 39% | 48% | 40% |
| Florida | 60% | 63% | 67% | 66% | 68% | 56% | 56% | 51% | 47% | 45% |

Source: Florida Department of Education, Florida Comprehensive Assessment Test
https://app1.fldoe.org/FCATDemographics/Selections.aspx?reportTypeID=1&level=District&subj=Math

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

# 3. Innovation and Economic Development

Too often limited to the academic realms of research institutions, innovation must be an integral part of the businesses of the region. Competitiveness and prosperity in the 21st Century will be based on technology, knowledge and innovation. Transforming the existing business base is the key to retention and expansion. Economic development tied to innovation requires a comprehensive understanding of what is necessary and prudent to incentivize business growth. Demands for return on investment have never been greater. As new industries emerge and legacy industries must contend with pressure from the processes of creative destruction, the role of innovation and economic development will be paramount to secure economic prosperity.

## a. Gross Domestic Product

As shown in Table 2.4, gross domestic product is the market value of all goods and services produced within the area during the year. The Gross Domestic Product of the region has maintained a positive upward trend but with sporadic advances and declines between 2008 and 2012. Seven of the 12 counties in the region experienced declines in Gross Domestic Product between 2006 and 2015.

## Table 2.4

### Gross Domestic Product
### North Central Florida Region and State
### Billions of Fixed 2009 Dollars
### 2006 to 2015

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | 10.71 | 10.84 | 10.94 | 10.62 | 10.91 | 10.89 | 10.95 | 11.21 | 11.42 | 11.77 |
| Bradford | 0.60 | 0.59 | 0.59 | 0.58 | 0.53 | 0.51 | 0.49 | 0.49 | 0.50 | 0.52 |
| Columbia | 2.06 | 2.09 | 1.97 | 2.03 | 1.98 | 1.77 | 1.74 | 1.78 | 1.82 | 1.88 |
| Dixie | 0.25 | 0.23 | 0.22 | 0.21 | 0.20 | 0.21 | 0.20 | 0.21 | 0.21 | 0.22 |
| Gilchrist | 0.26 | 0.25 | 0.24 | 0.23 | 0.24 | 0.25 | 0.24 | 0.25 | 0.26 | 0.27 |
| Hamilton | 0.39 | 0.39 | 0.37 | 0.37 | 0.33 | 0.34 | 0.36 | 0.35 | 0.36 | 0.37 |
| Lafayette | 0.13 | 0.13 | 0.14 | 0.15 | 0.13 | 0.14 | 0.13 | 0.13 | 0.13 | 0.14 |
| Levy | 0.73 | 0.73 | 0.69 | 0.67 | 0.69 | 0.65 | 0.63 | 0.65 | 0.67 | 0.69 |
| Madison | 0.41 | 0.38 | 0.37 | 0.39 | 0.40 | 0.36 | 0.35 | 0.37 | 0.38 | 0.39 |
| Suwannee | 0.93 | 0.96 | 0.84 | 0.85 | 0.92 | 0.90 | 0.89 | 0.94 | 0.96 | 0.99 |
| Taylor | 0.57 | 0.59 | 0.55 | 0.55 | 0.60 | 0.62 | 0.61 | 0.66 | 0.68 | 0.70 |
| Union | 0.30 | 0.29 | 0.29 | 0.27 | 0.26 | 0.26 | 0.25 | 0.25 | 0.26 | 0.26 |
| Region | 17.34 | 17.46 | 17.21 | 16.90 | 17.20 | 16.89 | 16.83 | 17.29 | 17.63 | 18.18 |
| Florida | 1,277.05 | 1,283.05 | 1,250.59 | 1,183.07 | 1,207.53 | 1,223.15 | 1,246.73 | 1,284.89 | 1,316.56 | 1,358.27 |

Source: Regional Economic Modeling, Inc. PI+, Florida Counties v 1.7

## b. Tourism Development Tax Collections

As shown in Table 2.5, tourism development taxes are collected on the value of overnight accommodations at hotels, bed and breakfast, recreational vehicle and camping sites and are used as a measurement of overall tourism activity in an area. Based on this measure, the region has experienced steady growth in tourism over the decade from Fiscal Year 2005-06 to Fiscal Year 2014-15 period, with slight declines in Fiscal Years 2008-09 and 2009-10, due primarily to the economic downturn. Two counties, Lafayette and Union, did not collect tourism development taxes for the period.

**Table 2.5**

**Tourism Development Tax Collections**
**North Central Florida Region and State**
**Thousands of Dollars, 2005-06 to 2014-15**

| Area | Fiscal Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
| Alachua | $1,968 | $2,238 | $2,278 | $1,980 | $2,133 | $3,338 | $3,488 | $3,542 | $3,904 | $4,226 |
| Bradford | $53 | $68 | $108 | $102 | $90 | $82 | $85 | $82 | $89 | $100 |
| Columbia | $421 | $401 | $392 | $383 | $385 | $586 | $627 | $668 | $916 | $987 |
| Dixie | $0 | $0 | $0 | $0 | $0 | $7 | $26 | $23 | $24 | $30 |
| Gilchrist | $0 | $8 | $21 | $21 | $26 | $30 | $28 | $24 | $29 | $40 |
| Hamilton | $47 | $52 | $44 | $33 | $24 | $31 | $30 | $28 | $30 | $30 |
| Lafayette | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Levy | $162 | $170 | $168 | $147 | $155 | $152 | $157 | $164 | $169 | $189 |
| Madison | $87 | $95 | $86 | $80 | $70 | $84 | $85 | $86 | $102 | $115 |
| Suwannee | $103 | $107 | $117 | $103 | $101 | $110 | $167 | $162 | $193 | $219 |
| Taylor | $126 | $153 | $172 | $173 | $180 | $220 | $196 | $205 | $231 | $229 |
| Union | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Region | $2,968 | $3,291 | $3,387 | $3,022 | $3,163 | $4,641 | $4,887 | $4,984 | $5,690 | $6,166 |
| Florida | $436,165 | $489,307 | $524,341 | $466,657 | $466,707 | $516,632 | $572,967 | $604,643 | $662,750 | $746,014 |

Source: Florida Department of Revenue website, Local Government Tax Receipts by County, <http://dor.myflorida.com/dor/taxes/colls_from_7_2003.html>
Note: Values presented in thousands of dollars.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## c. Trade Exports and Imports

As shown in Table 2.6, trade exports is a measure of all goods and services produced in the region and sold outside the region. Comparing Trade Exports to Trade Imports reveals whether the region is bringing in more outside money from exports than it sends out by purchasing imported goods and services. In 2006, the region imported approximately 37.7 percent more goods and services than it exported, while in 2015, the ratio of exports to imports increased to approximately 45.3 percent, as opposed to the state ratios of approximately 3.8 percent in 2006 and approximately 2.7 percent in 2015. The increase in the export to import ratio demonstrates a significant leakage of capital from the region.

**Table 2.6**

**Trade Exports**
**North Central Florida Region and State**
**Billions of Fixed 2009 Dollars, 2006 to 2015**

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | 3.19 | 6.29 | 6.41 | 5.97 | 6.15 | 6.17 | 6.22 | 6.39 | 6.60 | 6.78 |
| Bradford | 0.51 | 0.51 | 0.52 | 0.48 | 0.43 | 0.44 | 0.43 | 0.44 | 0.46 | 0.47 |
| Columbia | 2.39 | 2.39 | 2.14 | 2.22 | 2.10 | 1.72 | 1.67 | 1.74 | 1.80 | 1.86 |
| Dixie | 0.30 | 0.27 | 0.24 | 0.22 | 0.20 | 0.24 | 0.22 | 0.22 | 0.22 | 0.23 |
| Gilchrist | 0.20 | 0.19 | 0.17 | 0.15 | 0.15 | 0.16 | 0.16 | 0.16 | 0.16 | 0.17 |
| Hamilton | 0.71 | 0.71 | 0.66 | 0.60 | 0.53 | 0.57 | 0.59 | 0.61 | 0.63 | 0.64 |
| Lafayette | 0.09 | 0.10 | 0.10 | 0.11 | 0.09 | 0.10 | 0.10 | 0.10 | 0.10 | 0.11 |
| Levy | 0.70 | 0.72 | 0.66 | 0.58 | 0.58 | 0.55 | 0.55 | 0.56 | 0.58 | 0.59 |
| Madison | 0.51 | 0.42 | 0.42 | 0.41 | 0.44 | 0.37 | 0.38 | 0.40 | 0.41 | 0.42 |
| Suwannee | 1.12 | 1.14 | 0.91 | 0.86 | 0.92 | 0.89 | 0.89 | 0.92 | 0.96 | 0.98 |
| Taylor | 0.76 | 0.82 | 0.76 | 0.71 | 0.79 | 0.84 | 0.85 | 0.89 | 0.91 | 0.93 |
| Union | 0.21 | 0.19 | 0.19 | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 | 0.18 | 0.18 |
| Region | $10.68 | $13.74 | $13.16 | $12.47 | $12.52 | $12.22 | $12.22 | $12.59 | $13.02 | $13.37 |
| Florida | $431.06 | $440.19 | $454.90 | $477.68 | $507.90 | $513.80 | $517.27 | $494.13 | $478.74 | $507.02 |

Source: Regional Economic Modeling, Inc. Policy Insight Plus, Florida Counties v 1.7

As shown in Table 2.7, from 2006 to 2015 the value of Trade Imports in the region increased by $4.72 billion. Increasing Trade Imports coupled with increased Trade Exports is a sign of positive economic activity in the region.

## Table 2.7

## Trade Imports
## North Central Florida Region and State
## Billions of Fixed 2009 Dollars
## 2006 to 2015

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | $4.48 | $8.75 | $8.53 | $8.03 | $8.19 | $8.35 | $8.33 | $8.53 | $8.83 | $9.12 |
| Bradford | $0.93 | $0.94 | $0.93 | $0.89 | $0.88 | $0.87 | $0.84 | $0.85 | $0.89 | $0.92 |
| Columbia | $2.64 | $2.67 | $2.50 | $2.43 | $2.49 | $2.33 | $2.20 | $2.27 | $2.36 | $2.43 |
| Dixie | $0.46 | $0.44 | $0.42 | $0.39 | $0.39 | $0.42 | $0.40 | $0.42 | $0.43 | $0.45 |
| Gilchrist | $0.54 | $0.53 | $0.51 | $0.49 | $0.52 | $0.54 | $0.52 | $0.54 | $0.56 | $0.57 |
| Hamilton | $0.69 | $0.69 | $0.66 | $0.58 | $0.57 | $0.61 | $0.61 | $0.62 | $0.64 | $0.65 |
| Lafayette | $0.20 | $0.21 | $0.22 | $0.21 | $0.21 | $0.22 | $0.21 | $0.22 | $0.23 | $0.24 |
| Levy | $1.27 | $1.28 | $1.22 | $1.13 | $1.19 | $1.14 | $1.12 | $1.25 | $1.29 | $1.32 |
| Madison | $0.70 | $0.65 | $0.65 | $0.61 | $0.64 | $0.59 | $0.59 | $0.62 | $0.65 | $0.67 |
| Suwannee | $1.49 | $1.55 | $1.40 | $1.32 | $1.43 | $1.43 | $1.40 | $1.45 | $1.51 | $1.56 |
| Taylor | $0.88 | $0.93 | $0.88 | $0.79 | $0.89 | $0.92 | $0.91 | $1.02 | $1.07 | $1.09 |
| Union | $0.44 | $0.43 | $0.41 | $0.40 | $0.41 | $0.40 | $0.39 | $0.39 | $0.41 | $0.42 |
| Region | $14.71 | $19.07 | $18.32 | $17.25 | $17.79 | $17.81 | $17.51 | $18.17 | $18.85 | $19.43 |
| Florida | $447.40 | $458.37 | $470.73 | $503.30 | $537.11 | $550.05 | $555.19 | $526.57 | $493.46 | $520.94 |

Source: Regional Economic Modeling, Inc. Policy Insight Plus, Florida Counties v 1.7

# 4. Infrastructure and Growth Leadership

The Infrastructure and Growth Leadership pillar underscores the fundamental contributions of factors such as transportation, communications and land use to the creation and maintenance of a vibrant economy. Early symptoms of distressed infrastructure, if not addressed, can have a crippling effect, undermining the economic health of the region. Congested and deteriorating roadways and railways could choke intra- and inter-state commerce. Failure to provide high-speed communications infrastructure will deter local investments by high-tech industries. In contrast, smart and timely investments in strategies that are tied to infrastructure targets are the medicine for a shared economic prosperity for the region.

## a. Population Counts, Estimates and Projections

As shown in Table 2.8, the population of the region increased by 1.8 percent between the 2010 and 2015, compared with an increase of 7.2 percent for the state. The population of the region is expected to increase by 16.3 percent between 2015 and 2045, while the population of the state is projected to increase by 35.9 percent over the same period. Stagnation in the national economy could alter these projections significantly as a prolonged sluggish housing market could prevent people from selling their homes and relocating to Florida.

## Table 2.8

### Population Counts, Estimates and Projections
### North Central Florida Region and State
### 2010 to 2045

| Area | Census | Estimate | Projections | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 |
| Alachua | 247,336 | 254,893 | 265,500 | 275,200 | 283,100 | 290,300 | 296,700 | 302,700 |
| Bradford | 28,520 | 27,310 | 28,800 | 29,300 | 29,500 | 29,700 | 29,900 | 30,100 |
| Columbia | 67,531 | 68,163 | 71,100 | 73,700 | 75,800 | 77,600 | 79,100 | 80,300 |
| Dixie | 16,422 | 16,468 | 17,200 | 17,700 | 18,100 | 18,400 | 18,700 | 18,900 |
| Gilchrist | 16,939 | 16,839 | 17,500 | 18,400 | 19,000 | 19,600 | 20,100 | 20,500 |
| Hamilton | 14,799 | 14,630 | 15,300 | 15,600 | 15,900 | 16,200 | 16,400 | 16,600 |
| Lafayette | 8,870 | 8,664 | 8,900 | 9,200 | 9,500 | 9,800 | 10,000 | 10,200 |
| Levy | 40,801 | 40,448 | 41,700 | 43,000 | 44,100 | 44,900 | 45,600 | 46,200 |
| Madison | 19,224 | 19,200 | 19,400 | 19,500 | 19,600 | 19,700 | 19,800 | 19,900 |
| Suwannee | 41,551 | 44,452 | 46,000 | 47,800 | 49,300 | 50,600 | 51,800 | 52,700 |
| Taylor | 22,570 | 22,824 | 22,400 | 22,700 | 23,000 | 23,200 | 23,300 | 23,500 |
| Union | 15,535 | 15,918 | 16,300 | 16,800 | 17,100 | 17,500 | 17,700 | 18,000 |
| Region | 540,098 | 549,809 | 570,100 | 588,900 | 604,000 | 617,500 | 629,100 | 639,600 |
| Florida | 18,801,310 | 20,148,654 | 21,438,700 | 22,943,900 | 24,244,300 | 25,397,400 | 26,426,400 | 27,378,400 |

Source: Florida Estimates of Population, Table 5, and Projections of Florida Population by County, 2020 - 2045, with Estimates for 2016, Bureau of Economic and Business Research, 4/12/2017.

## b. Annual Building Permits

As shown in Table 2.9, the region, similar to the state, has experienced significant declines in new residential construction since the collapse of the housing market in 2006. The region has also tracked the state in recovery. As with the state, the region began to experience an increase in construction activity in 2012. However, the number of annual building permits issued in the region remains less than half the number issued in 2006.

**Table 2.9**

**Annual Building Permits**
**North Central Florida Region and State**
**Residential Units**
**2006 to 2015**

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | 1949 | 1388 | 1006 | 519 | 454 | 444 | 589 | 770 | 762 | 1171 |
| Bradford | 124 | 126 | 44 | 24 | 31 | 18 | 23 | 27 | 0 | 0 |
| Columbia | 473 | 326 | 227 | 99 | 84 | 52 | 47 | 65 | 80 | 80 |
| Dixie | 83 | 86 | 53 | 19 | 18 | 17 | 20 | 24 | 24 | 26 |
| Gilchrist | 92 | 87 | 48 | 10 | 36 | 20 | 35 | 30 | 37 | 43 |
| Hamilton | 40 | 46 | 26 | 13 | 22 | 15 | 12 | 9 | 9 | 22 |
| Lafayette | 26 | 18 | 14 | 10 | 19 | 4 | 14 | 4 | 11 | 10 |
| Levy | 278 | 213 | 101 | 83 | 56 | 54 | 50 | 57 | 49 | 49 |
| Madison | 89 | 54 | 48 | 32 | 27 | 27 | 28 | 34 | 33 | 35 |
| Suwannee | 274 | 123 | 52 | 53 | 50 | 28 | 25 | 28 | 41 | 40 |
| Taylor | 75 | 52 | 32 | 17 | 33 | 21 | 21 | 18 | 24 | 41 |
| Union | 71 | 52 | 22 | 17 | 13 | 9 | 13 | 15 | 22 | 23 |
| Region | 3,574 | 2,571 | 1,673 | 896 | 843 | 709 | 877 | 1,081 | 1,092 | 1,540 |
| Florida | 203,238 | 102,551 | 61,042 | 35,329 | 38,679 | 42,360 | 64,810 | 86,752 | 84,073 | 109,923 |

Source: https://socds.huduser.gov/permits/index.html>I

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## c. Vehicle Miles Traveled

As shown in Table 2.10, vehicle miles traveled is a general indicator of the vitality of the economy of an area. If the economy slows down, people and businesses tend to reduce their expenses by reducing the number of trips taken or by consolidating trips. As the economy improves, less emphasis is placed on mileage reduction. Daily Vehicle Miles Traveled in the region has been flat since 2006. Statewide, Daily Vehicle Miles Traveled peaked in 2012 and gradually declined through 2015.

**Table 2.10**

**Daily Vehicle Miles Traveled**
**North Central Florida Region and State**
**Millions of Miles**
**2006 to 2015**

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | 8.10 | 8.46 | 8.00 | 7.83 | 7.83 | 7.76 | 7.61 | 7.80 | 8.09 | 8.25 |
| Bradford | 1.09 | 1.07 | 1.04 | 1.03 | 1.00 | 0.99 | 0.99 | 1.02 | 1.03 | 1.05 |
| Columbia | 3.70 | 3.72 | 3.52 | 3.57 | 3.54 | 3.58 | 3.52 | 3.57 | 3.82 | 3.74 |
| Dixie | 0.83 | 0.81 | 0.78 | 0.78 | 0.77 | 0.76 | 0.66 | 0.64 | 0.64 | 0.67 |
| Gilchrist | 0.70 | 0.67 | 0.67 | 0.65 | 0.66 | 0.69 | 0.69 | 0.69 | 0.70 | 0.69 |
| Hamilton | 1.59 | 1.68 | 1.66 | 1.54 | 1.49 | 1.39 | 1.38 | 1.35 | 1.50 | 1.50 |
| Lafayette | 0.46 | 0.45 | 0.45 | 0.44 | 0.44 | 0.43 | 0.43 | 0.42 | 0.43 | 0.42 |
| Levy | 1.66 | 1.65 | 1.64 | 1.60 | 1.62 | 1.65 | 1.69 | 1.67 | 1.70 | 1.75 |
| Madison | 1.57 | 1.55 | 1.47 | 1.48 | 1.52 | 1.52 | 1.50 | 1.52 | 1.47 | 1.61 |
| Suwannee | 2.51 | 2.50 | 2.39 | 2.38 | 2.39 | 2.33 | 2.32 | 2.30 | 2.34 | 2.43 |
| Taylor | 1.22 | 1.17 | 1.11 | 1.10 | 1.11 | 1.04 | 1.06 | 1.02 | 1.05 | 1.06 |
| Union | 0.45 | 0.43 | 0.42 | 0.41 | 0.41 | 0.40 | 0.40 | 0.40 | 0.40 | 0.42 |
| Region | 23.88 | 24.16 | 23.15 | 22.80 | 22.77 | 22.54 | 22.25 | 22.41 | 23.16 | 23.58 |
| Florida | 468.57 | 489.54 | 508.61 | 537.49 | 550.61 | 558.31 | 562.80 | 542.33 | 538.09 | 536.32 |

Source: Florida Department of Transportation, Florida Highway Mileage and Travel Report, Summary since 1990.
<http://www.dot.state.fl.us/planning/statistics/mileage-rpts/public.shtm>

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

# 5. Business Climate and Competitiveness

Owners and executives making decisions about where they call home evaluate the attractiveness of the region in respect to its competitiveness across a host of business climate factors. According to Florida TaxWatch, Florida ranks highly in measures of business climate owing to the absence of a personal income tax; its openness and growth in international trade; and its general hospitableness to entrepreneurs and small businesses. Unfortunately, Florida ranks poorly in measures of high business costs, especially property tax burdens, state and local sales, excise and gross receipt tax burdens and general business costs. Vigilance in monitoring the position of the region relative to other competitive locations is critical to securing the position of the region among the most business-friendly climates.

## a. Average Annual Unemployment Rates

As shown in Table 2.11, the region has usually experienced lower rates of unemployment than the state. While several factors contribute to these lower unemployment rates, a primary factor is the higher public sector employment rate in the region as compared to the state.

## Table 2.11

### Average Annual Unemployment Rates
### North Central Florida Region and State
### 2006 to 2015

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | 2.6% | 2.9% | 4.2% | 6.9% | 7.9% | 7.6% | 6.7% | 5.7% | 5.2% | 4.6% |
| Bradford | 2.8% | 3.3% | 4.7% | 7.8% | 9.2% | 9.1% | 7.6% | 6.3% | 5.6% | 4.8% |
| Columbia | 3.2% | 3.5% | 5.4% | 9.0% | 10.1% | 10.3% | 8.9% | 7.6% | 6.6% | 5.4% |
| Dixie | 3.4% | 4.2% | 7.2% | 11.1% | 13.0% | 12.3% | 10.3% | 8.5% | 7.4% | 6.2% |
| Gilchrist | 2.8% | 3.7% | 5.5% | 9.1% | 9.9% | 10.3% | 9.1% | 7.9% | 6.7% | 5.6% |
| Hamilton | 3.7% | 4.5% | 7.0% | 10.8% | 11.8% | 10.4% | 8.9% | 8.6% | 7.6% | 6.4% |
| Lafayette | 2.7% | 2.9% | 4.4% | 7.3% | 8.6% | 6.2% | 5.7% | 5.2% | 5.1% | 4.5% |
| Levy | 3.5% | 4.1% | 6.9% | 11.1% | 12.0% | 10.9% | 9.3% | 8.2% | 6.8% | 5.7% |
| Madison | 5.0% | 5.9% | 6.8% | 10.4% | 11.4% | 9.6% | 8.6% | 7.8% | 7.1% | 6.1% |
| Suwannee | 3.2% | 3.5% | 5.8% | 9.4% | 10.0% | 9.2% | 8.0% | 6.9% | 6.3% | 5.4% |
| Taylor | 3.9% | 4.1% | 6.4% | 10.4% | 11.2% | 10.1% | 9.0% | 7.8% | 6.9% | 6.6% |
| Union | 2.6% | 3.0% | 4.7% | 7.3% | 8.7% | 8.2% | 7.2% | 6.3% | 6.0% | 4.8% |
| Region | 3.0% | 3.3% | 5.0% | 8.1% | 9.1% | 8.7% | 7.6% | 6.6% | 5.8% | 5.0% |
| Florida | 3.3% | 4.0% | 6.2% | 10.2% | 11.3% | 10.0% | 8.5% | 7.3% | 6.3% | 5.4% |

Source: Florida Department of Economic Opportunity Local Area Unemployment Statistics

<http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/local-area-unemployment-statistics>

## b. Employment by Industry

As shown in Table 2.12, state government, health care, retail trade and local government have remained the predominant employment industries from 2006 to 2015 in the region. While still the largest single employer in the region in 2015, employment in State Government did decline by 9.0 percent over the period. Private sector industries that posted significant employment gains over the period include Health Care, Accommodation and Food Services, Finance and Insurance, Transportation and Warehousing, Farming, Management of Companies and Mining.

As shown in Tables 2.12 and 2.13, Health Care, retail trade, state government and local government have remained the predominant employment industries from 2001 to 2010 in the region. On a percentage basis, the largest gains during the period were experienced in Management (149%), Educational Services (57.4%), and Federal Civilian (42%). Private sector industries that posted significant employment gains over the period on an absolute basis include Health Care and Social Assistance (9,502 jobs), Real Estate Rental and Leasing (4,529 jobs) and Accommodation and Food Services (3,569 jobs). Declines occurred in the Manufacturing (-4,173 jobs), State Government, (-2,726 jobs) and Retail Trade (-1,732 jobs) industries.

## Table 2.12

## Employment by Industry
## North Central Florida Region
## 2006 to 2015

| Industry | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| State Government | 39,312 | 38,573 | 36,999 | 37,181 | 36,834 | 36,577 | 35,608 | 35,155 | 35,442 | 35,784 |
| Health Care and Social Assistance | 30,187 | 30,801 | 31,674 | 31,744 | 31,855 | 31,590 | 31,960 | 32,742 | 33,681 | 34,396 |
| Retail Trade | 28,919 | 30,373 | 28,033 | 26,854 | 26,189 | 26,568 | 26,228 | 26,339 | 26,989 | 27,687 |
| Local Government | 22,652 | 22,865 | 22,677 | 22,256 | 22,370 | 22,217 | 21,905 | 21,789 | 21,895 | 22,055 |
| Accommodation and Food Services | 18,888 | 19,621 | 20,603 | 18,629 | 18,016 | 18,148 | 18,479 | 19,001 | 19,370 | 19,875 |
| Other Services, except Public Administration | 13,869 | 14,171 | 14,027 | 13,554 | 13,118 | 13,802 | 13,497 | 13,551 | 13,780 | 14,075 |
| Manufacturing | 15,311 | 15,417 | 14,312 | 12,275 | 12,627 | 13,041 | 13,533 | 13,390 | 13,425 | 13,578 |
| Administrative and Waste Management Services | 11,424 | 11,124 | 10,580 | 10,169 | 9,851 | 10,740 | 11,643 | 12,035 | 12,290 | 12,599 |
| Professional, Scientific, and Technical Services | 12,714 | 13,296 | 12,867 | 12,428 | 12,272 | 11,957 | 11,740 | 11,401 | 11,745 | 12,056 |
| Construction | 15,920 | 15,698 | 13,878 | 11,614 | 10,582 | 10,155 | 10,503 | 10,727 | 11,051 | 11,661 |
| Finance and Insurance | 8,193 | 8,837 | 9,085 | 9,013 | 8,914 | 9,243 | 9,466 | 9,217 | 9,406 | 9,597 |
| Real Estate and Rental and Leasing | 10,822 | 10,644 | 9,611 | 9,307 | 9,385 | 9,346 | 8,929 | 8,991 | 9,117 | 9,278 |
| Farming | 6,984 | 8,180 | 8,150 | 8,142 | 8,342 | 8,546 | 8,814 | 8,763 | 8,509 | 8,290 |
| Transportation and Warehousing | 6,065 | 6,450 | 7,330 | 6,709 | 6,886 | 6,959 | 7,378 | 8,021 | 8,146 | 8,269 |
| Federal Civilian | 5,160 | 5,349 | 5,586 | 5,845 | 6,541 | 6,164 | 6,036 | 6,077 | 5,926 | 5,898 |
| Wholesale Trade | 5,476 | 5,716 | 5,669 | 5,645 | 5,370 | 5,220 | 5,016 | 5,270 | 5,413 | 5,555 |
| Arts, Entertainment, and Recreation | 4,081 | 4,359 | 4,288 | 4,239 | 4,206 | 4,357 | 4,282 | 4,335 | 4,379 | 4,436 |
| Educational Services | 4,139 | 4,052 | 4,714 | 4,742 | 4,015 | 3,920 | 3,864 | 3,348 | 3,446 | 3,548 |
| Forestry, Fishing, and Related Activities | 3,285 | 3,363 | 3,081 | 3,761 | 3,597 | 3,170 | 3,324 | 3,232 | 3,216 | 3,242 |
| Information | 3,278 | 3,286 | 3,276 | 2,836 | 2,815 | 2,786 | 2,657 | 2,797 | 2,759 | 2,712 |
| Management of Companies and Enterprises | 262 | 275 | 690 | 663 | 1,033 | 1,369 | 1,694 | 1,596 | 1,609 | 1,625 |
| Mining | 343 | 258 | 331 | 148 | 164 | 629 | 1,006 | 1,245 | 1,332 | 1,378 |
| Utilities | 895 | 877 | 861 | 968 | 968 | 1,012 | 861 | 1,256 | 1,228 | 1,210 |
| Federal Military | 1,132 | 1,160 | 1,150 | 1,170 | 1,169 | 1,128 | 1,085 | 1,089 | 1,056 | 1,032 |

Source: Regional Economic Modeling, Inc., Policy Insight Plus, Florida Counties v 1.7

As shown in Table 2.13 and 2.14, public sector employment in the region has declined from 2006 to 2015, as a percentage of total employment. This trend is likely to continue as the private sector experiences job growth and government budgets continue to be constrained due to sluggish state and national economies.

## Table 2.13

### Employment by Sector (Thousands)
### North Central Florida Region and State
### 2006 to 2015

| Sector | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Employment Region: | 269 | 275 | 269 | 260 | 257 | 259 | 260 | 261 | 265 | 270 |
| Total Employment State: | 15,854 | 16,149 | 15,842 | 15,222 | 15,113 | 15,469 | 15,739 | 16,060 | 16,370 | 16,672 |
| Private Sector Employment Region: | 201 | 207 | 203 | 193 | 190 | 193 | 195 | 197 | 201 | 205 |
| Private Sector Employment State: | 13,887 | 14,146 | 13,813 | 13,216 | 13,114 | 13,504 | 13,796 | 14,131 | 14,441 | 14,734 |
| Public Sector Employment Region: | 68 | 68 | 66 | 66 | 67 | 66 | 65 | 64 | 64 | 65 |
| Public Sector Employment State: | 1,967 | 2,003 | 2,029 | 2,006 | 2,000 | 1,964 | 1,943 | 1,929 | 1,929 | 1,938 |

Source: Regional Economic Modeling, Inc., Policy Insight Plus, Florida Counties v. 1.7

## Table 2.14

### Percent Employment by Sector
### North Central Florida Region
### 2006 to 2015

| Sector | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Percent Private Sector Employment-Region | 74.7% | 75.3% | 75.4% | 74.4% | 74.0% | 74.4% | 75.1% | 75.5% | 75.7% | 76.0% |
| Percent Public Sector Employment-Region | 25.3% | 24.7% | 24.6% | 25.6% | 26.0% | 25.6% | 24.9% | 24.5% | 24.3% | 24.0% |
| Percent Private Sector Employment-State | 87.6% | 87.6% | 87.2% | 86.8% | 86.8% | 87.3% | 87.7% | 88.0% | 88.2% | 88.4% |
| Percent Public Sector Employment-State | 12.4% | 12.4% | 12.8% | 13.2% | 13.2% | 12.7% | 12.3% | 12.0% | 11.8% | 11.6% |

Source: Regional Economic Modeling, Inc., Policy Insight Plus, Florida Counties v. 1.7

## c. Wages by Industry

As shown in Table 2.15, the majority of industries experienced stable wage growth from 2006 to 2015. Four of the 23 industries measured had overall wage growth that met or exceeded an annual average rate of 3.0 percent. Industries that had the highest overall growth in average annual wages include Farm, Educational Services, Forestry, Fishing, and Related Activities and Wholesale Trade. Only three industries, Management, Federal Military and Mining had overall declining average annual wages for the period.

## Table 2.15

## Average Annual Wages by Industry
## North Central Florida Region
## Thousands of Current Dollars
## 2006 to 2015

| Industry | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Utilities | $76.1 | $75.5 | $80.5 | $83.2 | $88.2 | $96.0 | $92.7 | $78.1 | $81.8 | $85.2 |
| Federal Civilian | $59.3 | $61.8 | $62.3 | $64.2 | $62.1 | $64.8 | $65.9 | $66.9 | $69.1 | $71.9 |
| Manufacturing | $49.0 | $50.0 | $52.9 | $53.2 | $54.6 | $53.1 | $53.9 | $57.4 | $59.7 | $61.7 |
| Wholesale Trade | $44.7 | $45.3 | $46.0 | $44.7 | $46.4 | $48.5 | $52.0 | $56.8 | $59.1 | $61.1 |
| Management | $63.7 | $63.4 | $41.3 | $42.0 | $29.8 | $41.3 | $44.1 | $54.6 | $57.3 | $59.7 |
| Health Care and Social Assistance | $42.6 | $43.8 | $45.6 | $47.1 | $46.9 | $47.4 | $48.2 | $48.4 | $49.2 | $49.7 |
| Information | $43.5 | $44.5 | $42.9 | $44.7 | $42.8 | $44.4 | $47.1 | $44.7 | $47.0 | $49.1 |
| State and Local Government | $36.6 | $38.1 | $39.4 | $40.4 | $40.8 | $41.0 | $41.9 | $42.8 | $44.3 | $46.0 |
| Finance and Insurance | $43.2 | $43.2 | $42.1 | $37.7 | $39.4 | $37.7 | $39.7 | $41.2 | $42.7 | $44.1 |
| Professional and Technical Services | $32.9 | $32.6 | $34.5 | $34.5 | $36.1 | $37.4 | $37.0 | $36.9 | $37.8 | $38.5 |
| Construction | $27.6 | $29.7 | $30.2 | $29.1 | $31.0 | $29.9 | $32.8 | $33.5 | $34.5 | $35.3 |
| Forestry, Fishing, and Related Activities | $23.7 | $23.3 | $24.3 | $23.9 | $25.1 | $28.4 | $29.3 | $30.4 | $31.6 | $32.6 |
| Federal Military | $29.9 | $30.7 | $33.3 | $35.5 | $33.3 | $30.4 | $28.3 | $28.2 | $28.9 | $29.6 |
| Transportation and Warehousing | $23.7 | $25.4 | $27.6 | $27.2 | $25.2 | $26.2 | $28.3 | $27.6 | $28.6 | $29.4 |
| Retail Trade | $23.8 | $24.3 | $24.7 | $24.3 | $25.3 | $25.3 | $25.3 | $25.9 | $26.9 | $27.7 |
| Mining | $26.7 | $29.9 | $20.1 | $35.7 | $150.0 | $40.3 | $24.9 | $23.4 | $24.2 | $24.7 |
| Other Services, not Pub.Admin. | $20.3 | $21.0 | $22.1 | $21.8 | $21.8 | $20.5 | $21.0 | $21.9 | $22.3 | $22.7 |
| Administrative and Waste Services | $18.9 | $19.1 | $20.1 | $19.8 | $19.2 | $18.7 | $19.4 | $20.3 | $20.8 | $21.1 |
| Educational Services | $13.8 | $14.5 | $14.2 | $15.0 | $18.0 | $19.3 | $20.5 | $19.4 | $19.6 | $19.8 |
| Arts, Entertainment, and Recreation | $15.9 | $17.5 | $18.7 | $19.3 | $20.2 | $18.8 | $18.8 | $18.7 | $19.1 | $19.5 |
| Accommodation and Food Services | $15.7 | $16.4 | $16.3 | $16.4 | $17.0 | $16.9 | $17.9 | $18.1 | $18.5 | $18.9 |
| Real Estate and Rental and Leasing | $8.7 | $8.9 | $10.1 | $10.6 | $11.3 | $10.2 | $11.0 | $11.0 | $11.3 | $11.6 |
| Farm | $4.8 | $4.3 | $5.3 | $5.6 | $5.9 | $5.2 | $5.1 | $6.9 | $7.3 | $7.8 |

Source: Regional Economic Modeling, Inc., Policy Insight Plus, Florida Counties, v. 1.7

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

As shown in Table 2.16, in both public as well as private sector employment, average annual wages in the region continue to lag those of the state. The gap between state and regional average annual wages narrowed between 2006 to 2015 in both public and private sector employment.

**Table 2.16**

**Average Annual Wages by Sector**
**North Central Florida Region and State**
**Thousands of Current Dollars**
**2006 to 2015**

| Sector | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Total Avg Annual Wage Rate - Region | $27.2 | $27.9 | $28.7 | $29.2 | $29.8 | $29.9 | $30.5 | $31.1 | $32.1 | $33.0 |
| Total Avg Annual Wage Rate - State | $32.1 | $32.8 | $33.3 | $32.8 | $33.4 | $33.6 | $34.4 | $34.8 | $36.0 | $37.1 |
| Priv Sctr Avg Annual Wage Rate - Region | $24.1 | $24.8 | $25.5 | $25.5 | $26.1 | $26.3 | $27.0 | $27.6 | $28.4 | $29.1 |
| Priv Sctr Avg Annual Wage Rate - State | $31.0 | $31.5 | $31.8 | $31.1 | $31.6 | $32.0 | $32.9 | $33.4 | $34.6 | $35.6 |
| Pub Sctr Avg Annual Wage Rate - Region | $38.2 | $39.9 | $41.3 | $42.4 | $42.8 | $43.1 | $43.9 | $44.8 | $46.3 | $48.1 |
| Pub Sctr Avg Annual Wage Rate - State | $42.0 | $43.5 | $44.8 | $45.8 | $46.1 | $46.6 | $46.6 | $46.9 | $48.6 | $50.6 |

Source: Regional Economic Modeling, Inc., Policy Insight Plus, Florida Counties, v. 1.7

# 6. Civic and Governance Systems

Free markets need structure in place to deliver services, set rules that organize business and society, and provide vehicles for the public to engage in, influence, and change how society works. These include things such as constitutional integrity, ethics and elections, redundancy and government spending.

## a. Millage Rates

As shown in Table 2.17, millage rates across the region shared a downward trend from 2006 to 2015, due primarily to rising property value assessments. By 2008, however, effects of the national real estate crash had caused property values to decline rapidly, and millage rates across the region were raised accordingly in 2009 as local governments adjusted millage rates to meet budgetary requirements. However, millage rates resumed their decline in 2010 and continued to decline through 2015.

## Table 2.17

### Millage Rates
### North Central Florida Region and State
### 2006 to 2015

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | 19.27 | 17.65 | 17.52 | 19.08 | 19.21 | 19.42 | 18.87 | 18.91 | 18.92 | 18.75 |
| Bradford | 17.05 | 16.80 | 16.81 | 16.86 | 16.85 | 16.98 | 16.91 | 16.78 | 16.37 | 16.34 |
| Columbia | 19.34 | 17.95 | 18.19 | 18.36 | 17.33 | 17.01 | 16.80 | 16.59 | 16.52 | 16.49 |
| Dixie | 18.11 | 17.14 | 17.47 | 18.35 | 18.25 | 18.31 | 18.24 | 17.85 | 17.78 | 17.36 |
| Gilchrist | 19.28 | 17.34 | 17.52 | 17.81 | 17.80 | 17.67 | 17.70 | 17.45 | 17.32 | 18.26 |
| Hamilton | 18.29 | 17.93 | 18.15 | 18.50 | 18.35 | 18.43 | 18.58 | 18.41 | 17.80 | 17.77 |
| Lafayette | 18.24 | 16.47 | 16.02 | 16.93 | 17.08 | 16.94 | 16.68 | 16.88 | 16.57 | 16.37 |
| Levy | 15.61 | 14.96 | 15.16 | 15.17 | 15.07 | 15.37 | 15.31 | 15.66 | 15.55 | 15.51 |
| Madison | 16.01 | 14.79 | 16.13 | 17.33 | 17.84 | 17.69 | 17.97 | 17.83 | 17.72 | 17.72 |
| Suwannee | 17.29 | 15.93 | 15.88 | 16.26 | 16.36 | 16.50 | 16.57 | 16.64 | 16.72 | 16.38 |
| Taylor | 15.73 | 15.11 | 14.51 | 15.20 | 15.12 | 15.05 | 15.12 | 14.94 | 15.10 | 14.84 |
| Union | 18.79 | 18.54 | 18.58 | 18.78 | 18.94 | 18.96 | 18.95 | 18.51 | 18.28 | 18.09 |
| Region | 17.75 | 16.72 | 16.83 | 17.39 | 17.35 | 17.36 | 17.31 | 17.20 | 17.05 | 16.99 |
| Florida | 15.25 | 13.93 | 14.05 | 14.53 | 14.77 | 14.75 | 14.69 | 14.70 | 14.71 | 14.60 |

Source: Florida Department of Revenue, Property Tax Analysis, Millage, Levies and Collections; Florida Ad Valorem Valuation and Tax Data 2006 to 2015; Millage and Taxes Levied Report <http://floridarevenue.com/dor/property/resources/data.html>

## b. Registered Nonprofit Organizations

As shown in Table 2.18, the number of registered public and private charities in the region has grown consistently over the 2006 to 2015 period. Each of the counties in the region experienced substantial increases in the total number of registered charities, and as a whole, the region experienced an increase of over 82.6 percent compared to 46.2 percent for the state.

**Table 2.18**

**Registered 501(c)(3) Organizations**
**Public and Private Foundation Charities**
**North Central Florida Region and State, 2006 to 2015**

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | 1,091 | 1,137 | 1,135 | 1,219 | 1,266 | 1,189 | 1,197 | 1,196 | 1,265 | 1,326 |
| Bradford | 59 | 60 | 63 | 67 | 65 | 140 | 137 | 129 | 132 | 144 |
| Columbia | 170 | 172 | 182 | 192 | 200 | 183 | 188 | 194 | 194 | 204 |
| Dixie | 32 | 31 | 30 | 34 | 35 | 691 | 695 | 688 | 702 | 719 |
| Gilchrist | 38 | 39 | 40 | 43 | 48 | 49 | 49 | 48 | 54 | 49 |
| Hamilton | 34 | 33 | 36 | 36 | 38 | 51 | 50 | 44 | 50 | 54 |
| Lafayette | 20 | 22 | 25 | 26 | 29 | 28 | 23 | 24 | 57 | 61 |
| Levy | 91 | 103 | 111 | 115 | 123 | 215 | 219 | 211 | 253 | 262 |
| Madison | 57 | 61 | 66 | 67 | 74 | 117 | 113 | 113 | 175 | 176 |
| Suwannee | 109 | 110 | 110 | 109 | 115 | 121 | 127 | 133 | 141 | 135 |
| Taylor | 48 | 51 | 48 | 49 | 53 | 51 | 48 | 51 | 52 | 80 |
| Union | 29 | 30 | 26 | 31 | 32 | 31 | 31 | 33 | 35 | 37 |
| Region | 1,778 | 1,849 | 1,872 | 1,988 | 2,078 | 2,866 | 2,877 | 2,864 | 3,110 | 3,247 |
| Florida | 49,817 | 52,756 | 55,048 | 58,209 | 61,047 | 57,406 | 58,009 | 56,904 | 68,456 | 72,843 |

Source: Internal Revenue Service, Exempt Organizations Business Master File, (501(c)(3) Charities
The Urban Institute, National Center for Charitable Statistics, <http://nccsdataweb.urban.org/tablewiz/pc.php> ©2012

## c. Voter Participation

As shown in Table 2.19, voter participation in the region closely mirrored that of the state across the ten-year period from 2006 to 2016, with slightly greater regional participation than the state in most election years. Voter participation was significantly greater during the presidential election cycle, and dropped off from 21.3 percent to 26.4 percent during non-presidential election years.

**Table 2.19**

**Voter Participation**
**North Central Florida Region and State**
**Biennial General Elections, 2006 to 2016**

| Area | General Election Year | | | | | |
|---|---|---|---|---|---|---|
| | 2006 | 2008 | 2010 | 2012 | 2014 | 2016 |
| Alachua | 48.3% | 81.7% | 49.4% | 73.5% | 50.2% | 73.6% |
| Bradford | 50.7% | 74.9% | 51.8% | 75.7% | 55.4% | 76.2% |
| Columbia | 43.5% | 74.1% | 48.1% | 76.9% | 52.4% | 77.6% |
| Dixie | 48.9% | 68.5% | 53.5% | 68.5% | 55.3% | 73.4% |
| Gilchrist | 56.4% | 73.4% | 50.5% | 72.0% | 54.6% | 74.6% |
| Hamilton | 45.6% | 73.5% | 51.6% | 68.6% | 48.6% | 68.4% |
| Lafayette | 51.0% | 76.4% | 58.1% | 75.4% | 59.9% | 77.0% |
| Levy | 47.4% | 72.8% | 51.9% | 74.0% | 52.2% | 73.1% |
| Madison | 52.3% | 73.0% | 55.5% | 72.7% | 55.6% | 74.4% |
| Suwannee | 47.0% | 71.8% | 54.7% | 71.1% | 51.5% | 71.5% |
| Taylor | 45.2% | 72.2% | 52.4% | 73.3% | 55.9% | 76.5% |
| Union | 45.4% | 73.7% | 52.3% | 74.6% | 72.1% | 79.3% |
| Region | 47.9% | 77.1% | 50.7% | 73.5% | 52.2% | 74.1% |
| Florida | 46.8% | 75.2% | 48.7% | 71.5% | 50.5% | 74.5% |

Source: Florida Department of State, Division of Elections
<https://doe.dos.state.fl.us/elections/resultsarchive/Index.asp?ElectionDate=11/8/2016&DATAMODE=>

# 7. Quality of Life and Quality Places

Economic and urban theorist Richard Florida underscores the importance of place as an integral component of prosperity. He documents the shift from generations that once chased the job and landed by coincidence in a particular city, to the current cohort that selects geography first and then lands the job. The future economy of the region depends on the preservation and enhancements of a wide range of integrated elements that together express the robustness of our culture and the positive perceptions of those things that make us healthy, safe, comfortable and secure.

## a. Per Capita Income

As shown in Table 2.20, per capita incomes in the region grew across all counties from 2006 to 2015. Eight of the 12 counties in the region experienced double digit rates of increase over the time period, and the region as a whole had a higher rate of per capita income growth than the state. However, the gap between state and regional per capita incomes declined 15.5 percent from 2006 to 2015.

## Table 2.20

## Real Personal Per Capita Income
## North Central Florida Region and State
## Fixed 2009 Dollars
## 2006 to 2015

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | $34,739 | $34,975 | $34,792 | $33,303 | $34,200 | $35,224 | $34,738 | $35,025 | $35,540 | $36,648 |
| Bradford | $26,495 | $27,010 | $27,046 | $27,395 | $28,220 | $29,019 | $29,811 | $29,781 | $30,526 | $31,346 |
| Columbia | $24,418 | $25,450 | $25,197 | $24,515 | $26,100 | $27,185 | $26,030 | $26,319 | $27,171 | $28,221 |
| Dixie | $20,406 | $20,312 | $19,689 | $19,424 | $19,877 | $20,276 | $20,719 | $21,327 | $22,099 | $22,994 |
| Gilchrist | $29,037 | $29,138 | $28,466 | $28,063 | $29,508 | $29,899 | $30,700 | $30,718 | $31,699 | $32,890 |
| Hamilton | $17,346 | $17,706 | $17,734 | $17,321 | $18,282 | $19,111 | $18,163 | $18,517 | $19,214 | $19,911 |
| Lafayette | $16,356 | $18,358 | $18,886 | $17,721 | $18,193 | $18,231 | $18,333 | $18,377 | $18,813 | $19,418 |
| Levy | $25,483 | $25,281 | $24,589 | $24,319 | $25,721 | $26,319 | $25,999 | $26,676 | $27,600 | $28,688 |
| Madison | $22,225 | $22,361 | $22,114 | $22,012 | $22,843 | $23,351 | $23,365 | $23,841 | $24,718 | $25,777 |
| Suwannee | $26,237 | $27,354 | $26,314 | $25,339 | $26,172 | $25,913 | $25,739 | $26,041 | $26,966 | $28,003 |
| Taylor | $23,859 | $24,130 | $22,921 | $22,825 | $24,886 | $25,583 | $24,456 | $24,810 | $25,617 | $26,522 |
| Union | $18,792 | $18,280 | $17,498 | $18,282 | $18,722 | $18,971 | $18,607 | $18,842 | $19,309 | $19,929 |
| Region | $28,912 | $29,281 | $28,914 | $28,053 | $29,096 | $29,893 | $29,509 | $29,848 | $30,556 | $31,614 |
| Florida | $39,431 | $39,725 | $38,641 | $36,716 | $37,159 | $38,314 | $38,541 | $38,517 | $39,380 | $40,504 |

Source: Regional Economic Modeling, Inc., Policy Insight Plus, Florida Counties, v. 1.7

## b. House Price Cost Index

As shown in Table 2.21, housing prices in the region as well as the state remained a bargain relative to national average home prices. With the exception of Alachua County and Levy County, the relative cost of a home in the region was less than one-half that of the nation and significantly less than other areas of the state. From 2006 to 2015, the region as a whole declined slightly relative to the nation, while the overall relative prices of the state also declined by a larger amount.

**Table 2.21**

**Relative Housing Price**
**North Central Florida Region and State**
**National Index = 1.0**
**2006 to 2015**

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | 0.66 | 0.72 | 0.76 | 0.74 | 0.72 | 0.70 | 0.72 | 0.66 | 0.66 | 0.66 |
| Bradford | 0.58 | 0.57 | 0.55 | 0.50 | 0.46 | 0.44 | 0.44 | 0.44 | 0.45 | 0.45 |
| Columbia | 0.53 | 0.45 | 0.57 | 0.48 | 0.49 | 0.44 | 0.41 | 0.41 | 0.41 | 0.41 |
| Dixie | 0.50 | 0.49 | 0.48 | 0.44 | 0.40 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 |
| Gilchrist | 0.55 | 0.54 | 0.53 | 0.48 | 0.44 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 |
| Hamilton | 0.62 | 0.60 | 0.59 | 0.53 | 0.49 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 |
| Lafayette | 0.63 | 0.62 | 0.60 | 0.55 | 0.51 | 0.48 | 0.48 | 0.48 | 0.49 | 0.49 |
| Levy | 0.69 | 0.72 | 0.75 | 0.77 | 0.78 | 0.79 | 0.78 | 0.74 | 0.73 | 0.72 |
| Madison | 0.45 | 0.44 | 0.43 | 0.39 | 0.36 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| Suwannee | 0.52 | 0.51 | 0.50 | 0.45 | 0.42 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 |
| Taylor | 0.49 | 0.48 | 0.47 | 0.42 | 0.39 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 |
| Union | 0.51 | 0.49 | 0.48 | 0.44 | 0.41 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 |
| Region | 0.61 | 0.64 | 0.67 | 0.63 | 0.62 | 0.59 | 0.60 | 0.56 | 0.56 | 0.57 |
| Florida | 0.80 | 0.78 | 0.76 | 0.73 | 0.67 | 0.66 | 0.64 | 0.64 | 0.65 | 0.65 |

Source: Regional Economic Modeling, Inc., PI+, Florida Counties, v. 1.3

## c. Persons Living in Poverty

As shown in Table 2.22, the percentage of persons living in poverty in the region increased over the 2006 to 2015 period. However, the gap between the region and state decreased over the period, from 7.6 percent in 2006 to 6.2 percent in 2015. The largest increases in poverty rates in the region occurred in 2009 and 2012.

**Table 2.22**

**Percent of Persons Living in Poverty**
**North Central Florida Region and State**
**2006 to 2015**

| Area | Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alachua | 21.8% | 22.8% | 20.0% | 23.0% | 25.3% | 23.5% | 26.6% | 25.7% | 21.6% | 21.1% |
| Bradford | 16.3% | 16.9% | 19.3% | 22.5% | 19.4% | 23.1% | 23.1% | 21.8% | 22.6% | 21.3% |
| Columbia | 18.2% | 13.9% | 18.0% | 19.1% | 19.5% | 21.7% | 23.4% | 18.8% | 21.7% | 19.7% |
| Dixie | 22.6% | 21.6% | 22.8% | 23.7% | 26.6% | 25.2% | 27.3% | 27.1% | 27.1% | 29.3% |
| Gilchrist | 17.6% | 15.4% | 16.8% | 18.0% | 21.0% | 19.5% | 22.0% | 21.9% | 19.8% | 19.2% |
| Hamilton | 24.3% | 27.7% | 29.3% | 28.5% | 30.8% | 31.9% | 28.9% | 29.2% | 31.7% | 31.8% |
| Lafayette | 22.3% | 22.0% | 25.6% | 24.6% | 26.0% | 23.8% | 26.4% | 25.2% | 25.6% | 23.8% |
| Levy | 17.8% | 18.5% | 17.8% | 21.8% | 27.0% | 22.0% | 22.7% | 23.6% | 21.2% | 22.1% |
| Madison | 20.9% | 21.0% | 23.6% | 26.2% | 23.4% | 25.9% | 25.6% | 28.9% | 27.7% | 27.0% |
| Suwannee | 18.1% | 17.8% | 19.9% | 19.7% | 20.9% | 24.7% | 28.1% | 24.6% | 23.7% | 23.6% |
| Taylor | 20.6% | 18.5% | 22.9% | 23.8% | 20.6% | 22.7% | 24.2% | 23.9% | 23.4% | 21.2% |
| Union | 19.4% | 21.5% | 23.6% | 26.5% | 24.3% | 25.3% | 26.2% | 23.8% | 24.3% | 26.2% |
| Region | 20.2% | 20.2% | 20.1% | 22.3% | 23.8% | 23.4% | 25.6% | 24.4% | 22.5% | 22.0% |
| Florida | 12.6% | 12.1% | 13.3% | 15.0% | 16.5% | 17.0% | 17.2% | 17.1% | 16.6% | 15.8% |

Source: U.S. Census Bureau, Small Area Income and Poverty Estimates
<https://www.census.gov/did/www/saipe/data/interactive/saipe.html>

# B. Problems, Needs and Opportunities

## 1. Comprehensive Economic Development Strategy Priority Project Areas

The Comprehensive Economic Development Strategy Priority Project Areas serve as the roadmap for future economic development projects in the region and summarize the problems, needs and opportunities of the region. Additionally, future U.S. Economic Development Administration projects that fall within one of the priority project categories and are consistent with the goals and objectives of the Comprehensive Economic Development Strategy will be eligible for funding from the U.S. Economic Development Administration.

1. Talent Supply and Education - Support the development of educational programs to increase the labor force in the healthcare and life sciences industry.

2. Innovation and Economic Development - Support the development of the catalyst sites for the North Central Florida Rural Area of Opportunity and the development and expansion of regional business incubators and research parks.

3. Infrastructure and Growth Leadership - Support continuing improvements to multi-modal infrastructure, including highway interchanges along interstate corridors, railway corridors, airport facilities and broadband infrastructure.

4. Business Climate and Competitiveness - Support streamlining processes at the local level to encourage new businesses to open and help existing businesses thrive.

5. Civic and Governance Systems - Support programs to educate local government officials in the fundamentals of economic development.

6. Quality of Life and Quality Places - Support regional tourism promotional initiatives.

# C. Goals and Objectives

The Economic Development Element establishes the goals and policies necessary to solve the economic problems and capitalize on the resources of the region. The goals and policies are organized using the Florida Chamber Foundation's Six Pillars of Florida's Future Economy.

## 1. Talent Supply and Education

**REGIONAL GOAL 2.1.** Connect and align education and workforce development programs to develop the region's current and future talent supply chain and meet employer needs.

**Regional Indicator**

For the 2014- 2015 school year, the high school graduation rate of the region was 74.3 percent.

**Policy 2.1.1.** Expand options for high school students to become industry certified while still in high school, as an alternative to college path.

**Policy 2.1.2.** Integrate education, training and workforce development to develop a strong supply chain.

**Policy 2.1.3.** Support efforts by Florida Gateway College, North Florida Community College, Santa Fe College, CareerSource Crown, CareerSource North Florida and CareerSource North Central Florida to expand education programs in healthcare related fields and create a marketing strategy to promote enrollment in health professions programs.

**Policy 2.1.4.** Support the creation of electronic medical records education and training programs utilizing a regional community-adaptive health information technology model.

**REGIONAL GOAL 2.2** Expand access to education and training programs for talent in distressed markets (e.g., rural, urban core) throughout the region.

**Policy 2.2.1.** Support the creation of online and distance learning programs for students that lack other means of attaining necessary training.

**Policy 2.2.2.** Support the development of educational programs to increase the labor force in the healthcare and life sciences industry.

# 2. Innovation and Economic Development

**REGIONAL GOAL 2.3.** Grow, sustain and integrate efforts related to research and development, technology commercialization, and seed capital, to create, nurture and expand regional innovation businesses.

**Regional Indicator**

In 2015, there were 12,056 jobs in the region in the Professional, Scientific, and Technical Enterprises industry.

**Policy 2.3.1.** Support development of the Innovation Square research and development park in Gainesville, the integration of the University of Florida's research enterprise and commercialization programs into the fabric of the Innovation Square project through the Florida Innovation Hub at the University of Florida and Progress Park in Alachua.

**Policy 2.3.2.** Support the development of existing and new business incubators and accelerators throughout the region such as the Gainesville Technology Entrepreneurship Center, the Santa Fe Center for Innovation and Economic Development in Gainesville and the Sid Martin Biotechnology Incubator in Alachua.

**Policy 2.3.3.** Support the development of existing and new industrial parks throughout the region such as Cornerstone in Gainesville..

**REGIONAL GOAL 2.4.** Increase the number of regional businesses engaged in selling goods and services internationally and the diversification of the markets they serve.

**Regional Indicator**

In 2015, the region experienced a net trade export deficit of goods and services of $294 million.

**Policy 2.4.1.** Provide educational opportunities to regional businesses interested in international trade on the advantages of exporting their goods and services.

**REGIONAL GOAL 2.5.** Brand and market the north central Florida region as the best location for business.

**Regional Indicator**

As of January 2016, the North Central Florida Regional Planning Council was a member of the North Florida Economic Development Partnership.

**Policy 2.5.1.** Support the North Florida Economic Development Partnership asset mapping and geographic information system projects in the region.

**Policy 2.5.5.** Support the development of the Enterprise Florida/Rural Economic Development Initiative Catalyst Sites located in Columbia County and Suwannee County by pursuing funding sources for the infrastructure necessary to develop the catalyst sites to shovel ready status.

**REGIONAL GOAL 2.6.** Promote the continued viability of military installations in close proximity to the region.

**Regional Indicator**

As of January 2016 the North Central Florida Regional Planning Council continues to review local government comprehensive plans, plan amendments, and other items for adverse impacts to military installations either within or in close proximity to the region.

**Policy 2.6.1.** Improve collaboration between local government and military leaders to utilize best management practices that ensure successful economic partnerships.

**Policy 2.6.2.** Support the development of the catalyst sites for the North Central Florida Rural Area of Opportunity.

**Policy 2.6.3.** Support the development and expansion of regional business incubators and research parks.

# 3. Infrastructure and Growth Leadership

**REGIONAL GOAL 2.7.** Modernize the transportation, telecommunications, energy, water and wastewater systems of the region to meet future demand and respond to changing business needs.

**Regional Indicator**

As of 2015, the nonresidential actual capital stock of the region was valued at $19.6 billion.

**Policy 2.7.1.** Support the development of diverse, reliable and cost effective energy sources and systems to meet the region's economic and environmental goals.

**Policy 2.7.2.** Ensure the future supply and quality of water to meet the region's economic and quality of life goals by encouraging the use of the groundwater resources of the region in a sustainable manner and by strengthening local control of area surface and groundwater systems and supplies.

**Policy 2.7.3.** Develop and maintain a cutting-edge telecommunications infrastructure by supporting initiatives to bring high-speed internet service to the rural areas of the region.

**Policy 2.7.4.** Develop and maintain multimodal, interconnected trade, logistics and transportation systems to enhance freight mobility in support of a prosperous, competitive economy.

**Policy 2.7.5.** Support the continued development of the Gainesville Regional Airport as part of the State's Strategic Intermodal System and promote the designation of the Lake City Municipal Airport as part of the State's Strategic Intermodal System.

**REGIONAL GOAL 2.8.** Improve coordination of economic development, land use, infrastructure, water, energy, natural resources, workforce and community development decision-making and investments at the regional level.

**Regional Indicator**

As of January 2016, the North Central Florida Regional Planning Council continues to review local government comprehensive plans, applications for federal funds and direct federal actions for adverse impacts to Natural Resources of Regional Significance, regional facilities, and affected local governments.

**Policy 2.8.1.** Improve collaboration and alignment between regional and local agencies and business leaders through a regional vision.

**Policy 2.8.2.** Support continuing improvements to multi-modal infrastructure, including highway interchanges along interstate corridors, railway corridors, airport facilities and broadband infrastructure.

**Policy 2.8.3.** Identify economic development projects that may qualify for federal and state funding opportunities and provide grant writing and administrative services where needed.

**Policy 2.8.4.** Provide technical assistance in the form of economic impacts analysis, research and best practices to local economic development organizations and government agencies.

**Policy 2.8.5.** Facilitate coordination between regional economic development strategies and the state five-year economic development plan.

# 4. Business Climate and Competitiveness

**REGIONAL GOAL 2.9.** Streamline permitting, development and other regulatory processes at the local level to meet changing business needs and provide a predictable legal and regulatory environment in the region.

**Regional Indicator**

As of January 2016, the North Central Florida Strategic Regional Policy Plan contains goals and policies encouraging the streamlining of permitting and regulatory processes.

**Policy 2.9.1.** Reduce barriers to small business and entrepreneurial growth.

**Policy 2.9.2.** Develop a government revenue structure that encourages business growth and development.

**Regional Goal 2.10.** Ensure local government agencies provide collaborative, seamless, consistent and timely customer service to regional businesses.

**Regional Indicator**

As of January 2016, the North Central Florida Strategic Regional Policy Plan contains goals and policies encouraging the streamlining of permitting and regulatory processes.

**Policy 2.10. 1.** Work with water management districts in the region to simplify permitting process for new and expanding businesses.

**REGIONAL GOAL 2.11.** Expand opportunities for access to capital for businesses throughout their life cycle.

**Regional Indicator**

As of January 2016, the Council reviews applications for federal grants and loans.

**Policy 2.11.1.** Create a database of capital sources available to regional businesses.

**REGIONAL GOAL 2.12.** To enhance the resilience of the north central Florida economy in the face of natural disasters and changes to the national and state economies through increased awareness and preparation by businesses for environmental risks.

**Regional Indicator**

As of January 2016, all north central Florida local governments are signatories to the Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery.

**Policy 2.12.1**. Educate government and businesses on continuity and recovery plans in the event of natural or man-made disasters to address workforce retention and ensure access to loan and other assistance programs.

# 5. Civic and Governance Systems

**REGIONAL GOAL 2.13.** Support and sustain regional partnerships to accomplish the region's economic and quality of life goals.

**Regional Indicators**

1. As of January 2016, the North Central Florida Regional Planning Council is a member of the North Florida Economic Development Partnership as well as the Florida Economic Council.

2. As of January 2016, the North Central Florida Regional Planning Council serves as staff to the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area, the North Central Florida Comprehensive Economic Development Strategy Committee and The Original Florida Tourism Task Force.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

**Policy 2.13.1.** Utilize the North Florida Economic Development Partnership's Economic Development Academy as a vehicle to provide a functional understanding of economic development concepts to local elected officials.

**Policy 2.13.2.** Work with the Florida Association of Counties and the Florida League of Cities to add economic development information to their curriculums for newly elected officials.

**Policy 2.13.3.** Invest in strategic regional economic development priorities.

**Policy 2.13.4.** Support programs to educate local government officials in the fundamentals of economic development

**Policy 2.13.5.** Conduct regular meetings of the Comprehensive Economic Development Strategy Committee to monitor the status of regional projects and Comprehensive Economic Development Strategy implementation. District staff will actively participate in economic development activities in the region and provide technical assistance when needed.

**Policy 2.13.6.** Support the North Florida Economic Development Partnership and the development of the North Central Florida Rural Area of Opportunity Catalyst Sites in Columbia and Suwannee Counties by serving on the Partnership's Board of Directors and providing technical assistance when necessary.

# 6. Quality of Life and Quality Places

**REGIONAL GOAL 2.14.** Ensure future growth and development decisions maintain a balance between sustaining the region's environment and enhancing the region's economy and quality of life.

**Regional Indicator**

As of January 2016, the North Central Florida Regional Planning Council continues to review local government comprehensive plans, applications for federal funds and direct federal actions for adverse impacts to Natural Resources of Regional Significance, regional facilities, and affected local governments.

**Policy 2.14.1.** Create and sustain vibrant, healthy communities that attract workers, businesses, residents and visitors to the region.

**Policy 2.14.2.** Promote and incentivize local government in the development of vibrant city centers.

**REGIONAL GOAL 2.15.** Promote, develop, and leverage the region's natural and cultural assets in a sustainable manner.

**Regional Indicator**

As of January 2016, the North Central Florida Regional Planning Council provides staff services to The Original Florida Tourism Task Force.

**Policy 2.15.1.** Support the efforts of the Original Florida Tourism Task Force and other regional tourism marketing organizations to develop sustainable tourism-based economic development programs and increase the entrepreneurial capacity of the hospitality industry.

**Policy 2.15.2.** Improve the branding and awareness of the region as a tourism destination by leveraging regional resources with VISIT FLORIDA, the State's official tourism marketing organization.

**Policy 2.15.3.** Promote and support the state parks within the region and improve branding and awareness of the parks as a tourist destination.

**Policy 2.15.4.** Promote sustainable economic development through regional tourism promotion, while encouraging the preservation of resources that bring visitors to the area. The North Central Florida Economic Development District will provide professional staffing services to the Original Florida Tourism Task Force to implement their regional marketing strategies.

# Chapter III
# Emergency Preparedness

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

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# Chapter III: Emergency Preparedness

## A. Conditions and Trends

### 1. Introduction

It was a cool, windy Friday, typical of the month of March in north central Florida. The National Weather Service was predicting the possibility of severe storms, particularly in Dixie and Taylor counties. Still, the weather forecast was nothing out of the ordinary and life went on as usual in the coastal fishing communities dotting Dixie and Taylor counties. Residents went to bed early, as they usually do in anticipation of an early morning fishing excursion. The rain came down hard with plenty of wind. It was so windy that electricity and telephone service was knocked out. Yes, it was a big storm, but how bad could it be? After all, it wasn't hurricane season and no evacuation order had been issued.

Hud Lillion and Laurie O'Quinn from the unincorporated Taylor County coastal community of Dekle Beach remember the night well. "After watching the water for a while I went to bed," said Hud. "I woke up about 2:00 a.m. and looked out and saw water up on the tires of my truck but it didn't particularly alarm me, so I went back to bed. Laurie woke up about 2:30 a.m. and told me Louis Lanier's house was gone and so was my truck. I knew then that this was more than just a storm, so we moved to the back of the house. Every wave that came in was knocking the boards up in the floor. I told Laurie we had to get out. I made my way to the back door. I fell through the floor two or three times. I couldn't hardly get the door open because of the wind and the door started smashing Laurie's hand."

"We finally got out on the deck, then everything started collapsing so we jumped. We swam across the road to a home that was still standing and managed to get up on the deck. We managed to get inside and tried to find some life jackets, then that house started crumbling but we managed to get on the roof. A wave came and knocked off the roof. We grabbed hold of a board and floated up to Carlton Hamilton's home. It was still dark then, about 5:30 a.m. We stayed there for some minutes. Mrs. Sapp was there holding a baby.[1] We all huddled together to try and stay warm but we were freezing. Fred Morgan and Tom Geohagen came wading in waist deep water. The wind was still blowing about 65 mph. They took us to Craig and Ruth Harvey's house where some other people had gathered and there was a fire in the fireplace. We were just glad to be alive."[14] At 5:42 a.m. a weather forecaster in Tampa went on a statewide emergency radio network to issue a flood warning.[15]

[1]"O'Quinn floated until she was able to grab another house, and that's when the woman swam by with a baby in her arms. 'She said, 'help me, my baby is dead,' and we just stood there and hugged each other until Fred and Tom came and got us out." "Counting People Instead of Bodies," Gainesville Sun, March 15, 1993.

[14]TaCo Times, Perry, Florida, March 17, 1993

[15]"Why the Delay in Storm-Surge Warning?" Gainesville Sun, March 19, 1993.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

John Robertson was huddled in his travel trailer, listening to the rain and reading a mystery novel, when the owners of the nearby Keaton Beach Marina knocked on his door and told him he should join them in the marina's second-floor living quarters. "I'm 6-foot-4 and by the time I got to the marina I was swimming," Robertson said. "There is total destruction here. Just about everything is lost." Marina co-owner Brad Beach said a tidal surge caused the water to rise about 6 feet in 20 minutes before dawn Saturday, and it ebbed just as quickly. During its short stay, the surge crumbled concrete foundations, flooded buildings, immersed vehicles and took homes, docks, and other structures with it as it retreated. "I never saw anything like it in my life," Beach said, "It took just 20 (minutes) to get 6 feet, and then there were 4- to 5-foot waves on top of it. Houses finally floated away."[16]

In just 20 minutes Saturday morning, March 13, 1993, north central Florida coastal residents went from just another spring storm to the Storm of the Century. The storm devastated the region's entire coastline. Fully 25 percent of the region's coastal homes were destroyed and another 25 percent were damaged. Dixie County was lucky. No one died. Taylor County was not. Ten people drowned. On March 13th, President Clinton declared Florida a disaster area.

Predicting the severity of the storm and the height of the tide surge was difficult for the National Weather Service. The storm could not have occurred except for a unique set of circumstances. The storm developed suddenly late Friday as incoming Arctic air collided with a warm air stationary front over the Gulf of Mexico. The difference in temperature between the two air masses was estimated at 50 degrees. The dramatic contrast in air temperatures allowed the storm to develop very rapidly. A dramatic drop in barometric pressure followed. The storm produced the lowest barometric pressure ever recorded in the City of Tallahassee. Drops in barometric pressure are normally associated with tropical storms, which this was not. The drop in barometric pressure led to high winds. The region experienced a high tide when the storm hit land. These factors combined to produce a storm surge that surpassed forecasters predictions.[17]

Dixie and Taylor County coastal residents were unlikely to hear an evacuation warning had the weather service issued one. Neither Dixie nor Taylor County officials had access to the National Warning System radio network. Both counties were outside the range of the National Oceanic and Atmospheric Administration weather radio station network and neither county had emergency sirens.

# 2. Planning for Coastal Storms

As a result of the Presidential disaster declaration for the Storm of the Century, the President activated an Interagency Hazard Mitigation Team to identify areas of significant hazards, visit sites, and evaluate the impact of the disaster. The team was comprised of representatives of federal, state, regional, and local agencies who possess the varied backgrounds and expertise necessary to promote a comprehensive approach to hazard mitigation. The team issued a report containing 25 recommendations which describe the actions, time-lines, and potential funding sources necessary to reduce future losses from similar events. Among the team's findings were recommendations for the installation of additional weather monitoring equipment in coastal areas to help weather forecasters better predict storm events as well as a better warning system for coastal residents.

[16] "Taylor County Beach Residents Return to Ruins," Gainesville Sun, March 16, 1993.

[17] "Weather Still Hard to Predict," Gainesville Sun, March 17, 1993.

North central Florida National Oceanic and Atmospheric Administration weather radio signals coverage has been significantly expanded since the Storm of the Century. Computer-generated National Oceanic and Atmospheric Administration weather radio coverage maps developed by the National Oceanic and Atmospheric Administration suggest that, with the exception of a small area parallel to Interstate 10 in Madison County, all of north central Florida is covered by at least one of the weather radio stations identified in Table 3.1, below.

**TABLE 3.1**

**NORTH CENTRAL FLORIDA**
**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**
**WEATHER RADIO COVERAGE**

| Location | Station | Broadcast Frequency | Counties Covered or Partially Covered |
|---|---|---|---|
| **Lake City** | KEB-97 | 162.400mHz | Alachua, Bradford, Columbia, Gilchrist, Hamilton, Lafayette, Suwannee, Union |
| **Tallahassee** | KIH-24 | 162.400mHz | Madison, Taylor |
| **Palatka** | WNG-522 | 162.425mHz | Alachua, Bradford |
| **Salem (Taylor County)** | WWF-88 | 162.425mHz | Dixie, Lafayette, Madison, Suwannee, Levy, Taylor |
| **Morriston (Citrus County)** | KWN38 | 162.55mHz | Alachua, Bradford, Columbia Dixie, Gilchrist, Hamilton, Lafayette, Levy, Taylor, Union |
| **Gainesville** | WXJ-60 | 162.475mHz | Alachua, Bradford, Columbia, Dixie, Gilchrist, Lafayette, Suwannee, Union |
| **Valdosta, GA** | WWH-31 | 162.500mHz | Hamilton, Madison, Suwannee |
| **Ocala** | WWF-85 | 162.525mHz | Alachua, Levy |

Source: www.nws.noaa.gov/nwr/usframes.html, November 2010.

The National Oceanic and Atmospheric Administration weather radio website notes that the coverage maps were calculated using a computer model and station data using ideal weather conditions. The National Oceanic and Atmospheric Administration notes that coverage may be 5 to 10 percent less than indicated by the maps. Suwannee County Emergency Management personnel have noted that, since the Live Oak National Oceanic and Atmospheric Administration weather radio station was moved to Lake City in 2004, Suwannee County does not receive reliable coverage west of U.S. Highway 129, at least during periods of inclement weather. Upgrading the existing 300-watt National Oceanic and Atmospheric Administration

weather radio station in Lake City to a 1,000-watt station may provide the necessary coverage for the remaining unserved areas of Suwannee County.

During the Storm of the Century, the statewide emergency warning system consisted of a dedicated telephone system linking federal and state weather forecasters with local governments. The system allows for two-way conversation similar to a telephone system party-line. Few local governments in north central Florida were connected to this system due to its high installation and maintenance costs. A sophisticated satellite-based communications system has replaced it, linking emergency management agencies throughout the state to provide voice, high-speed data, facsimile, and video communications capabilities. It is more reliable than the National Warning System since it is not dependent upon telephone lines and will perform under any weather conditions. The system has been installed in every county, solving a missing link in north central Florida emergency management capabilities.

At the time of the storm, no weather buoys or other government-owned weather monitoring instruments were located in the Gulf of Mexico off the Big Bend coastline. Weather buoys provide valuable information regarding temperature, wind speed, wind direction, and barometric pressure. Meteorologists can run computer models that predict storm surge height based upon these factors.

Storm surge increases in height as it nears land. As of 2015, one Coastal-Marine Automated Network coastal weather station is located in Keaton Beach, three weather buoys are located between 51 and 100 miles of Steinhatchee, two weather buoys are located between 101 and 150 miles of Steinhatchee, and four weather buoys are located in the Gulf of Mexico between 151 to 175 miles of Steinhatchee. However, no weather buoys are located in the Gulf of Mexico between 10 and 50 miles of Steinhatchee.

Dixie Levy and Taylor counties have six small coastal communities: the unincorporated coastal communities of Jena-Steinhatchee, Dekle Beach-Keaton Beach, Suwannee, and the incorporated municipalities of Cedar Key, Horseshoe Beach and Yankeetown. Warning sirens can be useful means of notifying community residents of storm warnings and evacuation orders when other forms of communication fail. During the Storm of the Century, none of these communities had warning sirens. As of 2015, six north central Florida coastal communities (Cedar Key, Horseshoe Beach, Dekle Beach, Keaton Beach, Steinhatchee, and Yankeetown) had emergency warning sirens. The unincorporated communities of Suwannee and Jena do not have sirens, However, Dixie County has installed a “Reverse 911” notification system which is capable of notifying Dixie County coastal residents who have telephone service of approaching coastal storms.

As was evident in the Storm of the Century, the greatest danger to coastal areas is the storm surge, a 20- to 100-mile wide wall of water generated by high winds, hurricane forward velocity, and sharp changes in barometric pressure present in coastal storms. Storm surges cause nine out of ten hurricane fatalities. Dixie, Levy and Taylor counties are among the most susceptible counties in the state and, perhaps, the nation, to inundation from storm surge. This is due to the geomorphology and the bathymetry of the Gulf of Mexico. Dixie, Levy and Taylor counties are located near the Florida panhandle where the coast curves west, creating a corner which can trap sea water. Along a straight coastline, the surge can dissipate more easily by flowing parallel to the coastline. However, in Dixie ,Levy and Taylor counties, the seawater is trapped in Apalachee Bay where it piles up rather than flows out. The bathymetry, or sea bottom topography, of the gulf of Mexico is much shallower than most other U.S. coastal basins. A shallow basin can increase surge height by as much as 80 percent.[18]

[18]North Central Florida Regional Planning Council, 1990 North Central Florida Regional Hurricane Inland Shelter Study Technical Report Update, Gainesville, Fl., 1990, pg. 10.

The potential loss of life and property damage due to hurricanes in Dixie, Levy and Taylor Counties is minimized due to their small populations and large coastal land holdings in public ownership. The 2008 Dixie County estimated population was 15,965, the 2008 Levy County estimated population was 40,817 while 2008 Taylor County estimated population was 23,199. Population density is low in these counties. The 2008 Dixie County population density was 23 persons per square mile, ranked at 62 among Florida's 67 counties. The Levy County population density was 36 persons per square mile, ranked 55th. Taylor County had an estimated 2008 population density of 22 persons per square mile, ranked at 64th among Florida's counties.[19] Additionally, approximately two-thirds of the Dixie, Levy and Taylor counties coastline is in public ownership.

## a. Clearance Times and Shelter Capacities

In 2015, the North Central Florida Regional Planning Council updated portions of the Statewide Regional Evacuation Study for the region. The evacuation study reports average clearance times by "Level." A "level" is comparable to the Category 1-5 Saffir-Simpson Hurricane classification system, with Level A comparable to a Category 1 hurricane and a Level E hurricane comparable to a Category 5 hurricane.

The evacuation study also identified clearance times to three separate destinations: Clearance Time to Shelter; In-County Clearance Time, and Out of County Clearance Time. Clearance Time to Shelter refers to the time necessary to safely evacuate vulnerable residents and visitors to a "point of safety" within the county based on a specific hazard, behavioral assumptions and evacuation scenario. Calculated from the point in time when the evacuation order is given to the point in time when the last vehicle reaches a point of safety within the county. In-County Clearance Time refers to the time required from the point an evacuation order is given until the last evacuee can either leave the evacuation zone or arrive at safe shelter within the county (excludes evacuees leaving the county, on their own). Out of County Clearance Time refers to the time necessary to safely evacuate vulnerable residents and visitors to a "point of safety" outside the county. It is calculated from the time an evacuation order is given to the time when the last vehicle assigned an external destination exits the county.

The general response model, post-hurricane behavioral surveys of residents of the north central Florida region and past experience were used to determine public shelter demand. The number of evacuees who choose public shelter as their evacuation destination was based on demographic characteristics of the population including income and age, risk area and housing (mobile home vs. site built homes). The planning assumptions regarding anticipated shelter use were based upon the behavioral surveys and past experiences and were applied to the projected hurricane evacuation population estimates.

Several different assumptions were used regarding the evacuation population. The base scenarios used for planning and growth management purposes assume that 100 percent of the population-at-risk evacuates plus a smaller percentage of non-vulnerable population referred to as shadow evacuation.

[19]Bureau of Economic and Business Research, 2009 Florida Statistical Handbook, University Press of Florida, Gainesville, FL., 20010, Table 1.14.

**TABLE 3.2**

**2015 CLEARANCE TIMES FOR BASE SCENARIO**

| County | Clearance Times by Level (in Hours) | | | | |
|---|---|---|---|---|---|
| | Level A | Level B | Level C | Level D | Level E |
| **Clearance Time to Shelter** | | | | | |
| **Dixie** | 13.0 | 13.0 | 13.0 | 13.5 | 13.0 |
| **Levy** | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| **Taylor** | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| **In-County Clearance Time** | | | | | |
| **Dixie** | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| **Levy** | 14.0 | 17.0 | 23.5 | 24.5 | 27.0 |
| **Taylor** | 13.0 | 13.0 | 13.0 | 13.0 | 14.5 |
| **Out of County Clearance Time** | | | | | |
| **Dixie** | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| **Levy** | 22.0 | 26.0 | 32.5 | 34.5 | 36.0 |
| **Taylor** | 14.0 | 14.0 | 14.0 | 14.0 | 14.5 |

Source: 2015 Statewide Regional Evacuation Study for the North Central Florida Region, Volume 1: Technical Data Report, North Central Florida Regional Planning Council, September 2015

Table 3.3 below identifies risk shelter capacities for north central Florida counties.

**TABLE 3.3**

**NORTH CENTRAL FLORIDA PUBLIC SHELTER CAPACITY**
**USING AMERICAN RED CROSS PUBLIC SHELTER GUIDELINES**

| County | Shelter Capacity | Category A Surplus or (Deficit) | Category B Surplus or (Deficit) | Category C Surplus or (Deficit) | Category D Surplus or (Deficit) | Category E Surplus or (Deficit) |
|---|---|---|---|---|---|---|
| **Alachua** | 5,687 | 1,045 | (486) | (3,546) | (5,078) | (6,608) |
| **Bradford** | 1,695 | 668 | 583 | 498 | 326 | 241 |
| **Columbia** | 4,362 | 135 | (39) | (387) | (561) | (737) |
| **Dixie** | 826 | (626) | (643) | (730) | (1,002) | (1,148) |
| **Gilchrist** | 3,129 | 2,084 | 2,043 | 2,006 | 1,967 | 1,930 |
| **Hamilton** | 1,696 | 758 | 714 | 669 | 627 | 582 |
| **Lafayette** | 647 | 166 | 166 | 131 | 61 | 25 |
| **Levy** | 4,328 | 1,096 | 1,050 | 863 | 563 | 125 |
| **Madison** | 4,236 | 3,157 | 3,096 | 3,035 | 2,972 | 2,910 |
| **Suwannee** | 3,534 | 171 | 45 | (7) | (212) | (338) |
| **Taylor** | 3,626 | 2,372 | 2,368 | 2,211 | 2,015 | 1,850 |
| **Union** | 1,284 | 805 | 751 | 698 | 588 | 533 |
| **Region** | 35,050 | 11,831 | 9,648 | 5,441 | 2,266 | (635) |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

Source: 2015 Update of North Central Florida Statewide Regional Evacuation Study, September 2015.

# 3. Riverine and Freshwater Flooding

The Suwannee River System has a broad, expansive floodplain which is regularly inundated in response to spring rains.[20] The Suwannee River Water Management District, in conjunction with the Federal Emergency Management Agency, has mapped the 100-year floodplain of the Suwannee River System in order to assist local governments with management of the floodplain. Many local governments within the region have adopted floodplain ordinances for the Suwannee River System to regulate the construction and location of structures within the 100-year floodplain.

Every north central Florida county adjacent to the Suwannee River System has, and requires through their comprehensive plans, low dwelling unit densities within the floodplain. The comprehensive plans of north central Florida local governments limit rural floodplain dwelling unit densities to one unit per five acres and one unit per ten acres. Six small urban areas (Branford, Dowling Park, Fanning Springs, Old Town, Suwannee, and White Springs) are located within the Suwannee River 100-year floodplain. Within these urban areas, the maximum allowable residential density within the floodplain is four units per acre.

Along the major tributaries of the Suwannee (Alapaha, Santa Fe, and Withlacoochee Rivers), dwelling unit densities within the 100-year floodplain are also limited to one unit per five acres and one unit per ten acres. No north central Florida municipalities or urban areas are located within the 100-year floodplains of these rivers. The 100-year floodplains of the region's regionally significant coastal rivers (Aucilla, Econfina, and Steinhatchee) are similarly protected with maximum allowable dwelling unit densities ranging from one unit per five acres to one unit per ten acres. Only one urban area, the unincorporated town of Steinhatchee, is within the 100-year floodplain of a coastal river (the Steinhatchee River).

In addition to the Suwannee River System, the Federal Emergency Management Agency has prepared maps which identify flood hazard areas for all unincorporated areas of the region as well the region's incorporated municipalities. As of November 2010, 39 of the region's 41 local governments with mapped flood hazard areas within their jurisdiction participated in the National Flood Insurance Program. Participation in the program makes federal flood insurance, the only flood insurance in the nation, available for properties located within the 100-year floodplain. All north central Florida local governments with floodable areas within their jurisdiction, regardless of whether they participate in the National Flood Insurance Program, have comprehensive plans which identify floodable areas and contain policies which address flood management.

In 2014, the City of Live Oak was impacted by freshwater flooding that was reported to be the worst since Hurricane Dora in 1964.

[20]The Suwannee River System consists of the Suwannee River and its major tributaries the Alapaha, Santa Fe, and the Withlacoochee rivers.

# 4. Tornadoes

Between 1950 and 2014, 218 tornadoes have touched down in north central Florida resulting in 11 fatalities and 155 injuries.[21] Tornadoes occur most frequently in the region during the months of May through August, with June as the peak month. However, tornadoes can occur year-round. Currently, there is no accurate way to predict where or when a tornado will "touch down." Due to their violent nature and the increasing number of mobile homes locating in the region, the probability of property damage and deaths due to tornadoes is increasing.

While mobile homes are of special concern, all north central Florida buildings are vulnerable to tornado damage. Few conventionally-built homes in the region have basements or underground tornado shelters due to a high water table which makes their construction impractical. None of the region's local governments require construction of tornado shelters or safe rooms for large shopping malls, schools, hospitals, or mobile home parks. The construction of safe rooms may be financially infeasible given the level of risk.

Improvements have been made to the region's tornado warning system. The National Weather Service installed Doppler weather radar at its Jacksonville and Tallahassee weather stations in 1995 as part of a nationwide modernization program. These locations provide Doppler weather radar information for all eleven north central Florida counties. Doppler radar is a significant improvement over the older weather radar system. Under the old system, meteorologists had to identify tornadoes based on certain visual patterns displayed on the radar screen. Doppler radar detects wind directions and wind velocities at a high degree of resolution within a storm. In addition to displaying radar data on a screen, Doppler radar data is fed to a computer which helps meteorologists understand the storm's dynamics. Meteorologists at the Jacksonville weather station believe Doppler radar allows the National Weather Service to issue tornado warnings ten to 15 minutes earlier than they could using the prior system. Accuracy is also increased. In June, 1995's, Hurricane Allison, the Jacksonville weather station identified 16 of the 17 tornadoes which occurred within their area of jurisdiction. According to Al Sandrick, a meteorologist stationed at the Jacksonville National Weather Service station, "We would never have imagined achieving that type of accuracy with the old radar system."

[21]Tornado History Project, March 16, 2016, http://www.tornadohistoryproject.com.

# 5. Regionally Significant Emergency Preparedness Facilities

The facilities listed in Table 3.4 are recognized as regionally significant facilities.[22]

**TABLE 3.4**

**REGIONALLY SIGNIFICANT EMERGENCY PREPAREDNESS FACILITIES**

| |
|---|
| Alachua County Emergency Operations Center |
| Dixie County Emergency Operations Center |
| Taylor County Emergency Operations Center |
| Levy County emergency Operations Center |
| Public Emergency Shelters |
| NOAA Radio Stations |
| Weather Buoys and Similar Off-shore Weather Monitoring Equipment |
| Doppler Weather Radar Installations Covering the Region |
| Warning Sirens in Coastal Communities |
| Gainesville Fire Rescue Hazardous Materials Emergency Response Team |

Source: North Central Florida Regional Planning Council, 2010.

# 6. Hazardous Materials Releases

Under contract with the Florida Division of Emergency Management, the North Central Florida Regional Planning Council serves as staff to the North Central Florida Local Emergency Planning Committee. The North Central Florida Local Emergency Planning Committee was established in 1988 in response to the federal Emergency Planning and Community Right-to-Know Act which requires the preparation of local emergency response plans for hazardous materials releases which, for the State of Florida, have been developed utilizing the ten regional planning council districts.[23] The North Central Florida Local Emergency Planning Committee is composed of representatives of 18 different occupational categories. Membership is also distributed geographically to assure that each of the region's eleven counties has at least one resident serving as a member. Committee members are appointed by the State Emergency Response Committee.

[22]Hurricane evacuation routes recognized as regionally significant transportation facilities are listed in Table 5.8. North central Florida regionally significant facilities and resources, as defined in Rule 27E.005, Florida Administrative Code, consist of Regionally Significant Emergency Preparedness Facilities identified in Table 3.4, Natural Resources of Regional Significance identified in Table 4.1, Regionally Significant Transportation Facilities identified in Table 5.8, and Regionally Significant Facilities and Resources, identified in Section VI.

[23]Although referred to as a local plan, it is, in fact, a regional plan which addresses all eleven north central Florida counties.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

The local emergency response plan for north central Florida was adopted by the Committee on June 9, 1989, is updated annually. The North Central Florida Local Emergency Planning Committee emergency response plan identifies locations of possible hazardous materials releases based upon known locations of hazardous materials. The plan also delineates vulnerable zones.[24]

In addition to the emergency response plan, the North Central Florida Local Emergency Planning Committee is also involved in establishing training programs, conducting emergency response exercises, providing public information campaigns, and other activities aimed at minimizing risks from hazardous materials releases.

Given the rural nature of north central Florida and the large populations located south of the region, it is likely that the biggest hazardous materials emergencies involving unknown chemicals could result from releases from trucks and trains passing through the region. In 2003, the Local Emergency Planning Committee conducted a hazardous materials commodity flow study. The study was used to identify the most common chemicals transported through the region. The information helps guide the selection of hazardous materials training classes as well as planning efforts by the Local Emergency Planning Committee. The commodity flow study looked at transportation on Interstate Highways 10 and 75, as well as U.S. Highways 19 and 301. The most common hazardous materials identified in the study included flammable liquids, toxic and corrosive noncombustible substances, water-miscible, flammable liquids and other toxic or corrosive substances.

When a hazardous materials release occurs, a local fire department or other local government personnel arrive at the scene and determine if local resources can deal with the release. If the incident requires greater than local resources, the local government contacts one of the region's regional response teams.

No regional hazardous materials response team is located within a 60 minute response time of Perry or Greenville. North Central Florida Regional Hazardous Materials Response Team members are located in the City of Alachua, Lake City, Gainesville, Starke and Fanning Springs, and Dixie County. Response times to all eleven counties by at least one of the regional hazardous materials response teams is 60 to 90 minutes. The District 2 Regional Domestic Security Task Force has hazmat response capabilities located in Tallahassee that also provide coverage to Madison and Perry. However, the response times to Perry, Cross City, and Greenville are still in excess of 60 minutes.

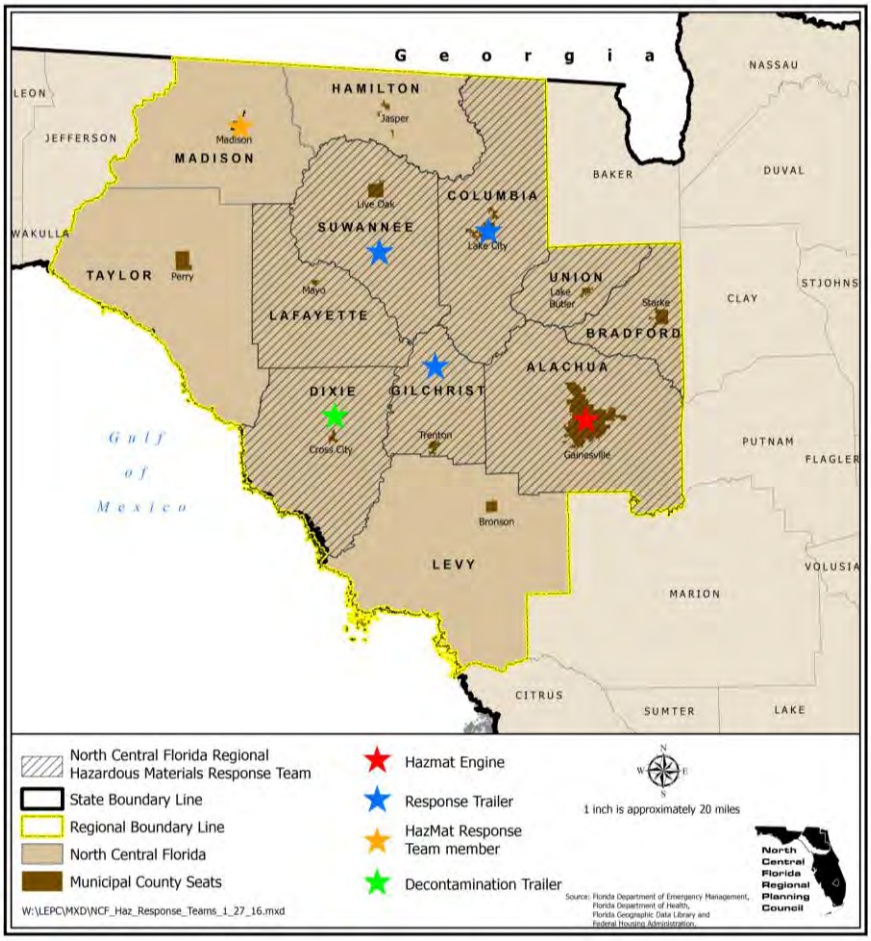
There are areas of north central Florida where the closest hazardous materials response team is in either Valdosta, Georgia or Dothan, Alabama. The Local Emergency Planning Committee has been working to establish a tri-state hazardous materials mutual aid agreement. As of 2015, an agreement has not been adopted by all of the parties. Nevertheless, cross-state hazardous materials response is occurring in the absence of an agreement.

The North Central Florida Regional Hazardous Materials Response Team has expanded the areas which can receive a more timely response. Illustration 3.1 shows the locations of Team members.

[24]Vulnerable zones are areas where the estimated chemical concentration from an accidental release is at a level where people's health could be adversely impacted during a worst-case release.

**Illustration 3.1**

**North Central Florida Regional Hazardous Materials Response Team**
**Locations of Members**




# 7. State Emergency Management Efforts

In the aftermath of 1992's Hurricane Andrew, the state revitalized its efforts in emergency preparedness planning, especially for hurricanes. After Andrew, the Governor's Disaster Planning and Response Review Committee was established to identify problems with statewide disaster preparedness and recommend improvements. In a report commonly known as the Lewis Report after Committee Chairman Philip D. Lewis, the Committee made 99 recommendations as to how the state could improve its ability to handle emergencies.[25] The Committee identified five key recommendations: improve communications at and

[25]Governor's Disaster Planning and Response Review Committee, Draft Final Report, Executive Office of the Governor, Tallahassee, Fl, December 2, 1992.

among all levels of government; strengthen plans for evacuation, shelter, and post-disaster response and recovery; enhance intergovernmental coordination; improve training; and provide sufficient funding for the development of emergency management plans and activities.

The major recommendations of the Lewis report were incorporated into amendments to the State Emergency Management Act (Chapter 252, Florida Statutes). Formerly, the act required the preparation of three, and sometimes four, county emergency management plans: a Peacetime Emergency Plan, a Nuclear Civil Protection Plan, a Hazardous Materials Emergency Plan, and a Radiological Emergency Plan for counties located within 50 miles of a nuclear power plant. These plans are now consolidated into a single Comprehensive Emergency Management Plan. Nuclear civil protection planning was de-emphasized due to the greater likelihood of emergencies resulting from other events. Another major change to the legislation was the creation of the Emergency Management Preparedness and Assistance Trust Fund from surcharges on residential and commercial property insurance policies. Funds from the trust are used to support the Florida Division of Emergency Management, as well as local government emergency preparedness agencies. The trust fund allowed, by 1994, every north central Florida county to hire a full-time emergency management director.[26]

# 8. Local Government Comprehensive Emergency Management Plans

Rule 9G-6, Florida Administrative Code, requires local governments to prepare revised Comprehensive Emergency Management Plans which meet the requirements of rule 9G-7, Florida Administrative Code. The county Comprehensive Emergency Management Plan is to provide a detailed description of the process to be followed at the local level whenever an emergency or disaster occurs as a result of natural or manmade causes. Such emergencies include, but are not limited to: tornadoes, hurricanes, wind storms, floods, freezes, electrical generating capacity shortages, drought, hazardous materials releases, and civil disturbances. Each county Comprehensive Emergency Management Plan is required to address the following 17 emergency support functions: animal services, communications, energy, fire fighting, food and water, hazardous materials, health and medical services, information and planning, law enforcement and security, mass care, military support, public works and engineering, public information, resource support, transportation, search and rescue, and volunteers and donations. County Comprehensive Emergency Management Plans are submitted to the Florida Division of Emergency Management for compliance review.

# 9. Mutual Aid Agreements

Most north central Florida local governments have not entered into formal mutual aid agreements with their neighbors. If a north central Florida local government requires assistance, it merely calls and their neighboring local government responds. Few such requests have been made, and where they occurred, in the spirit of cooperation, local governments did not charge the requesting local government to cover the costs of the request. However, in an age of increasingly tight local government budgets, the need for more specialized regional response teams, and concerns regarding liability issues, formal mutual aid agreements are becoming increasingly important to assure assistance is available.

[26]With the exception of Madison County, every north central Florida county has a full-time emergency management director.

Mutual aid agreements provide greater assurances that assistance will be provided, when available, by other local governments. An agreement can decrease the time required by local governments to exchange resources during an emergency without the delay of declaring a formal "state of emergency." This is especially important due to the short timeframes associated with hazardous materials releases.

The State Emergency Management Act authorizes the Division of Emergency Management to develop and enter into mutual aid agreements. The Division has prepared a statewide mutual aid agreement and is requesting all local governments to adopt the agreement.

The statewide agreement allows for reimbursement to assisting local governments for most incurred costs from the Emergency Management Preparedness and Assistance Trust Fund as well as from the requesting local government. The agreement also establishes a supervision and control structure for assisting local government personnel and resources at the scene of the emergency, formalizes procedures for making emergency assistance requests, and resolves other mutual aid issues. As of January-2016, all of the region's local governments had adopted the agreement.

# B. Problems, Needs and Opportunities

The Council identifies the following emergency preparedness problems, needs, and opportunities:

1. A need exists for an additional National Oceanic and Atmospheric Administration weather station radio to better serve Suwannee County.

2. A need exists for additional weather monitoring buoys or other meteorological instruments in the Gulf of Mexico between 10 and 50 miles of Steinhatchee.

3. A need exists for the installation of emergency warning sirens in north central Florida coastal communities.

4. An opportunity exists to make flood hazard insurance available within all north central Florida local government jurisdictions.

5. A need exists to reduce the response times of regional hazardous material response teams to hazardous materials emergencies to 60 minutes in Perry and Greenville.

6. Both a need and an opportunity exist for all north central Florida local governments to receive assistance from other local governments during emergencies by becoming signatories to the Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

# C. Regional Goals and Policies

**REGIONAL GOAL 3.1.** Improve emergency preparedness for coastal storms in the region.

**Regional Indicators**

1. As of 2015, one Coastal-Marine Automated Network coastal weather station is located in Keaton Beach, no weather buoys are located in the Gulf of Mexico between 10 and 50 miles of Steinhatchee, three weather buoys are located between 51 and 100 miles of Steinhatchee, two weather buoys are located between 101 and 150 miles of Steinhatchee, and four weather buoys are located in the Gulf of Mexico between 151 to 175 miles of Steinhatchee.

2. As of 2015, National Oceanic and Atmospheric Administration weather radio transmissions covered approximately 97 percent of the region.

3. As of 2015, eight National Oceanic and Atmospheric Administration weather radio stations serve north central Florida.

4 As of 2015, three north central Florida coastal communities (Dekle Beach, Keaton Beach and Steinhatchee) had emergency warning sirens.

5. As of 2015, Dixie County had a Level E In-county clearance time of 13.0 hours.

6. As of 2015, Taylor County had a Level E In-county clearance time of 14.5 hours.

7. As of 2015 Levy County had a Level E In-county clearance time of 13.0 hours.

8. As of 2015, the American Red Cross 4496-Compliant Risk Public Shelter Capacity for the region was 44,958.

**Policy 3.1.1.** Install weather monitoring buoys or other meteorological instruments at 100, 50, and 10 mile locations in the Gulf of Mexico spaced approximately 50 miles apart along the west Florida coastline from Pinellas to Franklin counties.

**Policy 3.1.2.** Establish National Oceanic and Atmospheric Administration weather radio station radio coverage for all of north central Florida.

**Policy 3.1.3.** Establish emergency warning sirens for north central Florida coastal communities.

**Policy 3.1.4.** Maintain up-to-date hurricane evacuation and inland hurricane shelter plans for north central Florida.

**Policy 3.1.5.** With the exception of enhancements necessary for the health, safety, and welfare of its residents, avoid the expenditure of state funds that subsidize development in Coastal High Hazard Areas.

**Policy 3.1.6.** Complete public shelter surveys to determine their compliance status with American Red Cross Publication 4496 guidelines in order to determine the public shelter Risk Capacity for the region.

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**Policy 3.1.7.** Determine the public shelter Risk Capacity net surplus/deficit for all north central Florida counties.

**Policy 3.1.8.** Encourage local governments to include in their comprehensive plans to require an analysis of public shelter capacity and evacuation times of new development locating within the Coastal High Hazard Area and within coastal storm evacuation areas to ensure that such development is adequately notified of an approaching storm, evacuated in a timely fashion and does not adversely impact public shelter capacity.

**REGIONAL GOAL 3.2.** Participation by all north central Florida local governments in the National Flood Insurance Program.

**Regional Indicators**

1. As of 2015, 56 of the 58 local governments in the region with mapped flood hazard areas within their jurisdictions participated in the National Flood Insurance Program.

2. As of 2015, National Flood Insurance Rate Maps are available for all north central Florida local governments.

3. As of 2015, two north central Florida local governments do not contain mapped flood hazard areas within their jurisdictions.

**Policy 3.2.1.** Maintain local government eligibility for the Federal Emergency Management Agency Flood Insurance program.

**Policy 3.2.2.** Assist non-participating north central Florida local governments whose jurisdictions contain floodable area to become eligible and apply for the National Flood Insurance Program.

**Policy 3.2.3.** Request the Federal Emergency Management Agency to prepare National Flood Insurance Rate Maps for north central Florida municipalities for which such maps have not been prepared.

**REGIONAL GOAL 3.3.** Reduce response times of regional hazardous materials response teams to 60 minutes for hazardous materials emergencies in Perry and Greenville.

**Regional Indicators**

1. As of 2015, a hazardous materials commodity flow study was completed to determine the types and amounts of hazardous materials moving via highways in the region.

2. As of 2015, North Central Florida Regional Hazardous Materials Response Team had four active hazardous materials response units located in the Cities of Cross City, Gainesville, Lake City~~,~~ and Live Oak.

**Policy 3.3.1.** Establish a regional hazardous materials response team in or near the City of Perry.

**Policy 3.3.2.** Provide state funding for regional hazardous materials emergency response teams.

**Policy 3.3.3.** Promote coordination among Valdosta, Georgia, Dothan, Alabama, Tallahassee, Florida and north central Florida local governments to provide hazardous materials emergency response services with response times of 60 minutes or less to Madison County.

**REGIONAL GOAL 3.4.** Improve the ability of emergency response teams to respond to hazardous materials emergences.

**Regional Indicators**

1. As of 2015, two hazardous materials commodity flow studies were completed to determine the types and amounts of hazardous materials moving via highways in the region.

2. As of 2015, no commodity flow studies have been undertaken to determine the types and amounts of hazardous materials moving via railroads in the region.

**Policy 3.4.1.** Conduct a commodity flow study to determine the types and amounts of hazardous materials moving via railroads located in the region.

**Policy 3.4.2.** Continue to provide technical assistance to local governments in the preparation of their hazardous materials response plans.

**Policy 3.4.3.** Continue to serve as staff to the North Central Florida Local Emergency Planning Committee.

**Policy 3.4.4.** Provide local emergency dispatch operators with a summary of hazards analysis information so as to inform responders as to what types of hazardous materials at the scene of the emergency.

**Policy 3.4.5.** Provide training to local emergency personnel for dealing with hazardous materials emergencies.

**Policy 3.4.6.** Keep the general public informed of potential hazardous materials dangers facing their communities by promoting annual hazardous materials spill prevention week programs.

**REGIONAL GOAL 3.5.** All north central Florida local governments are signatories to the Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery.

**Regional Indicator**

As of January 2015, 58 north central Florida local governments have adopted the Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery.

**Policy 3.5.1.** Actively promote north central Florida local governments to adopt the statewide mutual aid agreement for catastrophic disaster response and recovery.

# Chapter IV
# Natural Resources of Regional Significance

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

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# Chapter IV: Natural Resources of Regional Significance

# A. Conditions and Trends

## 1. Introduction

North central Florida is one of the largest planning districts in the state in terms of area yet one of the smallest in terms of population. As a result, the region has large expanses of undeveloped areas and unspoiled natural resources. The region consists of 8,055 square miles, all of which is classified by the Council as a Natural Resource of Regional Significance.[1]

Natural resources of regional significance are natural resources or systems of interrelated natural resources, which due to their function, size, rarity, or endangerment, provide benefits of regional significance to the natural or human environment.[2] They consist of both coastal and inland wetlands, rivers and their associated floodplains, large forested areas, lakes, springs, the Floridan Aquifer, and land areas with the potential to adversely affect the water quality of the aquifer (stream-to-sink watersheds and high recharge areas). High priority habitat of listed species is also recognized as a Natural Resource of Regional Significance.[3]

Regionally significant natural resources play important roles in the region's economy and quality of life. Drinking water for most residents is drawn from the Floridan Aquifer. The Suwannee-Santa Fe river system and fresh water wetlands serve a valuable role in regulating surface water runoff and flooding. The salt marsh provides a valuable breeding ground for many varieties of commercial seafood. Commercial forest lands play an important role in the regional economy, while public lands provide valuable resource-based recreation for north central Florida residents. Both private and public lands provide important habitats for the survival of native plant and animal species. Nearly all identified Natural Resources of Regional Significance play, or can play, an important role in the region's budding ecotourism industry.

The mission of the North Central Florida Regional Planning Council is to improve the quality of life of the Region's citizens by coordinating growth management, protecting regional resources, promoting economic development and providing technical services to local governments. The North Central Florida Strategic

[1]Includes the Floridan Aquifer, a Natural Resource of Regional Significance which underlies the entire region.

[2]North central Florida regionally significant facilities and resources, as defined in Rule 27E.005, Florida Administrative Code, consist of Regionally Significant Emergency Preparedness Facilities identified in Table 3.4, Natural Resources of Regional Significance identified in Table 4.1, Regionally Significant Transportation Facilities identified in Table 5.8, and Regionally Significant Facilities and Resources, identified in Section VI.

[3]Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50, Code of Federal Regulations, Part 17.

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Regional Policy Plan implements the mission statement by balancing sustainable economic development with the protection of Natural Resources of Regional Significance.

The regional plan balances economic development with the protection of Natural Resources of Regional Significance. It seeks the protection of the functions and qualities of Natural Resources of Regional Significance. Therefore, the plan allows development and economic activity within and near Natural Resources of Regional Significance to the extent that such development and economic activity does not significantly and adversely affect the functions of the resource.

Furthermore, the scope of the regional plan goals and policies is limited to Natural Resources of Regional Significance and regional facilities which are specifically identified and mapped in the regional plan, as well as the extent to which the plans of one local government effect other local governments. The type and extent of economic activity which can occur without significantly and adversely impacting a Natural Resource of Regional Significance is framed by the goals and policies of the regional plan.

Although mapped as discrete geographic units, Natural Resources of Regional Significance are really parts of an interconnected natural system extending across and beyond the region. Actions in one part of the system can have significant adverse consequences elsewhere. For example, the Big Bend Seagrass Beds and the fishery it supports are dependent upon fresh water flows from the Suwannee and other coastal rivers. The rivers are in turn dependent upon headwater swamps for their base flows of fresh water. Dredging and filling headwater swamps, such as the Okefenokee Swamp in Georgia and north central Florida's San Pedro Bay and Mallory Swamp, could have negative impacts upon the seagrass beds and coastal fishery. One purpose of the regional plan is to identify Natural Resources of Regional Significance and include strategies to minimize potential adverse impacts to these resources while promoting economic activities such as agriculture and silviculture within these areas, especially where such resources are in private ownership.

Natural resources of regional significance are grouped into five categories: Coastal and Marine Resources, Groundwater Resources, Natural Systems, Planning and Resource Management Areas, and Surface Water Systems. The text, maps, and policies of this element are organized around the five map layers.[4]

Natural resources of regional significance are listed in Table 4.1. The regional plan identifies 213 Natural Resources of Regional Significance. Quantifying the number of identified Natural Resources of Regional Significance is difficult. Several are listed multiple times. Some natural resources, such as Wes Skiles Peacock Springs State Park, contain springs which are designated as Natural Resources of Regional Significance in their own right. Areas of High Recharge Potential to the Floridan Aquifer are listed only once. However, the Groundwater Resources map identifies over one million acres as potential high aquifer recharge area. Some resources defy counting. For example, approximately 1,331 parcels of land owned by the Suwannee and St. Johns water management districts are recognized as Natural Resources of Regional Significance. Many of these parcels are adjacent to one another, which could justify grouping them together for a lower parcel count. Instead, they are counted as one natural resource and classified as "Water Management District Lands." Similarly, local government-owned land is counted as one natural resource and classified as Local Government Conservation Areas.

[4]The Floridan Aquifer is not mapped since it underlies the entire region; the Florida Middle Ground and the Okefenokee National Wildlife Refuge are also not mapped as they are outside the region; the Big Bend Seagrass Beds are only partially mapped as much of the resource is located beyond the state's jurisdiction.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

Maps of Natural Resources of Regional Significance included in the regional plan vary widely in terms of accuracy. Some coverages, such as the Suwannee River Corridor, were imported directly into the Council's computerized geographic information system from the Suwannee River Water Management District. Coverages (maps) which are directly imported from one geographic information system to another represent the most accurate coverages contained in the regional plan. While reasonably accurate for purposes of presentation in the regional plan, they should not be used as a substitute for the source maps from which they were derived.

**TABLE 4.1**

**NATURAL RESOURCES OF REGIONAL SIGNIFICANCE**

| Map Layer | Classification | Name | Acreage |
|---|---|---|---|
| **Coastal and Marine Resources** | Big Bend Salt Marsh | Big Bend Salt Marsh | 72,641.34 |
| **Coastal and Marine Resources** | Big Bend Seagrass Beds | Big Bend Seagrass Beds | 902,381.62 |
| **Coastal and Marine Resources** | Florida Middle Ground | Florida Middle Ground | 132,000.00 |
| **Groundwater Resources** | Areas of High Recharge Potential to the Floridan Aquifer | Areas of High Recharge Potential to the Floridan Aquifer | 1,180,502.52 |
| **Groundwater Resources** | Floridan Aquifer | Floridan Aquifer | 5,154,958.96 |
| **Groundwater Resources** | Ichetucknee Trace | Ichetucknee Trace | 10,767.00 |
| **Groundwater Resources** | Sinks | Alachua Sink | 1.00 |
| **Groundwater Resources** | Sinks | Aucilla River Sinks | 2,000.00 |
| **Groundwater Resources** | Sinks | Brooks Sink | 1.00 |
| **Groundwater Resources** | Sinks | Clay Sink | 1.00 |
| **Groundwater Resources** | Sinks | Devil's Millhopper | 1.00 |
| **Groundwater Resources** | Sinks | O'leno Sink | 1.00 |
| **Groundwater Resources** | Sinks | Rose Sink | 1.00 |
| **Groundwater Resources** | Sinks | Saylor Sink | 1.00 |
| **Groundwater Resources** | Stream-to-Sink Watershed | Sinking Branch | 1,596.00 |
| **Groundwater Resources** | Stream-to-Sink Watershed | Cannon Creek/Columbia Rose Creek/ Clay Hole Creek | 34,303.00 |
| **Groundwater Resources** | Stream-to-Sink Watershed | Indian Mound Swamp/ South Falling Creek/ Turkey Prairie | 30,759.00 |
| **Groundwater Resources** | Stream-to-Sink Watershed | Little River | 35,639.00 |

## TABLE 4.1 (Continued)

## NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

| Map Layer | Classification | Name | Acreage |
|---|---|---|---|
| **Groundwater Resources** | Stream-to-Sink Watershed | Norton Creek | 9,337.00 |
| **Groundwater Resources** | Stream-to-Sink Watershed | Alachua Slough/Blues Creek/Burnett Lake/Mill Creek Sink/Hammock Branch/North Alachua/Pareners Branch/Turkey Creek | 41,954.00 |
| **Groundwater Resources** | Stream-to-Sink Watershed | Unnamed basin on Marion-Levy border | 56,193.24 |
| **Groundwater Resources** | Stream-to-Sink Watershed | Priest Prairie Drain | 43,132.61 |
| **Natural Systems** | State Ecological Greenways Network | Regional Ecological Greenways Network | 1,861,136 |
| **Planning & Resource Management Areas** | Private Lands | n/a | 5,861.31 |
| **Planning & Resource Management Areas** | Public Lands | Aucilla River Sinks | 1,097.00 |
| **Planning & Resource Management Areas** | Public Lands | Austin Cary Memorial Forest | 2,076. 30 |
| **Planning & Resource Management Areas** | Public Lands | Big Bend Wildlife Management Area | 90,662.59 |
| **Planning & Resource Management Areas** | Public Lands | Big Gum Swamp National Wilderness Area | 3,374.00 |
| **Planning & Resource Management Areas** | Public Lands | Big Shoals State Forest | 1,636.04 |
| **Planning & Resource Management Areas** | Public Lands | Lafayette Blue Springs State Park | 713.74 |
| **Planning & Resource Management Areas** | Public Lands | Cedar Key National Wildlife Refuge | 624.49 |
| **Planning & Resource Management Areas** | Public Lands | Cedar Key Scrub State Reserve | 4,531.04 |
| **Planning & Resource Management Areas** | Public Lands | Other Local Government Conservation Areas | 22,830.32 |
| **Planning & Resource Management Areas** | Public Lands | Devil's Millhopper Geologic State Park | 6724 |
| **Planning & Resource Management Areas** | Public Lands | Econfina River State Park | 4,375.73 |
| **Planning & Resource Management Areas** | Public Lands | Goethe State Park | 52,957.81 |
| **Planning & Resource Management Areas** | Public Lands | Gum Root Park | 371.80 |
| **Planning & Resource Management Areas** | Public Lands | Ichetucknee Springs State Park | 2,531.97 |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.1 (Continued)

## NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

| Map Layer | Classification | Name | Acreage |
|---|---|---|---|
| **Planning & Resource Management Areas** | Public Lands | Lake Alto Preserve | 672.00 |
| **Planning & Resource Management Areas** | Public Lands | Lochloosa Wildlife Conservation Area | 10,659.68 |
| **Planning & Resource Management Areas** | Public Lands | Lower Suwannee River National Wildlife Refuge | 53,333.83 |
| **Planning & Resource Management Areas** | Public Lands | Newnans Lake State Forest | 1,004 |
| **Planning & Resource Management Areas** | Public Lands | Okefenokee National Wildlife Refuge | 0.00 |
| **Planning & Resource Management Areas** | Public Lands | O'leno State Park | 2,372.41 |
| **Planning & Resource Management Areas** | Public Lands | Osceola National Forest | 114,199.13 |
| **Planning & Resource Management Areas** | Public Lands | Paynes Prairie Preserve State Park | 21,561.72 |
| **Planning & Resource Management Areas** | Public Lands | Peacock Springs Conservation Area | 1,115. 19 |
| **Planning & Resource Management Areas** | Public Lands | River Rise State Preserve | 3,827.20 |
| **Planning & Resource Management Areas** | Public Lands | St. Marks National Wildlife Refuge | 1,293.06 |
| **Planning & Resource Management Areas** | Public Lands | San Felasco Hammock State Preserve | 7,358.48 |
| **Planning & Resource Management Areas** | Public Lands | Santa Fe Swamp Conservation Area | 7,368.47 |
| **Planning & Resource Management Areas** | Public Lands | Stephen Foster State Folk Cultural Center | 903.90 |
| **Planning & Resource Management Areas** | Public Lands | Suwannee River State Park | 1,929.71 |
| **Planning & Resource Management Areas** | Public Lands | Upper Alapaha Conservation Area | 2,036.82 |
| **Planning & Resource Management Areas** | Public Lands | Waccasassa Bay Preserve State Park | 4,531.04 |
| **Planning & Resource Management Areas** | Public Lands | Water Management District Easements | 136,643.35 |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.1 (Continued)

## NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

| Map Layer | Classification | Name | Acreage |
|---|---|---|---|
| **Planning & Resource Management Areas** | Public Lands | Other Water Management District Lands | 149,474.39 |
| **Planning & Resource Management Areas** | Public Lands | Other State Lands | 50,483.20 |
| **Planning & Resource Management Areas** | Public Lands | Other Federal Lands | 682.44 |
| **Planning & Resource Management Areas** | Surface Water Improvement Management Waterbodies | Newnans Lake | 6,019.00 |
| **Planning & Resource Management Areas** | Surface Water Improvement Management Waterbodies | Waccasassa River | 200.00 |
| **Planning & Resource Management Areas** | Surface Water Improvement Management Waterbodies | Withlacoochee River - Citrus/Levy | 347.30 |
| **Planning & Resource Management Areas** | Surface Water Improvement Management Waterbodies | Withlacoochee River - Hamilton/Madison | 14,004.24 |
| **Surface Water Systems** | Fresh Water Wetlands | Bee Haven Bay | 7,125.00 |
| **Surface Water Systems** | Fresh Water Wetlands | California Swamp | 21,786.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Dixie County Coastal Fresh Water Wetlands | 155,642.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Gum Root Swamp | 1,448.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Hixtown Swamp | 10,289.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Lake Alto Swamp | 1,405.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Lochloosa Forest | 28,451.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Mallory Swamp | 210,399.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Osceola National Forest/Pinhook Swamp | 184,350.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Paynes Prairie | 21,657.00 |
| **Surface Water Systems** | Fresh Water Wetlands | San Pedro Bay | 305,375.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Santa Fe Swamp | 7,403.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Spring Warrior Swamp | 16,039.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Taylor County Coastal Fresh Water Wetlands | 51,731.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Tide Swamp | 15,236.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Waccasassa Flats | 61,653.00 |
| **Surface Water Systems** | Fresh Water Wetlands | Waccasassa/Gulf Hammock/Goethe | 263,772.27 |
| **Surface Water Systems** | Lakes | Alligator Lake | 968.00 |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.1 (Continued)

## NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

| Map Layer | Classification | Name | Acreage |
|---|---|---|---|
| **Surface Water Systems** | Lakes | Chunky Pond | 647.13 |
| **Surface Water Systems** | Lakes | Lake Butler | 436.00 |
| **Surface Water Systems** | Lakes | Lake Crosby | 534.00 |
| **Surface Water Systems** | Lakes | Lake Geneva | 57.76 |
| **Surface Water Systems** | Lakes | Lake Rowell | 357.00 |
| **Surface Water Systems** | Lakes | Lake Sampson | 2,013.00 |
| **Surface Water Systems** | Lakes | Lake Santa Fe | 4,211.00 |
| **Surface Water Systems** | Lakes | Little Santa Fe Lake | 1,096.00 |
| **Surface Water Systems** | Lakes | Lochloosa Lake | 5,629.00 |
| **Surface Water Systems** | Lakes | Newnans Lake | 6,019.00 |
| **Surface Water Systems** | Lakes | Orange Lake | 9,533.00 |
| **Surface Water Systems** | Lakes | Watermelon Pond | 989.00 |
| **Surface Water Systems** | River Corridors | Alapaha River | 9,069.00 |
| **Surface Water Systems** | River Corridors | Aucilla River | 4,059.00 |
| **Surface Water Systems** | River Corridors | Cross Creek | 530.00 |
| **Surface Water Systems** | River Corridors | Econfina River | 11,743.00 |
| **Surface Water Systems** | River Corridors | Fenholloway River | 28,258.85 |
| **Surface Water Systems** | River Corridors | Ichetucknee River | 451.00 |
| **Surface Water Systems** | River Corridors | Prairie Creek | 873.00 |
| **Surface Water Systems** | River Corridors | River Styx | 1,772.00 |
| **Surface Water Systems** | River Corridors | Santa Fe River | 17,868.00 |
| **Surface Water Systems** | River Corridors | Steinhatchee River | 8,983.00 |
| **Surface Water Systems** | River Corridors | Suwannee River | 139,931.12 |
| **Surface Water Systems** | River Corridors | Waccasassa River | 15,037.96 |
| **Surface Water Systems** | River Corridors | Withlacoochee River - Citrus/Levy | 14,389.24 |
| **Surface Water Systems** | River Corridors | Withlacoochee River - Hamilton/Madison | 14,004.24 |
| **Surface Water Systems** | Springs | ALA112971 | 1.00 |


## TABLE 4.1 (Continued)

## NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

| Map Layer | Classification | Name | Acreage |
|---|---|---|---|
| **Surface Water Systems** | Springs | ALA930971 | 1.00 |
| **Surface Water Systems** | Springs | ALA930972 | 1.00 |
| **Surface Water Systems** | Springs | Alapaha Rise | 1.00 |
| **Surface Water Systems** | Springs | Allen Mill Pond | 1.00 |
| **Surface Water Systems** | Springs | Anderson Spring | 1.00 |
| **Surface Water Systems** | Springs | Bathtub | 1.00 |
| **Surface Water Systems** | Springs | Blue Hole | 1.00 |
| **Surface Water Systems** | Springs | Blue Sink | 1.00 |
| **Surface Water Systems** | Springs | Blue Spring Near Mayo | 1.00 |
| **Surface Water Systems** | Springs | Bonnet | 1.00 |
| **Surface Water Systems** | Springs | Branford Spring | 1.00 |
| **Surface Water Systems** | Springs | Cedar Head | 1.00 |
| **Surface Water Systems** | Springs | Charles Spring | 1.00 |
| **Surface Water Systems** | Springs | COL61981 | 1.00 |
| **Surface Water Systems** | Springs | COL928972 | 1.00 |
| **Surface Water Systems** | Springs | COL930971 | 1.00 |
| **Surface Water Systems** | Springs | COL1012971 | 1.00 |
| **Surface Water Systems** | Springs | COL101974 | 1.00 |
| **Surface Water Systems** | Springs | Columbia Spring | 1.00 |
| **Surface Water Systems** | Springs | Copper Spring | 1.00 |
| **Surface Water Systems** | Springs | Darby | 1.00 |
| **Surface Water Systems** | Springs | Devil's Ear | 1.00 |
| **Surface Water Systems** | Springs | Devil's Eye Spring | 1.00 |
| **Surface Water Systems** | Springs | DIX625993 | 1.00 |
| **Surface Water Systems** | Springs | Dogwood | 1.00 |
| **Surface Water Systems** | Springs | Ellaville Spring | 1.00 |
| **Surface Water Systems** | Springs | Falmouth Spring | 1.00 |
| **Surface Water Systems** | Springs | Fanning Springs | 1.00 |
| **Surface Water Systems** | Springs | GIL84971 | 1.00 |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.1 (Continued)

## NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

| Map Layer | Classification | Name | Acreage |
|---|---|---|---|
| **Surface Water Systems** | Springs | GIL94972 | 1.00 |
| **Surface Water Systems** | Springs | GIL107971 | 1.00 |
| **Surface Water Systems** | Springs | GIL107972 | 1.00 |
| **Surface Water Systems** | Springs | GIL729971 | 1.00 |
| **Surface Water Systems** | Springs | GIL1012971 | 1.00 |
| **Surface Water Systems** | Springs | GIL1012973 | 1.00 |
| **Surface Water Systems** | Springs | Ginnie Spring | 1.00 |
| **Surface Water Systems** | Springs | Grassy Hole | 1.00 |
| **Surface Water Systems** | Springs | Guaranto Spring | 1.00 |
| **Surface Water Systems** | Springs | HAM610981 | 1.00 |
| **Surface Water Systems** | Springs | HAM610982 | 1.00 |
| **Surface Water Systems** | Springs | HAM610983 | 1.00 |
| **Surface Water Systems** | Springs | HAM610984 | 1.00 |
| **Surface Water Systems** | Springs | HAM612981 | 1.00 |
| **Surface Water Systems** | Springs | HAM1023971 | 1.00 |
| **Surface Water Systems** | Springs | HAM1023974 | 1.00 |
| **Surface Water Systems** | Springs | Hart Spring | 1.00 |
| **Surface Water Systems** | Springs | Holton Spring | 1.00 |
| **Surface Water Systems** | Springs | Hornsby Spring | 1.00 |
| **Surface Water Systems** | Springs | ICH001C1 | 1.00 |
| **Surface Water Systems** | Springs | ICH001C2 | 1.00 |
| **Surface Water Systems** | Springs | ICH001C3 | 1.00 |
| **Surface Water Systems** | Springs | ICH001C4 | 1.00 |
| **Surface Water Systems** | Springs | ICH001C5 | 1.00 |
| **Surface Water Systems** | Springs | ICH001C6 | 1.00 |
| **Surface Water Systems** | Springs | ICH001C7 | 1.00 |
| **Surface Water Systems** | Springs | ICH001C8 | 1.00 |
| **Surface Water Systems** | Springs | Ichetucknee Spring | 1.00 |
| **Surface Water Systems** | Springs | July Spring | 1.00 |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.1 (Continued)

## NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

| Map Layer | Classification | Name | Acreage |
|---|---|---|---|
| **Surface Water Systems** | Springs | LAF718971 | 1.00 |
| **Surface Water Systems** | Springs | LAF718972 | 1.00 |
| **Surface Water Systems** | Springs | LAF924971 | 1.00 |
| **Surface Water Systems** | Springs | Lev719991 (Levy) | 1.00 |
| **Surface Water Systems** | Springs | Lilly Spring | 1.00 |
| **Surface Water Systems** | Springs | Lime | 1.00 |
| **Surface Water Systems** | Springs | Lime Run Sink | 1.00 |
| **Surface Water Systems** | Springs | Little Fanning Spring | 1.00 |
| **Surface Water Systems** | Springs | Little River Spring | 1.00 |
| **Surface Water Systems** | Springs | MAD610982 | 1.00 |
| **Surface Water Systems** | Springs | MAD612981 | 1.00 |
| **Surface Water Systems** | Springs | MAD612982 | 1.00 |
| **Surface Water Systems** | Springs | MAD922977 | 1.00 |
| **Surface Water Systems** | Springs | Manatee Spring | 1.00 |
| **Surface Water Systems** | Springs | Mearson Spring | 1.00 |
| **Surface Water Systems** | Springs | Mill Pond | 1.00 |
| **Surface Water Systems** | Springs | Mission | 1.00 |
| **Surface Water Systems** | Springs | Morgan's Spring | 1.00 |
| **Surface Water Systems** | Springs | Nutall Rise | 1.00 |
| **Surface Water Systems** | Springs | Orange Grove | 1.00 |
| **Surface Water Systems** | Springs | Otter Spring | 1.00 |
| **Surface Water Systems** | Springs | Owens Spring | 1.00 |
| **Surface Water Systems** | Springs | Peacock Springs | 1.00 |
| **Surface Water Systems** | Springs | Perry | 1.00 |
| **Surface Water Systems** | Springs | Pickard | 1.00 |
| **Surface Water Systems** | Springs | Poe Spring | 1.00 |
| **Surface Water Systems** | Springs | Pot | 1.00 |
| **Surface Water Systems** | Springs | Pothole | 1.00 |

## TABLE 4.1 (Continued)

## NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

| Map Layer | Classification | Name | Acreage |
|---|---|---|---|
| **Surface Water Systems** | Springs | Rock Bluff Spring | 1.00 |
| **Surface Water Systems** | Springs | Rock Sink | 1.00 |
| **Surface Water Systems** | Springs | Rum Island | 1.00 |
| **Surface Water Systems** | Springs | Running Spring | 1.00 |
| **Surface Water Systems** | Springs | Ruth Spring | 1.00 |
| **Surface Water Systems** | Springs | Santa Fe Blue Spring | 1.00 |
| **Surface Water Systems** | Springs | Santa Fe Rise | 1.00 |
| **Surface Water Systems** | Springs | Shingle | 1.00 |
| **Surface Water Systems** | Springs | Steinhatchee Rise | 1.00 |
| **Surface Water Systems** | Springs | Sunbeam | 1.00 |
| **Surface Water Systems** | Springs | SUW107971 | 1.00 |
| **Surface Water Systems** | Springs | SUW923973 | 1.00 |
| **Surface Water Systems** | Springs | SUW925971 | 1.00 |
| **Surface Water Systems** | Springs | SUW1017972 | 1.00 |
| **Surface Water Systems** | Springs | Suwanacoochee Spring | 1.00 |
| **Surface Water Systems** | Springs | Suwannee Spring | 1.00 |
| **Surface Water Systems** | Springs | Suwannee Blue Spring | 1.00 |
| **Surface Water Systems** | Springs | TAY625992 | 1.00 |
| **Surface Water Systems** | Springs | TAY730991 | 1.00 |
| **Surface Water Systems** | Springs | Telford Spring | 1.00 |
| **Surface Water Systems** | Springs | Trail Spring | 1.00 |
| **Surface Water Systems** | Springs | Troy Spring | 1.00 |
| **Surface Water Systems** | Springs | Turtle Spring | 1.00 |
| **Surface Water Systems** | Springs | Twin | 1.00 |
| **Surface Water Systems** | Springs | Wekiva Springs (Levy) | 1.00 |
| **Surface Water Systems** | Springs | White Spring | 1.00 |
| **Surface Water Systems** | Springs | Wilson | 1.00 |
| **Surface Water Systems** | Springs | Withlacoochee Blue Spring | 1.00 |

n/a = Not Applicable. An identification name or number is not provided as the natural resource is either located beyond the jurisdiction of the region, covers the entire region, or is adequately identified on the associated map without the need of a map identification name/number. Source: North Central Florida Regional Planning Council, 2016.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

# 2. Coastal and Marine Resources

The region's coastline bordering the Gulf of Mexico extends approximately 120 miles from the Aucilla River, separating Taylor and Jefferson Counties, south to the Withlacoochee River which forms the boundary between Citrus and Levy counties. The environmental quality of the Gulf coast in Dixie, Levy, and Taylor counties is generally excellent with few problems of regional significance. Salt marsh, broken only by rivers and their estuaries as well as a very few areas of beach, extends nearly the entire length of the coastline of Dixie, Levy, and Taylor counties. Seaward of the salt marsh are the Big Bend Seagrass Beds. The seagrass beds provide an attractive environment for many commercially valuable fish and invertebrates. The Suwannee River is the largest coastal river in the region and forms a large estuary which supports large, commercially-viable, oyster beds.

The salt marsh, estuaries, coastal fresh water wetlands, as well as the Gulf itself all interact to provide fish and wildlife species with the elements required for their propagation, growth, and survival.[5] Identified coastal and marine natural resources of regional significance are the Big Bend Salt Marsh, the Big Bend Seagrass Beds, and the Florida Middle Ground.

## a. Big Bend Salt Marsh

Nearly the entire length of the Dixie, Levy, and Taylor county coastline consists of salt marsh. The Big Bend Salt Marsh averages between one-half and one mile in width while penetrating several miles inland in some places, most notably at Shired Island and Horseshoe Cove where waters from the Suwannee River and California Swamp enter the Gulf.

Nutrients from the land and sea combine in the salt marsh to produce more biomass than some of the most intensively managed farms. It is a rich breeding ground for plant and animal life and is a primary nursery for commercially-valuable fish. Spotted sea trout, mullet, redfish and others spend much of their lives in the salt marsh. In addition, crabs, oysters, clams, shrimp, and other Gulf marine life depend on the salt marsh for food, protection, and propagation.

Other animal species found in the salt marsh include birds such as rails, egrets, gulls, terns, and seaside sparrows, all of which depend upon the salt marsh for food. The bald eagle breeds in several areas of salt marsh habitat. Besides the bald eagle, other listed species found in the Big Bend Salt Marsh include the diamond-back terrapin, salt marsh snake, mink, otter, and raccoon.[6]

The salt marsh is dependent for its existence upon an unrestricted flow of fresh water and sediments from coastal estuaries and sheet-flow runoff from fresh water coastal wetlands. Sand is an important ingredient in wetland building as it provides a stable platform in shallow water areas for marsh plant communities to develop. Once the flow of sand to the marsh is shut off, the forces of erosion and submergence take over.

[5]Coastal fresh water wetlands are addressed under Surface Water Systems, beginning on page IV-47.

[6]Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50, Code of Federal Regulations, Part 17.

## b. Big Bend Seagrass Beds

Three marine leagues seaward of land's end lies the limits of the jurisdiction of the state.[7] The area between land's end and the state's jurisdictional limit consists of salt marsh, oyster bars, as well as part of the Big Bend Seagrass Beds, which extend approximately 30 miles westward from land's end into the Gulf of Mexico to depths of 33 feet.[8] The seagrasses are comprised predominantly of Thalassia testudinum, Halodule wrightii, Syringodium filiforme, and Halophilla eugolmannii.

Similar to the salt marsh, the seagrass beds are an important community in terms of basic productivity. They provide habitat for many species of commercially-valuable invertebrate and fish. Submerged grass beds supply food to grazing animals, provide nutrients to the water, add oxygen, and stabilize sediments on the sea floor. The Big Bend Seagrass Beds are designated as both a State Aquatic Preserve and an Outstanding Florida Water. The beds are part of the second-largest area of continuous seagrasses in the eastern Gulf of Mexico.

The region has several small but growing coastal communities where development could, if not properly managed, adversely affect coastal resources. These include the town of Horseshoe Beach and the unincorporated communities of Steinhatchee, Suwannee, Keaton Beach, Cedar Island, and Dekle Beach. Population growth in coastal communities is likely to increase demand for access to coastal areas and resources.

Seagrass beds and coastal marshes can be adversely affected by channel dredging and associated spoils. Spoil deposition as well as the dredging process can deposit bottom muds on oyster beds and seagrass beds, causing their death through suffocation. Two areas of particular concern are the Keaton Beach - Cedar Island Channel near the mouth of Blue Creek and the Alligator Pass-Shark Channel at the mouth of the Suwannee River. The estuary at the mouth of the Suwannee provides a very important summer feeding and resting habitat for the endangered West Indian manatee. As a result, dredging activities have been confined to maintenance of existing channels only in West Pass.

Drilling activities have the potential for very high impacts on the seagrass beds.[9] Live bottoms, oyster beds, and seagrass beds may be at risk from drilling muds and cuttings discharge during drilling operations. Muds and cuttings deposited on top of coral, oysters, and seagrass can deprive these species of oxygen, causing them to suffocate. In addition, the ecology of the salt marsh may be severely disrupted by oil spills reaching such areas.

[7]Section 258.395, Florida Statutes.

[8]U.S. Department of the Interior, Minerals Management Service, Proposed 5-Year Outer Continental Shelf Oil and Gas Leasing Program, January 1987 - December 1991 Draft Environmental Impact Statement, Vol. 2, (1968), pp. IV.B.6.-31 and 32.

[9]Proposed 5-Year Outer Continental Shelf Oil and Gas Leasing Program January 1987- December 1991 Draft Environmental Impact Statement, pg. IV.B.6.-19.

A study of the sensitivity of Florida's coastal environment corroborates these concerns. The study ranked the region's coastline as among the most environmentally sensitive in the state.[10] Environmentally sensitive fish and benthic invertebrate species found along the north central Florida coast include the eastern blue oyster, blue crab, stone crab, bay scallop, pink shrimp, white shrimp, rock shrimp, spotted sea trout, red drum, mullet, sheepshead, Atlantic sturgeon, Spanish mackerel, bluefish, spotfish, and pompano.

## c. Florida Middle Ground

The Florida Middle Ground is found between 47 and 66 miles southwest of the mouth of the Steinhatchee River in water depths of up to 125 feet. It consists of approximately 132,000 acres of coral reefs similar to those found in the Caribbean and represents the northernmost extent of coral reefs in the eastern Gulf of Mexico. Live bottom areas such as the Florida Middle Ground are of concern because of their biological productivity and their use as fish habitats.[11] The Florida Middle Ground is probably the best known and most biologically developed of the live bottom areas of the Gulf and has been designated as a Habitat Area of Particular Concern by the Gulf of Mexico Fishery Management Council.

Its considerable distance from shore and moderating currents attract fish normally found in the Caribbean-west Indies. The middle ground's transparent waters, shallow reef crests, irregular bottom topography, well-defined currents, and carbonate sediments attract many reef fishes which are either rare or absent at other west Florida shelf reefs. The dominant stony corals of the middle ground include Madracis decactis, Porites divaricata, Dichochocoencia stellaris, and Dichochcenia stokesii. Octocorals, a minor component of other Gulf reefs, are prominent. Dominant forms include Muricea elongata (orange Muricea), Muricea laxa (Dekucate muricea), Eunicea calyculata (warty Eunicea), and Plexaura flexuosa (sea rod).

Sport fishermen and recreational divers frequent the area despite its distance from the coast. Commercial fishermen also frequent the middle grounds since it is inhabited by red snapper and grouper. Although recognized by the regional plan as a Natural Resource of Regional Significance, the Florida Middle Ground is not mapped due to its location beyond the state's jurisdiction. Despite its location, the Council has commented, and will likely continue to comment, on environmental impact statements produced for proposed activities which could affect the Florida Middle Ground.

[10]The Sensitivity of Coastal Environments and Wildlife to Spilled Oil in the North-Central Florida Region, Research Planning Institute, Inc., Columbia, South Carolina, 1984.

[11]Proposed 5-Year Outer Continental Shelf Oil and Gas Leasing Program, January 1987 - December 1991 Draft Environmental Impact Statement, pp. IV.B.6.-31 and 32.

# 3. Groundwater Resources

Groundwater Natural Resources of Regional Significance consist of the Floridan Aquifer, sinks with direct connection to the Floridan Aquifer, stream-to-sink watersheds, and high recharge areas of the Floridan Aquifer.

## a. Floridan Aquifer

Three different aquifers underlie north central Florida, a surficial water table aquifer, an intermediate artesian aquifer, and the Floridan Aquifer. Of the three, only the Floridan Aquifer is recognized in the regional plan as a Natural Resource of Regional Significance. The Floridan Aquifer is one of the largest and most productive fresh water aquifers in the world and is the region's primary source of potable water.

Underground limestone formations up to 5,000 feet thick exist within the region. However, the thickness of the permeable portion of the aquifer varies from approximately 600 to 1,700 feet. The potable portion of the aquifer increases in thickness from 250 feet near the coast to 1,250 feet in the northern portions of the region.[12]

The Floridan Aquifer can be divided into three classes. In Class I, the Floridan Aquifer is unconfined and is the sole source for groundwater supplies. In Class II, which may be thought of as a transitional area, a semi-artesian secondary system or water table aquifer overlays a semi-confined Floridan. In Class III, the Floridan Aquifer is confined. A water table aquifer and intermediate artesian aquifers overlay the Floridan. The aquifer ranges from Class III in the northeastern portion of the region where the aquifer is overlain by the Hawthorne Formation, through Class II which is roughly located in areas identified as High Recharge Areas of the Floridan Aquifer on the Groundwater Resources map, to Class I near the coastline. Generally, groundwater within the Floridan Aquifer moves from Class III to Class I areas (northeast to southwest).

### i. Water Quantity of the Floridan Aquifer

Table 4.2 indicates that north central Florida has a much higher reliance on groundwater than the rest of the state. In 2012, 70.1 percent of all north central Florida water withdrawn for human use came from groundwater sources, compared with 29.3 percent statewide. Table 4.2 also reveals that north central Florida water consumption by type of user is similar to statewide usage. The region's reliance on groundwater sources is even higher than depicted in Table 4.2 as this table includes the one-time pass-through use of river water for cooling Florida Power Corporation's Suwannee River electrical generation station. When Suwannee County is excluded, groundwater comprises 99.2 percent of the water withdrawals of the remaining 11-county area.

[12]Water Management Plan, Suwannee River Water Management District, Live Oak, Florida, August 8, 1994, Review Draft, pp. 34-35.

**TABLE 4.2**

**WATER WITHDRAWALS BY SOURCE, 2012**
**(MILLION GALLONS PER DAY)**

| Area | Total Withdrawal | Withdrawal Source | | | |
|---|---|---|---|---|---|
| | | Groundwater | | Surface Water | |
| | Amount | Amount | Percent of Total | Amount | Percent of Total |
| **Alachua** | 54.23 | 53.68 | 99.0% | 0.55 | 1.0% |
| **Bradford** | 5.37 | 5.33 | 99.3% | 0.04 | 0.7% |
| **Columbia** | 13.89 | 13.74 | 98.9% | 0.15 | 1.1% |
| **Dixie** | 4.59 | 4.57 | 99.6% | 0.02 | 0.4% |
| **Gilchrist** | 9.29 | 9.22 | 99.2% | 0.07 | 0.8% |
| **Hamilton** | 37.49 | 37.41 | 99.8% | 0.08 | 0.2% |
| **Lafayette** | 6.67 | 6.62 | 99.3% | 0.05 | 0.7% |
| **Levy** | 32.56 | 31.94 | 98.1% | 0.62 | 1.9% |
| **Madison** | 14.06 | 13.93 | 99.1% | 0.13 | 0.9% |
| **Suwannee** | 138.34 | 30 | 21.7% | 108.34 | 78.3% |
| **Taylor** | 42.90 | 42.87 | 99.9% | 0.03 | 0.1% |
| **Union** | 3.13 | 3.12 | 99.7% | 0.01 | 0.3% |
| **Region** | 362.52 | 252.43 | 69.6% | 110.09 | 30.4% |
| **Florida** | 14,988.29 | 4,172.99 | 27.8% | 10,815.30 | 72.2% |

Source: United States Geological Survey, Open-File Report 2015-1156

Most of the water used in the region is for commercial/industrial and power generation uses. However, these figures include water used for once-through cooling at the power plant, and water that is recycled several times at the PCS, Inc. phosphate plant in Hamilton County. The largest industrial user of water in the region is the Buckeye, Florida pulp mill in Taylor County with a 1990 average withdrawal of 46 million gallons per day.[13]

Table 4.3 presents the latest data reported in the United States Geological Survey, Water Withdrawals, Use, and Trends in Florida, 2010 regarding groundwater withdrawals by type.

[13]Suwannee River Water Management District, 1996.


## TABLE 4.3

## WATER USE: WATER WITHDRAWALS BY CATEGORY, 2010 (MILLIONS OF GALLONS PER DAY)

| Area | Total | Public | Domestic Self-Supply | Commercial, Industrial and Mining Self-Supply | Agriculture | Recreation and Landscape | Thermo-Electric |
|---|---|---|---|---|---|---|---|
| **Alachua** | 54.23 | 26.31 | 3.52 | 0.43 | 20.04 | 1.43 | 2.5 |
| **Bradford** | 5.37 | 1.62 | 1.67 | 1.3 | 0.7 | 0.08 | 0 |
| **Columbia** | 13.89 | 3.7 | 3.63 | 0.19 | 5.99 | 0.38 | 0 |
| **Dixie** | 4.59 | 0.67 | 0.98 | 0 | 2.94 | 0 | 0 |
| **Gilchrist** | 9.29 | 0.23 | 1.29 | 0.34 | 7.43 | 0 | 0 |
| **Hamilton** | 37.49 | 0.85 | 0.74 | 25.82 | 10.08 | 0 | 0 |
| **Lafayette** | 6.67 | 0.17 | 0.65 | 0.27 | 5.58 | 0 | 0 |
| **Levy** | 32.56 | 1.48 | 1.94 | 0.15 | 28.57 | 0.42 | 0 |
| **Madison** | 14.06 | 1.39 | 1 | 0.56 | 10.88 | 0.23 | 0 |
| **Suwannee** | 138.34 | 1.14 | 2.71 | 1.78 | 24.42 | 0.08 | 108.21 |
| **Taylor** | 42.9 | 2.03 | 0.9 | 39.51 | 0.38 | 0.08 | 0 |
| **Union** | 3.13 | 0.38 | 1.16 | 0.48 | 1.11 | 0 | 0 |
| **Region** | 362.52 | 39.97 | 20.19 | 70.83 | 118.12 | 2.7 | 110.71 |
| **Florida** | 14988.29 | 2267.82 | 213.84 | 378.35 | 2551.1 | 391.93 | 9185.25 |

Source: United States Geological Survey, Water Withdrawals, Use, and Trends in Florida, 2010
NOTE: Total includes Public Supply, Commercial-Industrial-Mining, Agricultural self-supplied, Recreational irrigation, Power generation, and Domestic self-supplied. Sum of water withdrawals by user category do not equal the Total, because Domestic self-supplied user category data was not included in the table.

Table 4.4 reports water withdrawal information from Table 4.3 in percentage terms. As can be seen, 82.6 percent of north central Florida water withdrawals are used for industrial, agriculture, and thermoelectric uses. Only 16.6 percent of north central Florida water withdrawals are used for public and domestic uses. Agricultural use accounts for approximately 32.6 percent of the region's total 2010 water use, which is higher than the statewide percentage of 17.0. Agricultural water uses are not routinely reported as agricultural water use metering is not required in north central Florida.

**TABLE 4.4**

**WATER WITHDRAWALS BY CATEGORY, 2010**
**PERCENT OF TOTAL**

| Area | Total | Public | Domestic Self-Supply | Commercial, Industrial and Mining Self-Supply | Agriculture | Recreation and Landscape | Thermo-Electric |
|---|---|---|---|---|---|---|---|
| **Alachua** | 100.0% | 48.5% | 6.5% | 0.8% | 37.0% | 2.6% | 4.6% |
| **Bradford** | 100.0% | 30.2% | 31.1% | 24.2% | 13.0% | 1.5% | 0.0% |
| **Columbia** | 100.0% | 26.6% | 26.1% | 1.4% | 43.1% | 2.7% | 0.0% |
| **Dixie** | 100.0% | 14.6% | 21.4% | 0.0% | 64.1% | 0.0% | 0.0% |
| **Gilchrist** | 100.0% | 2.5% | 13.9% | 3.7% | 80.0% | 0.0% | 0.0% |
| **Hamilton** | 100.0% | 2.3% | 2.0% | 68.9% | 26.9% | 0.0% | 0.0% |
| **Lafayette** | 100.0% | 2.5% | 9.7% | 4.0% | 83.7% | 0.0% | 0.0% |
| **Levy** | 100.0% | 4.5% | 6.0% | 0.5% | 87.7% | 1.3% | 0.0% |
| **Madison** | 100.0% | 9.9% | 7.1% | 4.0% | 77.4% | 1.6% | 0.0% |
| **Suwannee** | 100.0% | 0.8% | 2.0% | 1.3% | 17.7% | 0.1% | 78.2% |
| **Taylor** | 100.0% | 4.7% | 2.1% | 92.1% | 0.9% | 0.2% | 0.0% |
| **Union** | 100.0% | 12.1% | 37.1% | 15.3% | 35.5% | 0.0% | 0.0% |
| **Region** | 100.0% | 11.0% | 5.6% | 19.5% | 32.6% | 0.7% | 30.5% |
| **Florida** | 100.0% | 15.1% | 1.4% | 2.5% | 17.0% | 2.6% | 61.3% |

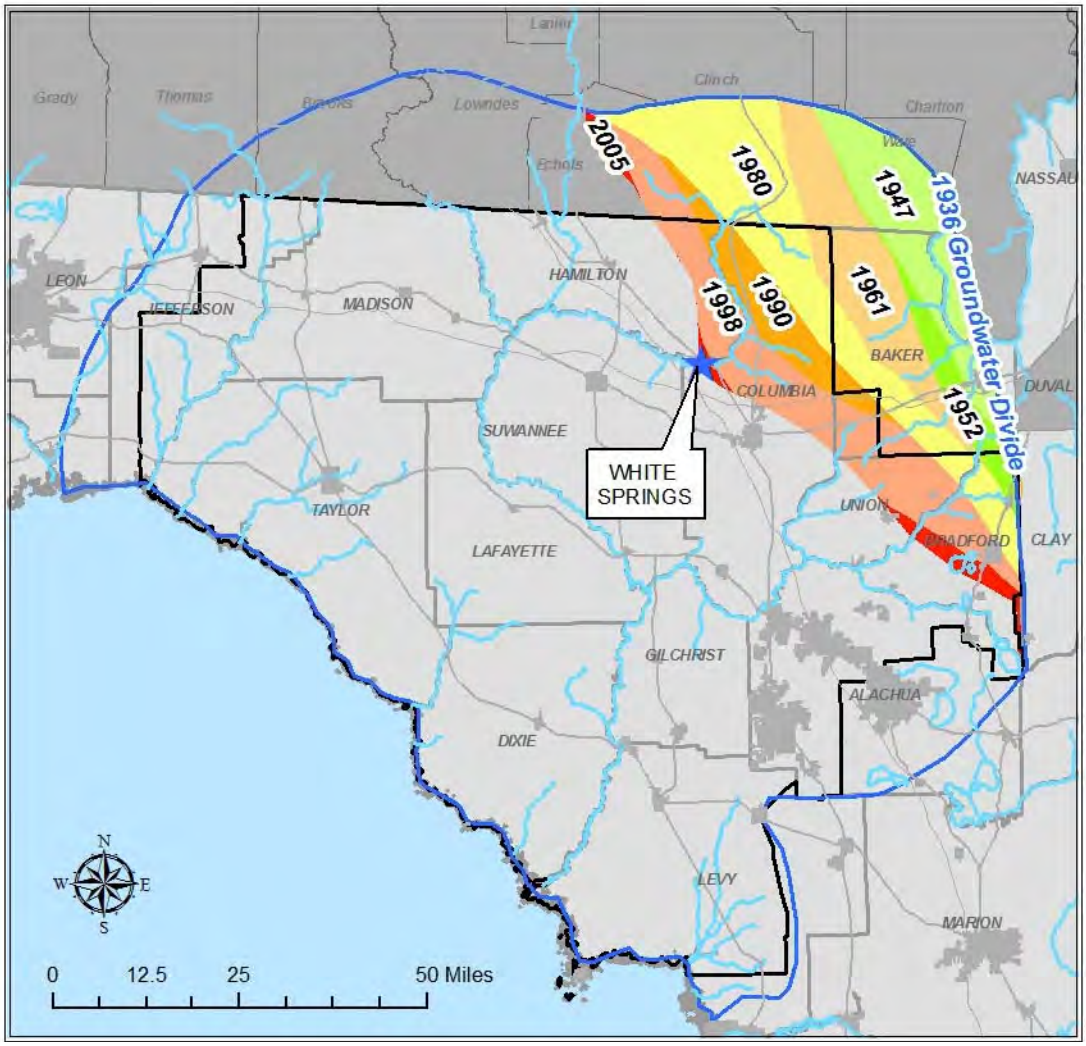
Source: United States Geological Survey, Water Withdrawals, Use, and Trends in Florida, 2010

The 2010 Suwannee River Water Management District Water Supply Assessment notes that the water resources of the eastern and northeastern portions of the District are in decline and that this trend is especially evident in the potentiometric surface of the Upper Floridan Aquifer.[14] The Water Supply Assessment notes that a southwestern migration of the groundwater basin divide has occurred between 1936 pre-development conditions through 2005 (see Illustration 4.1). The Assessment notes that the divide has migrated more than 35 miles to the southwest during this time period. The result of the migration is a decrease in the size of the groundwater contributing area to the eastern portion of the Suwannee River Water Management District by more than 20 percent or 1,900 square miles.

[14]Water Supply Assessment: Water for Nature, Water for People, 2010, Suwannee River Water Management District, December 6, 2010, Live Oak, Florida, pg. 46.

**ILLUSTRATION 4.1**

**MIGRATION OF THE GROUNDWATER BASIN DIVIDE**




Source: Water Supply Assessment 2010, Suwannee River Water Management District, 2010.

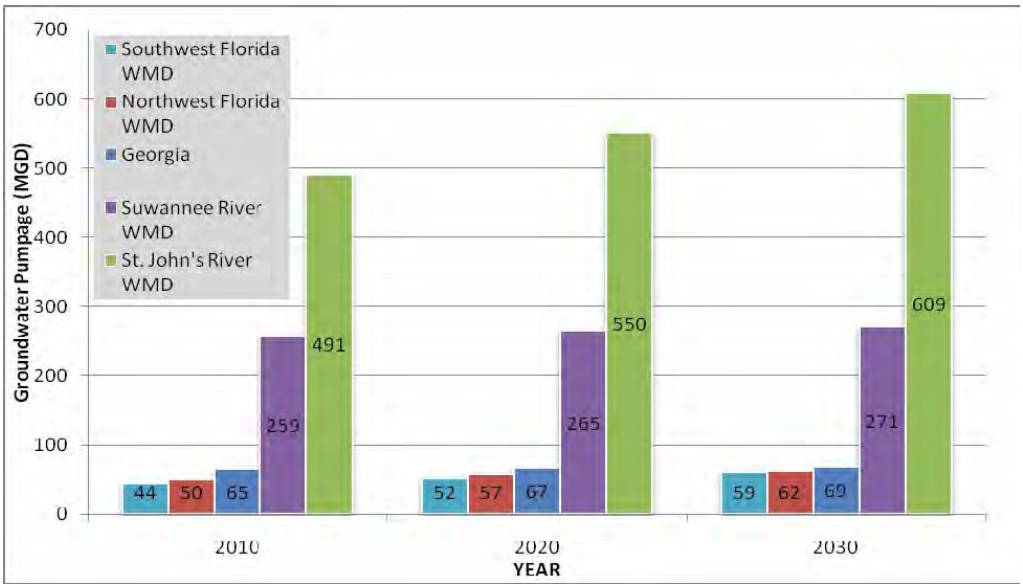
The Assessment further notes that the decrease, "... is apparently a result of groundwater withdrawals originating in the District, the St. Johns River Water Management District, and the State of Georgia."[15] Illustration 4.2 depicts water demand projections through the year 2030 of the Southwest Florida Water Management District, the Northwest Florida Water Management District, southern Georgia, the Suwannee River Water Management District and the St. Johns River Water Management District. The water withdrawals from these water management districts, as well as southern Georgia, are accounted for in a computer model used by the Suwannee River Water Management District and the St. Johns River Water

[15]Water Supply Assessment: Water for Nature, Water for People, 2010, Suwannee River Water Management District, December 6, 2010, Live Oak, Florida, pg. 46.

Management District to identify groundwater impacts. The Assessment notes that, within the geographic area subject to computer modeling, the magnitude of groundwater withdrawals occurring in the St. Johns River Water Management District's northern-most nine counties "... is significantly larger than the withdrawals in the entire Suwannee River Water Management District."[16]

**ILLUSTRATION 4.2**

**NORTH FLORIDA MODEL AREA WATER DEMAND PROJECTIONS**



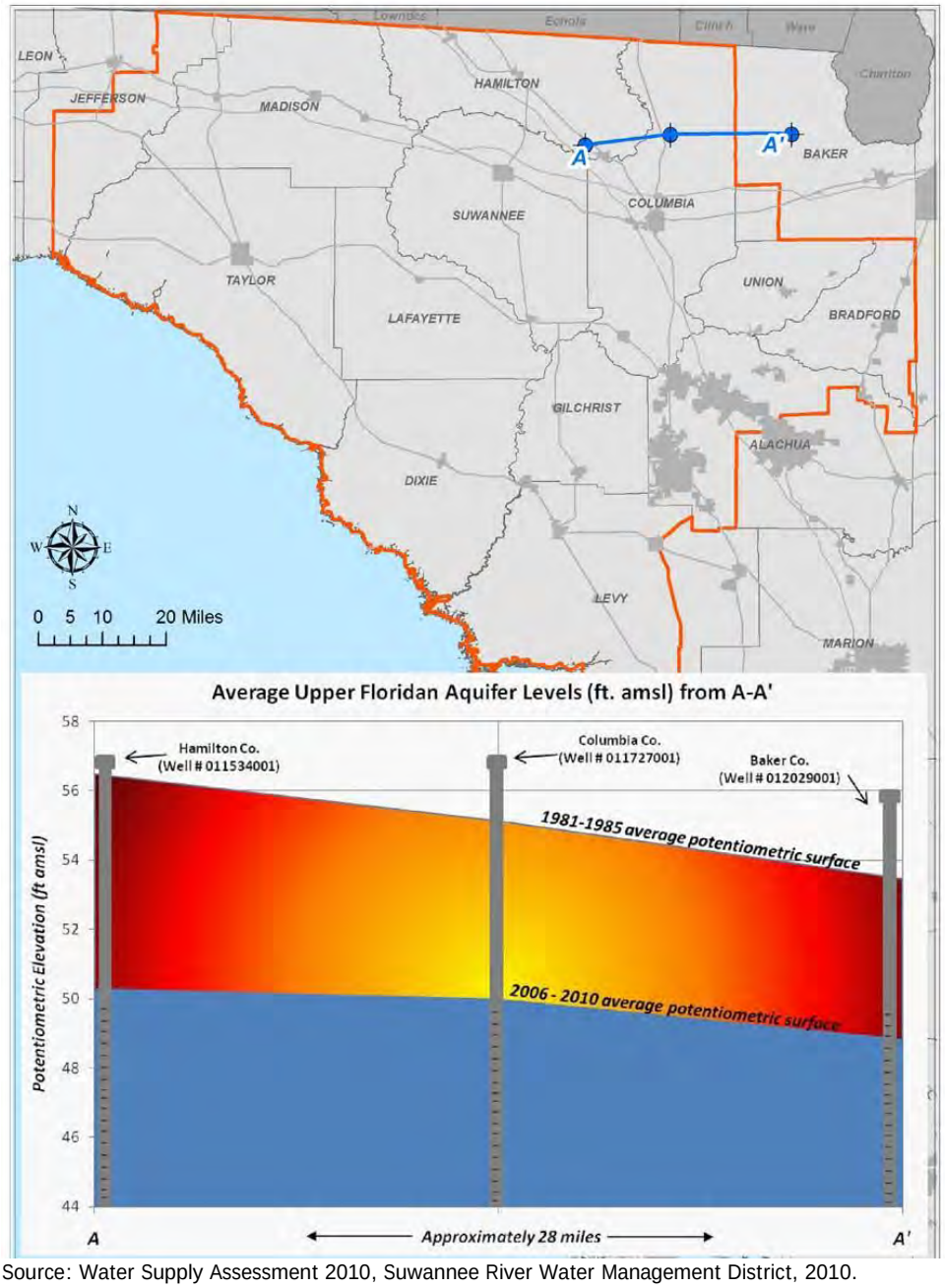

Source: Water Supply Assessment 2010, Suwannee River Water Management District, 2010.

Illustration 4.3 depicts the magnitude of the decline in average potentiometric levels from 1981 to the present along a 28-mile cross-section through the Upper Floridan Aquifer.

[16]Water Supply Assessment: Water for Nature, Water for People, 2010, Suwannee River Water Management District, December 6, 2010, Live Oak, Florida, pg. 34.

## ILLUSTRATION 4.3

## POTENTIOMETRIC SURFACE DECLINE ACROSS SECTION A-A

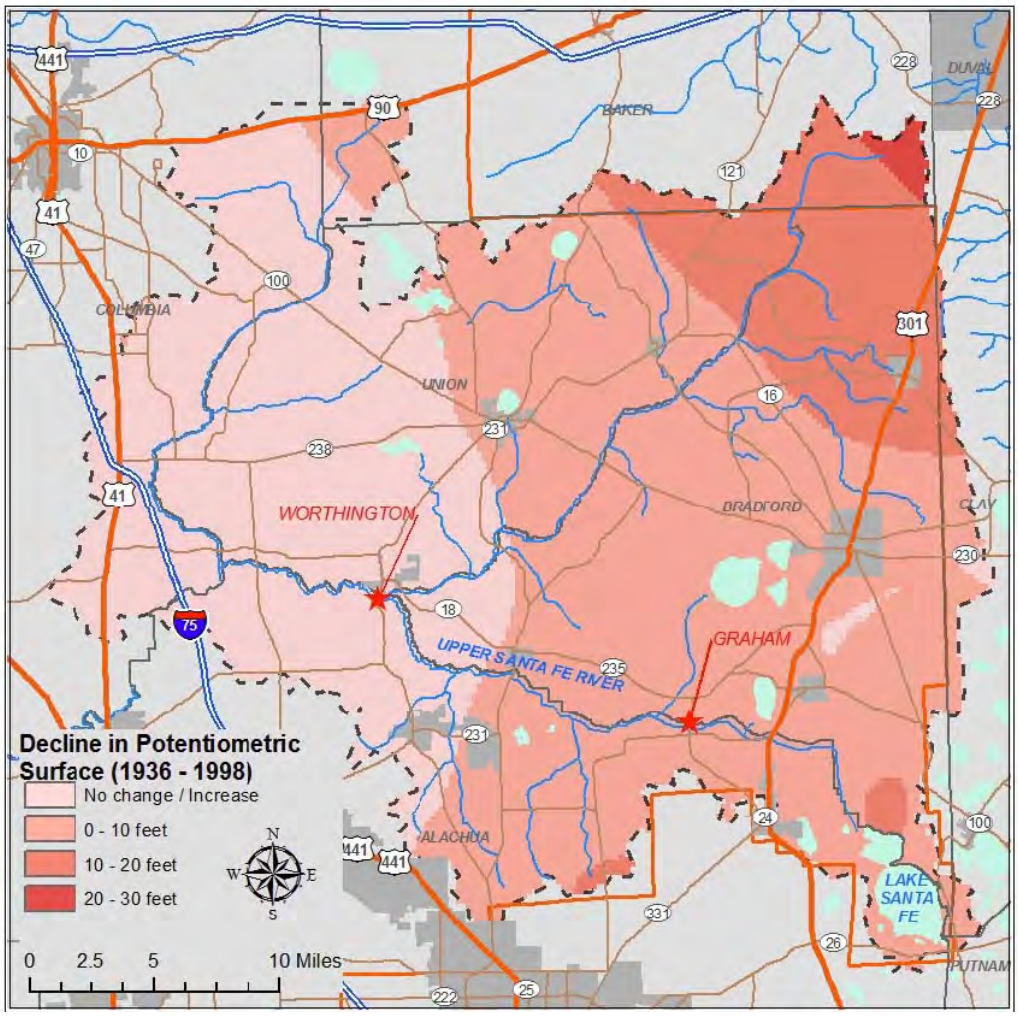



Source: Water Supply Assessment 2010, Suwannee River Water Management District, 2010.

The Water Supply Assessment notes that Section A-A has experienced a cumulative drawdown of approximately six feet over a 29-year period. The Assessment further notes that this decline is in addition to significant a drawdown which occurred prior to 1981.[17] The drawdown is particularly notable in the Upper Santa Fe River Basin, as shown in Illustration 4.4, below.

**ILLUSTRATION 4.4**

**UPPER SANTA FE RIVER BASIN POTENTIOMETRIC SURFACE DECLINE FROM PRE-DEVELOPMENT THROUGH 1998**




Source: Water Supply Assessment 2010, Suwannee River Water Management District, 2010.

[17]Water Supply Assessment: Water for Nature, Water for People, 2010, Suwannee River Water Management District, December 6, 2010, Live Oak, Florida, pg. 48.

The Water Assessment concludes that the decline in the potentiometric surface of the Floridan Aquifer in the northeastern portion of the Water Management District apparently has impacted a number of rivers, and springs to the degree that they are not currently meeting their established minimum flows and levels, or will not meet them at some point during the 20-year planning period of the Water Supply Assessment. More specifically, the Water Supply Assessment notes that the Aucilla River, a portion of the Suwannee River near White Springs, the Alapaha River, the Santa Fe River, Hornsby Spring, and Santa Fe Rise are anticipated to fall below their established minimum flows at some point by 2030.[18]

Subsection 373.042(2), Florida Statutes, requires water management districts to establish minimum flows and levels to protect surface waters. Minimum flows and levels represent the water level below which significant harm can occur to surface water bodies, be it to navigation, recreation, fish and wildlife, or fish and wildlife habitat. Once established, they are used as part of the water supply planning and permitting criteria for consumptive use permits issued by the districts. Essentially, water flows and levels which are above the minimum flow can be allocated for consumptive uses without significantly adversely impacting the water body from which the water is withdrawn.

The Water Supply Assessment recommends the creation of four Water Supply Planning Areas as depicted in Illustration 4.5 and associated Water Supply Plans. Designation as a Water Supply Planning Area can result in the area being classified by the Water Management District as a Water Resource Caution Area. A Water Resource Caution Area is an area where existing sources of water will not be adequate to satisfy future water demands and sustain water resources, including Natural Resources of Regional Significance. Future water users within Water Resource Caution Areas will be required to find water sources other than groundwater withdrawals from the Floridan Aquifer. Alternative water sources could include surface water from rivers, reclaimed water, brackish groundwater, and seawater. The Water Supply Assessment notes that water conservation is also considered to be an alternative water source even though it is a demand management method and not technically a source of water.[19]

Pursuant to Section 163.3177(4), Florida Statutes, within 18 months after the adoption of a Water Supply Plan, even if a Water Supply Area is not identified as a Water Resource Caution Area, local governments must amend their Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Element to incorporate alternative water supply projects from those identified in the regional water supply plan. The element must identify such alternative water supply projects and traditional water supply projects and conservation and reuse necessary to meet the water needs identified in the Water Supply Plan.

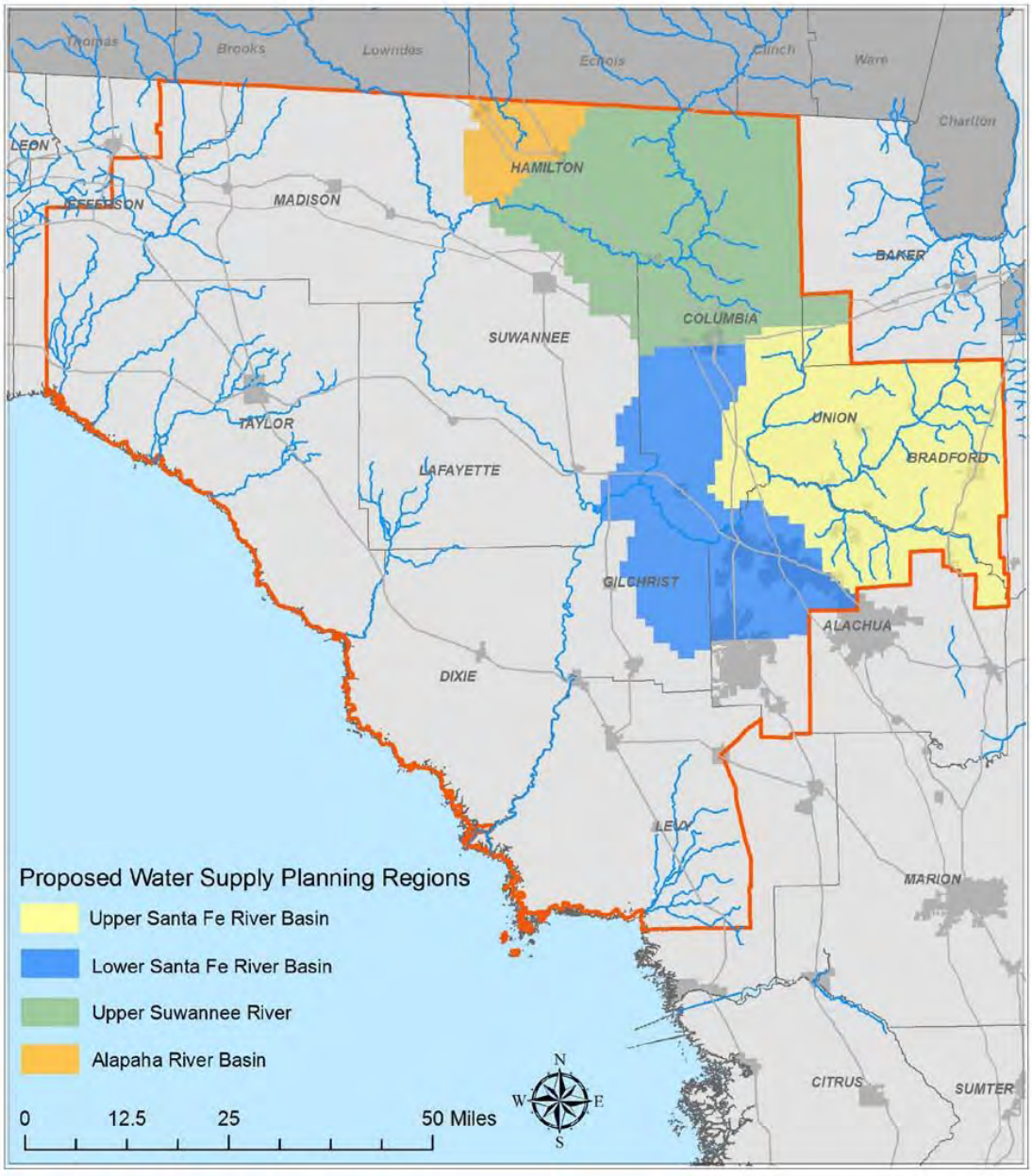
The element must also include a work plan, covering at least a 10-year planning period, for building public, private, and regional water supply facilities, including development of alternative water supplies, which are identified in the element as necessary to serve existing and new development. The work plan must also include an estimate of the capital costs, as well as the operating and maintenance costs, of the listed projects, including the identification of possible funding sources.

[18]Water Supply Assessment: Water for Nature, Water for People, 2010, Suwannee River Water Management District, December 6, 2010, Live Oak, Florida, ppg. 44 and 46.

[19]Water Supply Assessment: Water for Nature, Water for People, 2010, Suwannee River Water Management District, December 6, 2010, Live Oak, Florida, pg. 4.

## ILLUSTRATION 4.5

## WATER SUPPLY PLANNING REGIONS




Source: Water Supply Assessment 2010, Suwannee River Water Management District, 2010.

## ii. Water Quality of the Floridan Aquifer

Generally, the water quality of that portion of the Floridan Aquifer which underlies north central Florida is excellent. North central Florida groundwater contamination is local in nature, consisting of point source discharges, underground storage tanks, landfills, storm water drainage wells, direct recharge from untreated storm water, and direct recharge from untreated intensive agricultural runoff.[20] The Floridan Aquifer is almost entirely contained within a bed of limestone. Rainfall, surface water, and surficial aquifer water is slightly acidic. As a result, the carbonate rock of the Floridan Aquifer is slowly dissolving. The dissolved rock appears as dissolved particles in the groundwater. Consequently, water from the Floridan Aquifer is relatively high in specific conductivity, alkalinity, magnesium, and calcium.[21]

The region's springs can also provide a useful measure of groundwater quality. Nitrate Nitrogen is present in Floridan Aquifer and can be measured from spring discharges. High concentrations of nitrates may create an imbalance in a natural surface water system, causing algal blooms or other adverse effects. Nitrate Nitrogen concentrations in excess of the state drinking water standard of 10 mg per liter of water can result in Methemoglobinemia (blue baby syndrome) in infants.

Table 4.5 identifies Nitrate Nitrogen concentration changes over time in the regions first-magnitude springs. As can be seen, eight springs have experienced an increase in nitrate nitrogen, while six springs have experienced a decrease in nitrate nitrogen.

**TABLE 4.5**

**NORTH CENTRAL FLORIDA FIRST MAGNITUDE SPRINGS:
WATER QUALITY CHANGE OVER TIME**

| Spring Name | County | Nitrate Nitrogen (Milligrams per Liter) | Date of Measure | Nitrate Nitrogen (Milligrams per Liter) | Date of Measure | Percent Change |
|---|---|---|---|---|---|---|
| **Alapaha Rise** | Hamilton | 0.29 | 8/18/05 | 0.64 | 10/7/15 | 54.69 |
| **Blue Hole** | Columbia | 0.62 | 9/16/2002 | 0.76 | 3/14/16 | 18.11 |
| **Columbia** | Columbia | 0.5 | 11/1/05 | 0.32 | 1/19/16 | (54.94) |
| **Devil's Ear** | Gilchrist | 2.0 | 7/14/05 | 1.65 | 2006 | (21.21) |
| **Falmouth Spring** | Suwannee | 0.56 | 8/18/2005 | 1.48 | 10/8/2015 | 62.13 |
| **Holton Spring** | Hamilton | 0.025 | 10/13/10 | 0.004 | 10/7/2015 | (525.00) |

[20]Suwannee River Water Management District, 1996.

[21]Draft Water Management Plan, Live Oak, Florida, August 8, 1994, pg. 35.

**TABLE 4.5 (Continued)**

**NORTH CENTRAL FLORIDA FIRST MAGNITUDE SPRINGS:
WATER QUALITY CHANGE OVER TIME**

| Spring Name | County | Nitrate Nitrogen (Milligrams per Liter) | Date of Measure | Nitrate Nitrogen (Milligrams per Liter) | Date of Measure | Percent Change |
|---|---|---|---|---|---|---|
| **July** | Columbia | 1.22 | 8/22/01 | 1.63 | 4/20/16 | 25.16 |
| **Lafayette Blue Spring** | Lafayette | 1.98 | 3/15/06 | 2.25 | 3/15/16 | 11.84 |
| **Madison Blue Spring** | Madison | 1.7 | 11/28/05 | 1.79 | 12/8/15 | 5.05 |
| **Manatee Spring** | Levy | 1.88 | 2/21/06 | 2.25 | 2/3/16 | 16.47 |
| **Nutall Rise** | Taylor | 0.08 | 7/6/99 | .079 | 2/2/2016 | (1.78) |
| **Santa Fe Rise** | Columbia | 0.25 | 5/22/00 | 0.30 | 1/21/16 | 16.69 |
| **Santa Fe Spring (Columbia)** | Columbia | Current data unavailable | | | | |
| **Siphon Creek Rise** | Gilchrist | 0.69 | 8/22/01 | Current data unavailable | | |
| **Steinhatchee Rise** | Taylor | 0.03 | 7/6/99 | 0.03 | 9/18/14 | 0.00 |
| **Stevenson Spring** | Suwannee | 0.74 | 9/24/97 | Current data unavailable | | |
| **Treehouse Spring** | Alachua | 0.52 | 11/1/05 | 0.35 | 1/19/16 | (48.83) |
| **Troy Spring** | Lafayette | 2.83 | 11/2/05 | 2.54 | 11/2/15 | (11.52) |

a = not available.

Sources: Southwest Florida, St. John's River, and Suwannee River Water Management District, 2016; and Florida Department of Environmental Protection, 2015.

## iii. Impact of Stormwater on the Floridan Aquifer

Land use decisions and land management practices, particularly within high recharge areas and stream-to-sink watersheds, can have direct impacts upon both the quality and quantity of water contained within the Floridan Aquifer. Local government comprehensive plans and water management district surface water permitting regulations should ensure that adverse impacts resulting from development which does occur within high recharge areas and stream-to-sink watersheds are minimized.

Statewide stormwater management requirements began in 1982 with Chapter 17-25, Florida Administrative Code, rule requiring stormwater treatment. In 1983, the St. Johns River Water Management District adopted Chapter 40C-4, Florida Administrative Code, for regulation of stormwater quantity. In 1986 both St. Johns and Suwannee River Water Management Districts adopted rules for stormwater quality (40C-42 and 40B-4,

Florida Administrative Code, respectively), which replaced Chapter 17-25, Florida Administrative Code, in their respective jurisdictions. Prior to the enactment of these rules, there were no uniform stormwater management guidelines. Development occurring in some north central Florida local governments prior to 1982 faced no storm water management requirements whatsoever. This created a situation whereby stormwater in many of the region's older development, contaminated with pollutants such as oil, pesticide, and fertilizer residues, flows untreated into the Floridan Aquifer through high recharge areas and stream-to-sink watersheds. Inadequately treated stormwater also pollutes several surface waters identified as Natural Resources of Regional Significance.

## b. Areas of High Recharge Potential to the Floridan Aquifer

The Floridan Aquifer is replenished by rainfall. Certain areas of the region, due to the characteristics of the underlying soils, geology, and depth to the Floridan Aquifer, recharge more groundwater to the Floridan Aquifer faster than other areas. Areas of potential high recharge found within the region, as identified by the Southwest Florida, St. Johns River, and Suwannee River Water Management Districts, are recognized by the regional plan as Natural Resources of Regional Significance.[22]

Generally, Areas of High Recharge Potential to the Floridan Aquifer run northwest-southeast band that is approximately 38 miles wide. High aquifer recharge areas occur in Alachua, Columbia, Dixie Gilchrist, Hamilton, Lafayette, Levy and Madison counties. The regional plan identifies and maps 1,180,502.52 acres, 22.9 percent of the entire region, as areas of high recharge potential to the Floridan Aquifer a Natural Resource of Regional Significance.

Alachua County has undertaken a study to produce a more accurate map of high aquifer recharge areas. In its review of County Comprehensive Plan amendments in 2004, the Council indicated it was willing to accept the County high aquifer recharge map, once completed, in lieu of the high aquifer recharge map included in the regional plan. Therefore, the new County aquifer recharge map is recognized as a Natural Resource of Regional Significance and is used as a source map for the high aquifer recharge potential map included in the regional plan. Columbia County has also produced a new aquifer recharge map using the same methodology employed in the development of the new Alachua County map. Therefore, the new Columbia County aquifer recharge map is also recognized as a Natural Resource of Regional Significance and included in the regional plan in place of the Suwannee River Water Management District map.

### i. Stream-to-Sink Watersheds

Stream-to-sink watersheds are drainage basins containing one or more sinkholes which, in some cases, have direct connection to the Floridan Aquifer. In a stream-to-sink watershed, surface water runoff usually finds its way to streams that, in turn, flow into a sinkhole. Identification and management of these areas is necessary to prevent chemicals, pollutants, and fertilizers from finding direct or near-direct access to the drinking water supply through surface water runoff. The regional plan recognizes eight stream-to-sink watersheds as Natural Resources of Regional Significance. These are Norton Creek in Madison County,

[22]The water management districts used different methods to determine areas of high recharge, resulting in apparent inconsistencies between high aquifer recharge areas near district boundaries. For the St. Johns River Water Management District, the regional plan considers areas identified by the district as recharging 12 inches or more of water annually as Areas of High Recharge Potential to the Floridan Aquifer. For the Suwannee River Water Management District, the regional plan considers areas identified by the district as "High" to be Areas of High Recharge Potential to the Floridan Aquifer.

Sinking Branch in Hamilton County, Little River in Suwannee County, Indian Mound Swamp/South Falling Creek/Turkey Prairie in northwest Columbia County, the Cannon Creek/Columbia Rose Creek/Clay Hole Creek area in southern Columbia County, Alachua Slough/Blues Creek/Burnett Lake/Mill Creek/Hammock Branch/North Alachua/Pareners Branch/Turkey Creek in northern Alachua and southern Columbia Counties, Priest Prairie Drain on the northern Levy-Marion County border, and an unnamed basin on the central Levy-Marion County border.

## ii. Ichetucknee Trace

Ichetucknee Trace is located immediately north of Ichetucknee Springs State Park. The trace represents an ancient river corridor of the Ichetucknee River which is now underground. The waters of this ancient underground river re-emerge in the springs contained in Ichetucknee Springs State Park. Topographic analysis and recent ink dye tracing studies indicate a well-defined and integrated drainage system beneath the Ichetucknee Trace and the headwater springs of Ichetucknee Springs State Park. The trace itself represents an area of high karst activity, approximately one-mile in width on both sides of the ancient stream bank from Ichetucknee Springs State Park northward to the corridor's intersection with the 75-foot elevation contour. The entire trace area is approximately 13 miles in length. The northern portions of the trace include Rose and Clay Hole creeks. The trace area immediately north of the park is locally referred to as "Swiss cheese" due to the many sinkholes and chimneys located in the area. The entire Ichetucknee Trace abounds with sinkholes, ancient springs, isolated wetlands, and other solution features. Much of the trace is heavily forested.

Investigations by the University of Florida Geology Department have confirmed the direct connectivity of Rose Creek to the Ichetucknee Springs, as well as the connectivity of at least one sinkhole in the trace lying between Rose Creek sink and the springs. Septic tanks associated with urban development as well as agricultural activities are a special concern regarding the impact on water quality of the underground flows and ultimately on the surface water quality of the headwater springs located in Ichetucknee River State Park.

## iii. Sinks

Besides stream-to-sink watersheds and the sinks which drain them, four additional sinks and one sink group are identified as Natural Resources of Regional Significance. These include O'leno Sink in O'leno State Park, Devil's Millhopper in Devil's Millhopper State Geologic Site, Alachua Sink in Paynes Prairie State Preserve, Brooks Sink in Bradford County, and the Aucilla River Sinks in Taylor County. Three of these Natural Resources of Regional Significance are discussed in detail below.

### Aucilla River Sinks

Aucilla River Sinks comprise a four-mile section of the Aucilla River sometimes referred to as the "natural bridge" or "sink area" where the river disappears and rises in many sinkholes. This unique geological feature combined with a variety of wildlife in a diverse forest setting combine to make the sinks area of the Aucilla River a Natural Resource of Regional Significance.

The entire sink area encompasses some 2,000 acres along the river's trace in Taylor and Jefferson Counties. The four-mile river segment contains at least 50 to 60 sinkholes.[23] Some are simply limestone chimneys only a few feet in diameter; many are several hundred feet across with an elongated shape. Many sinks have a distinct flowing current.

The origin of these sinkholes is likely due to a ceiling collapse of an underground limestone river channel. Throughout the area, limestone banks are evident along the borders of all the sinks, usually forming banks from three to ten feet above the water surface. During periods of high rainfall the entire area may flood with the river as well as the sinkholes overflowing their banks.

The area along the river trace is predominantly a hardwood hammock. The limestone formation near the surface effectively prohibits most pine tree growth along the immediate river trace area. Much of the surrounding forest is overgrown with a dense understory, but paths and trails are frequent and provide access to the sinks. The area is not well used as few people know of its existence. Approximately two-thirds of the area was recently purchased by the State of Florida through the Conservation and Recreational Lands program.

Brooks Sink

Brooks Sink is located within a privately-owned pine forest approximately four miles east of the Town of Brooker in Bradford County. The natural character of the sink is similar to Devil's Millhopper. It is located in a small, well maintained area of natural vegetation within an eight square mile area of planted pine forest. The site is closed to the public. Although in the midst of an intensively managed pine forest, the immediate surroundings of the sink, approximately ten acres, have not been harvested.

The value of Brooks Sink lies primarily in its significance as a site for geologic study. The area is known for its excellent exposures of soil and rock strata, particularly of the Hawthorne Formation. The relatively small natural forest surrounding the sink contributes to the aesthetic appeal of the site.

The sink itself has almost sheer limestone banks lined with large oak and elm trees which occasionally fall into the sink. The walls are covered with a variety of mosses and ferns, and only on its south side do the banks have sufficient slope for trees and shrubs to grow partially into the basin. The sink is approximately 85 feet deep and 400 feet in diameter. A deep gully has been eroded into the southeast side of the sink draining some 600 acres of planted pines northeast of the sink. This channel has eroded deeply into the sides of the sink.

Almost every common pine species occurs here including slash, longleaf, and loblolly pine, as well as large oak, elm, and gum trees. The planted pine forest surrounding the sink area consists primarily of loblolly pines in various stages of maturity. The retention of natural vegetation around the sink greatly minimizes erosion. Common wildlife in the area include wild pig, deer, and rabbit. A variety of panfish have been caught in the sink but no other aquatic species have yet been identified.

[23] North Central Florida Regional Planning Council, Significant Natural Areas in Planning District Three, Gainesville, Florida, 1977, pg. 41.

Devil's Millhopper Geological State Park

The Devil's Millhopper is a large sinkhole located north of Gainesville in Alachua County. The bowl-shaped sink, one of the largest in the state, measures 500 feet across and approximately 120 feet deep. Currently owned and managed by the Florida Department of Environmental Protection, Division of Recreation and Parks, the Devil's Millhopper was purchased by the state in 1972.

The sinkhole displays a gradation of micro-ecosystems, each with its own biotic community. In addition to its unique ecological features, the exposed slopes of the sinkhole reveal a slice of Florida's fossil and geologic record. Although located in an area of rapid residential development, continued state ownership should buffer most adverse impacts caused by development.

# 4. Natural Systems

Natural Systems identified in the regional plan as Natural Resources of Regional Significance consist of the Regional Ecological Greenways Network, which is a subset of the of the Florida Ecological Greenways Network included in the legislatively-adopted Florida Greenways Plan administered by the Office of Greenways and Trails. The Florida Ecological Greenways Network consists of a statewide network of ecological hubs and linkages designed to maintain large-scale ecological functions including focal species habitat and ecosystem services throughout the state. Critical Linkages 1 Critical Linkages 2, Priority 1 and Priority 2 coverages identified in the Critical Lands and Waters Identification Project initiated by the Century Commission for Sustainable Florida are, collectively, the areas of the Florida Ecological Greenways Network with the highest state and regional significance and are therefore included in the Regional Plan as the Regional Ecological Greenways Network, a Natural Resource of Regional Significance. The Regional Ecological Greenway consists of the two highest priority classes identified in the 2016 update of the Florida Ecological Greenways Network.

The Florida Ecological Greenways Network aggregates various data which identify areas of ecological significance from the Florida Natural Areas Inventory, Florida Fish and Wildlife Conservation Commission, existing and proposed conservation lands, and other relevant data. The data were combined to identify large areas of ecological significance (ecological hubs), and a network of linkages and corridors connecting the hubs into a statewide system of hubs and corridors.

It is the intent of this plan to protect listed species and their associated habitats located within the Regional Ecological Greenways Network while, at the same time, allowing development and economic activity to occur within the Network to the extent that such development and economic activity does not significantly and adversely harm the function of the resource as an ecological greenway.[24]

[24]Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50, Code of Federal Regulations, Part 17.

# 5. Planning and Resource Management Areas

Planning and Resource Management Areas can more accurately be thought of as natural resource designations rather than the mapping of natural resources per se. Planning and Resource Management Areas recognized by the regional plan as Natural Resources of Regional Significance include privately- and publicly-owned conservation and resource-based recreation lands.

## a. Private Conservation and Resource-Based Recreation Lands

Privately-owned conservation and resource-based recreation lands designated as Natural Resources of Regional Significance are lands owned by the Nature Conservancy and similar organizations. The Nature Conservancy often works in concert with government agencies to acquire public conservation lands. Typically, the Nature Conservancy will acquire the property from a private owner and sell to a government agency. This technique was successfully used in the early 1990s to enlarge the Osceola National Forest. The Nature Conservancy also played an intermediary role in the state's Big Bend Coastal Tract acquisitions. Currently, privately-owned conservation lands total to 5,861.31 acres in the region.

## b. Public Conservation and Resource-Based Recreation Lands

Publicly-owned lands used for conservation and resource-based recreation purposes include national forests, state parks and preserves, other state lands owned for conservation and resource recreation purposes, lands owned by water management districts, and a few county-owned properties. Mapped categories of publicly-owned conservation and recreation lands are Federal, State, Water Management District, and County.

A number of tracts of publicly-held lands are found in north central Florida. The regional plan identifies 777,077.91 acres of regionally significant public lands (and conservation easements), representing 15.1 percent of the region. So much north central Florida land is in public ownership that some north central Florida county governments oppose additional public land acquisitions due to the resultant decline in the local tax base.

Every state park and preserve, and every national forest, wildlife refuge, and wilderness area has a management plan. The Council can, through its regional plan, provide input into the direction of future management plans prepared for such areas located within the region. Council input can help to coordinate the management plans for specific public lands with the policies of the regional plan. For example, recent Council emphasis on eco-tourism promotion may suggest a management plan place greater emphasis on recreational or environmental activities.

Publicly-owned lands recognized by the regional plan as Natural Resources of Regional Significance include Austin Cary Memorial Forest, Big Shoals State Forest, Big Gum Swamp National Wilderness Area, Big Bend Coastal Tracts, Devil's Millhopper State Geologic Site, Ichetucknee Springs State Park, Lower Suwannee River National Wildlife Refuge, Okefenokee National Wildlife Refuge, Osceola National Forest, O'leno State Park, Paynes Prairie State Preserve, Peacock Springs State Recreation Area, River Rise State Preserve, San Felasco Hammock State Preserve, St. Marks National Wildlife Refuge, Steven Foster State Folk Cultural Center, Suwannee River State Park, water management district lands including Lochloosa Forest, various tracts along the Suwannee River, as well as other holdings. Fifteen of these areas are highlighted below.

## i. Austin Cary Memorial Forest

Comprising 2,076.30 acres, Austin Cary Memorial Forest is in northeastern Alachua County immediately north of Gum Root Swamp, a Natural Resource of Regional Significance. The forest is owned by the University of Florida and managed by the university's School of Forest Resources and Conservation.

## ii. Big Bend Wildlife Management Area

The Big Bend Coastal Tracts consist of approximately 90,662.59 acres on the coast in Dixie and Taylor counties, 4,389 acres of which comprise the Econfina River State Park. The tracts were purchased under the Conservation and Recreational Lands program in 1988 and 1990. The tracts were part of a larger acquisition intended to protect the low energy coastline of the Gulf of Mexico.

The area contains salt marsh, hydric hammock, mesic flatwoods, sandhills, upland hardwood forest, maritime hammock, and coastal swamp. Much of the drier sites have been converted to planted pine forest. The areas support excellent populations of wildlife. The tracts are adjacent to the Big Bend Seagrass Aquatic Preserve. Four wildlife management areas (Hickory Mound, Spring Creek, Tide Swamp, and Big Bend) are located within the tracts. The Big Bend Salt Marsh and Tide Swamp are discussed in greater detail on pages IV- 11 and IV-48, respectively.

## iii. Big Gum Swamp National Wilderness Area

The Big Gum Swamp National Wilderness Area is located within the Osceola National Forest and is administered by the U.S. Forest Service. The area comprises 13,847 acres, of which 3,374 acres are in Columbia County. The remainder is located in Baker County and the Northeast Florida Regional Planning District. National wilderness areas differ from national forest lands in that no economic or mechanical activity may take place in wilderness areas. The land and wildlife must be left in its natural state.

## iv. Local Government Conservation Areas

Local government conservation areas designated as Natural Resources of Regional Significance consist of 23,102.18 acres. The parcels are located in Alachua, Columbia, Gilchrist, Levy and Suwannee counties as well as the Cities of Starke and Gainesville. The City of Starke property consists of 138 acres known as the Edwards Bottomland. The City of Gainesville owns and manages 21 separate properties consisting of ~~1,755~~ 2,280.12 acres. The Columbia County property consists of the 968-acre Alligator Lake Park and Recreation Area as well as the 136-acre Falling Creek Park. The Alachua County property includes 36 separate holdings consisting of 14,776.55 acres either owned or managed by the County. Gilchrist County manages the 275.87-acre Hart Springs Park. Levy County manages the 3,253.79-acre Devil's Hammock. The Town of Yankeetown manages the 426.56-acre Yankeetown Conservation Area. The Suwannee County property consists of the 77-acre Suwannee River Greenway at Branford.

## v. Ichetucknee Springs State Park

Ichetucknee Springs State Park consists of 2,531.97 acres along the Ichetucknee River. The park includes the head waters of the Ichetucknee River, which consists of a number of springs, including Ichetucknee Springs. The park was purchased by the state in 1970 and listed on the National Registry of Natural Landmarks in 1972. It is known for its clear water and is a very popular location for canoeing, rafting, and tubing.

The river bank ranges from high limestone outcrops to river swamp/marsh. Sandhills dominate the highest elevations in the park. The sandhill community comprises 30 percent of the park and has well-drained soil with an open canopy. Common plants include turkey oaks, sand post oak, longleaf pine, bracken fern, and wiregrass. Mesic hammock constitutes 65 percent of the park area. It is moderately drained and has a closed canopy consisting of mixed hardwoods including southern red oak, laurel oak, sweetgum, flowering dogwood, and sparkleberry. The park contains a small area of river swamp, which is poorly drained and frequently flooded with a dense canopy. The dominant plants of the river swamp are red maple, sweetgum, American elm, Florida ash, and bald cypress. Animals common to the park include beaver, turkey, limpkin, apple snail, Suwannee bass, gulf pipe fish, and river otter.

## vi. Lower Suwannee National Wildlife Refuge

The Lower Suwannee National Wildlife Refuge comprises approximately 53,333.83 acres of coastal marsh, of which 28,634 acres are located in Dixie County. The remainder is in Levy County. Within Dixie County, the refuge starts eight miles south of Fanning Springs, continues southward along the Suwannee River to the unincorporated coastal community of Suwannee, and extends ten miles northward along the coast.

National wildlife refuges are created by Congress for the protection of migratory waterfowl and endangered species. They are owned or leased by the federal government and managed by the U.S. Fish and Wildlife Service. While economic activities may occur in a national wildlife refuge, the activity must not threaten the habitats of endangered species or migratory birds. It is common for selected timber harvesting or limited agricultural activities to occur in a wildlife refuge.

## vii. Okefenokee National Wildlife Refuge

The Okefenokee National Wildlife Refuge consists of 396,000 acres, a small portion of which is adjacent to the northeast corner of Columbia County. The bulk of the refuge is in Georgia. The refuge is located approximately four miles north of the Osceola National Forest. The Nature Conservancy is slowly purchasing land between the Osceola National Forest and the Okefenokee National Wildlife Refuge in an effort to link the two federal holdings for purposes of wildlife preservation.

## viii. O'leno State Park and River Rise Preserve State Park

O'leno State Park and River Rise Preserve State Park are adjacent state land holdings encompassing 6,200 acres along the Santa Fe River. O'leno State Park is on the Columbia County side of the river while River Rise Preserve State Park is located on the Alachua County side. The Santa Fe River enters the O'leno State Park at its northeast corner and proceeds in a southwesterly direction through the property. Similar to the Aucilla River, the Santa Fe River disappears within in an area known as the river sink. The river travels approximately three miles underground before reappearing in the highly scenic area known as the river rise. The area between river sink and river rise is known as the natural bridge.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

The area has significant historical interest. The northern portion of the property is traversed by the Old Bellamy Road which was authorized by Congress in 1824 to link the east and west coasts of Florida. The Bellamy Road was the second federal road in the nation. An abundance of chert artifacts adds to the archaeological value of the area. Chert, also known as flint or flintrock, was used by American Indians in the manufacture of axe heads, spear heads, and arrow points.

Major plant communities within the park and preserve are sandhill, mesic hammock, bottomland hardwood swamp, and sandy scrub. Dominant species of the sandhill community include longleaf pine and loblolly pine. Other sandhill species include turkey oak and wiregrass. Dominant plant species in the mesic hammock community include the live oak, laurel oak, pignut hickory, and swamp chestnut oak with the sub-canopy made up of hollies, many shrubs, and wildflowers.

Areas of sandy scrub are found on the natural levees and the floodplain along the river. Due to a lack of nutrients and dry soil conditions, trees growing here seldom attain great height. Plant species include sand live oak, chapman oak, and extensive areas of saw palmetto. Woody swamp borders much of the river and is inundated at least part of the year. Plant species in the swamp area include bald cypress, river birch, red maple, American hornbeam, and black gum. Animals found in the park include fox squirrel, gopher tortoise, red tail hawk, indigo snake, pine snake, rufus-sided towhee, alligator, river otter, wood duck, white ibis, whitetail deer, opossum, raccoon, wild turkey, and pileated woodpecker.

## ix. Osceola National Forest

Osceola National Forest consists of 200,155 acres, 114,199.13 acres of which are in northwest Columbia County. The remainder of the forest is outside the region in Baker County and in the Northeast Florida Regional Planning District. Osceola National Forest is the largest federal government land holding in the region. Most of the forest consists of forested wetlands. The higher, better-drained areas are in the southern half of the property. The forest is covered by pine flatwoods with longleaf pine predominating the western one-third and slash pine predominating the eastern two-thirds of the forest. The most common understory includes saw palmetto and gallberry. Runner oak and wiregrass are the most common ground cover. Cypress is the second most-common tree type in the Forest. Blackgums, red bay, red maple, and holly accompany the bald cypress and pond cypress. Creek swamps featuring sweetbay, blackgum, and red maple occupies about 12 percent of the forest. A variety of wildflowers can be found throughout.

Osceola National Forest holds a variety of wildlife and fish. Game animals include white-tailed deer, black bear, wild turkey, quail, rabbit, squirrel, and dove. Non-game species include more than 50 species of fish, 40 species of amphibians, 60 species of reptiles, 180 species of birds, and 48 species of mammals.[25] The red-cockaded woodpecker, Florida sandhill crane, American alligator, indigo snake, and Suwannee bass are among the listed species found within the forest.[26]

[25]Final Environmental Impact Statement for National Forests in Florida Land Resource Management Plan, U.S.D.A. Forest Service, Southern Region, Tallahassee, Fl, December 1985, pg. III-13.

[26]Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50, Code of Federal Regulations, Part 17.

The National Forest Management Act of 1976 designates the U.S. Forest Service as the management agency for national forest lands. Under the act, the U.S. Forest Service is mandated to produce a continuous supply of goods and services from national forest lands. Goods and services are limited to timber, wildlife, water, forage, minerals, outdoor recreation, and soil conservation. Essentially, any activity detrimental to these items is prohibited in national forest lands. The National Environmental Policy Act of 1976 requires the preparation of an Environmental Impact Statement for major projects proposed in national forests.

The forest is extensively used for timber production and contains economically valuable phosphate deposits. Exploratory drilling during the late 1960s indicated a high quality reserve in excess of 100 million tons. There may also be some potential for oil and gas reserves, but limited exploration has shown no deposits. In 1984, the federal government prohibited oil, gas, and mineral extraction from the Osceola National Forest.

## x. Paynes Prairie Preserve State Park

Encompassing approximately 21,561.72 acres in southeastern Alachua County, Paynes Prairie was acquired as part of Florida's state parks and preserves system in 1973. State preserves differ from state parks as they are established primarily to protect natural wildlife and habitat. Access is limited when necessary to prevent adverse environmental damage. State parks are generally more accessible and emphasize outdoor recreation and camping activities. The prairie is intermittently flooded and receives surface water runoff from the City of Gainesville. The quality of surface water runoff to the prairie is of particular concern as the prairie has direct access to the Floridan Aquifer via Alachua Sink.

The major plant community of the prairie is marsh. The depth of water governs plant species and several vegetative zones can be found from the dry prairie edge to the deep water in the center of the prairie. Dog fennels, maiden cane, pickerel weed, cattails, and spatterdock occupy the dry zone. Woody plants such as coastal plain willow, wax myrtle, elderberry, and persimmon have invaded the prairie along its artificial dikes.

Paynes Prairie is famous as a wildlife and waterfowl habitat. The abundance and diversity of animal life in the prairie has been well known since it was first described by explorer-naturalist William Bartram in 1784. Deer, otter, muskrat, alligator, and raccoon exist in the prairie along with many birds, including herons, egrets, ibises, ducks, and bobwhites. Listed species inhabiting the prairie include wood stork, Florida sandhill crane, and American kestrel.[27]

Paynes Prairie, despite its size, does not include the prairie's entire ecosystem. The state Department of Environmental Protection is concerned about development on the fringe of the prairie and would like to expand its boundaries. An area of land on the northeast side of the preserve is proposed for purchase under the Conservation and Recreation Lands program to link the preserve with Prairie Creek and Newnans Lake.

[27]Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50, Code of Federal Regulations, Part 17.

## xi. Peacock Springs Conservation Area

Peacock Springs State Recreation Area is located ten miles southwest of Live Oak adjacent to the Suwannee River in Suwannee County. The area was recently purchased by the state through the Conservation and Recreational Lands Program. The area is an exemplary natural ecosystem containing elements of statewide and regional significance. The area encompasses excellent examples of surface and subsurface karst limestone features, including sizeable sinks, many smaller sinks, and depressions. It has one of the most extensive underwater cave systems in the continental United States and contains a total of 28,000 feet of explored and surveyed underwater passages.[28] The underwater cave system is widely regarded as one of the best underwater cave diving areas in the United States. In addition, the property has important archeological value as an early Spanish mission site.

The sinks and associated aquatic cave system provide critical habitat for at least three listed species of cave crustaceans endemic to Florida.[29] The area also contains mature, second-growth and old-growth forest stands.

## xii. St. Marks National Wildlife Refuge

The St. Marks National Wildlife Refuge comprises approximately 68,000 acres, of which 1,293.06 acres are in Taylor County on the Gulf of Mexico adjacent to the Aucilla River. The remaining acreage is located in Jefferson and Wakulla Counties in the Apalachee Regional Planning District.

## xiii. San Felasco Hammock Preserve State Park

San Felasco Hammock is located in the center of Alachua County between the cities of Gainesville and Alachua. The hammock has the most fertile soil on the Florida peninsula and is the last large remaining example of hardwood hammock in the region. San Felasco Hammock has many steep slopes, ravines, sinkholes, ponds, scattered swamps, and sand ridges. It contains virtually every species of plant and animal native to Alachua County. In addition, the hammock recharges to the Floridan Aquifer. Surface water runoff is transported into the hammock via Turkey Creek and Blue's Creek. San Felasco Hammock was purchased by the state in 1972.

The hammock comprises approximately 7,358.48 acres of wild forest land with some pasture land on its northern edge. Most of the forest has been selectively logged during the 20 years prior to its purchase by the state. The selective cutting does not appear to have caused any permanent damage.

## xiv. Suwannee River State Park

Located 14 miles west of Live Oak and 15 miles east of the City of Madison, Suwannee River State Park features the confluence of the Suwannee and Withlacoochee rivers. The park comprises approximately 1,929.71 acres of open pine sandhills, rich hardwood hammocks, and dense river swamps. The banks of

[28]J. Merrill Lynch, Suwannee River Preserve Design Project, The Nature Conservancy, Tallahassee, Florida, 1984, pg. 119.

[29]Florida Fish and Wildlife Conservation Commission, loc. cit.

the Suwannee have striking exposed walls of limestone outcroppings where the river has cut through the underlying rock.

Typical plants found in the sandhill community include longleaf pine, turkey oak, blue jack oak, and wiregrass. Sandhills are relatively high rolling prairies populated with pine trees. They are places of expansive openness, with wide spacing between the trees and a grassy ground cover. Original explorers of the area found miles upon miles of open sandhills with virgin longleaf pines towering above them. Most have been logged and cleared or left to succeed into hardwoods through the exclusion of natural fire. Sandhills are fire dependent, and constitute a fire-climax community where they appear. Wildlife found in sandhills include fox squirrel, gopher tortoise, red-tail hawk, indigo snake, pine snake, fence lizard, quail, rufous-sided towhee, and red cockaded woodpecker.

Hardwood hammock is an important Florida forest type. It is considered the climax forest of the southeastern coastal plain. Due to heavy logging and clearing, very few sizeable areas of hardwood hammock remain in Florida. Wildlife species dependent on hardwood hammock are diminishing. Suwannee River State Park provides a rich habitat for a wide variety of wildlife dependent upon hardwood hammock including bobcat, deer, turkey, gray squirrel, river otter, pileated woodpecker, wood duck, alligator, white ibis, cottonmouth moccasin, turtles, and a variety of songbirds.

### xv. Water Management District Conservation Areas

Water management districts have acquired approximately 171,368.29 acres of land in the region. The districts have also acquired conservation easements on an additional 136,643.35 acres of otherwise privately-held lands within the region. While the protection of surface water quality is one of the major reasons for water management district acquisitions, many other benefits are provided by these lands. The two primary sources of funds for water management district land acquisitions are the Save Our Rivers Act and the Preservation 2000 Act. The Save Our Rivers legislation created the Water Management Lands Trust Fund for acquiring “lands necessary for water management, water supply, and the conservation and protection of water resources...” The Preservation 2000 Act directs that acquisitions should be “planned so as to protect the integrity of ecological systems and provide multiple benefits, including preservation of fish and wildlife habitat, recreational space, and water recharge areas.” Most of the land acquired by the Suwannee River Water Management District is located within the 100-year floodplain of the Suwannee River and its tributaries. The St. Johns River Water Management District owns a portion of Lochloosa Wildlife Conservation Area in southeast Alachua County. Water management districts continue to receive state funding for land acquisition through the Water Management Lands Trust Fund and Preservation 2000. The districts continue to add to their holdings.

# 6. Surface Water Systems and Surface Water Quality

The region contains a rich assortment of lakes, springs, and wetlands. The headwaters of several rivers are found in the region. The headwaters of other rivers that flow through the region, such as the Suwannee, Alapaha, and Withlacoochee, are located in Georgia. Overall, the quality of surface waters is good. The regional plan identifies 13 lakes, 14 river corridors, 138 springs, and 17 wetlands as Natural Resources of Regional Significance.

## a. Surface Water Quality

According to the 1998 Suwannee River Basin Surface Water Quality Report, the overall water quality of the Suwannee River basin, and the water quality of surface waters listed as Natural Resources of Regional Significance, is good, with a few localized exceptions.[30] The report notes that in many respects, water quality has improved in the basin from conditions which existed in the 1960s and 1970s, when numerous point sources of pollution discharged wastes to the Suwannee River and its tributaries. The report notes that contamination from agricultural and urban runoff are priority water quality management issues. Nutrients, primarily nitrate nitrogen, are the primary concern.[31]

In 1995, 19 of the region's 33 incorporated municipalities had centralized sewer systems. While the unincorporated community of Suwannee has since added a centralized wastewater system, no incorporated north central Florida municipality has converted to a centralized wastewater treatment system since. The Suwannee River Water Management District commissioned a 1998 study entitled Quality Communities Needs Report to identify the needs of north central Florida communities for improvements to their wastewater treatment, systems, potable water systems, stormwater management systems. The study notes that Fanning Springs, Archer, Lee, Steinhatchee, and the Dekle Beach - Keaton Beach area of Taylor County are in need of either a centralized wastewater treatment system or feasibility studies to determine the cost-effectiveness of the installation of a centralized wastewater treatment system.

Table 4.6 below identifies 21 regional waterbodies with a fish consumption advisory issued by the Florida Department of Health. All of the fish consumption advisories are due to excessive levels of mercury in the identified fish species. No fish consumption advisories are in effect in north central Florida due to dioxin, pesticide or saxitoxin contamination.[32]

New criteria for fish advisories for the general population were adopted in 2016. The Florida Department of Health also started listing information for any water body that had been tested and no longer included "Unrestricted Consumption" as a recommendation. The highest rate of consumption included in the recommendations is "two meals per week." The two meals per week limitation is used since it meets the American Heart Association recommendation in the Healthy Heart Diet and there was growing evidence that people who consumed excessive amounts of seafood, some as high as 21 meals per week, could result in mercury poisoning in adults.

[30]David Hornsby and Marvin Raulston, Suwannee River Basin 1998 Surface Water Quality Report: Florida and Georgia, Suwannee River Water Management District, Live Oak, Florida, 2000, page 8.

[31]Hornsby and Raulston, page 35.

[32]Saxitoxin is a neurotoxin found in algae. It is also found in Puffer fish caught in Indian River Lagoons and from waterbodies in Volusia, Brevard, Indian River, St. Lucie and Martin Counties. None of these waterbodies are located in north central Florida.

## TABLE 4.6

## 2016 FLORIDA DEPARTMENT OF HEALTH FISH CONSUMPTION ADVISORIES, 2016

| Waterbody | Species | Women of Childbearing age, young children NUMBER OF MEALS* | All other individuals NUMBER OF MEALS* |
|---|---|---|---|
| **Alapaha River** | Spotted bullhead catfish, White catfish | One per week | Two per week |
| | Spotted sunfish, Redbreast sunfish, Redear sunfish | One per month | Two per week |
| | Bluegill, Brown bullhead catfish, Channel catfish, Largemouth bass | One per month | One per week |
| **Aucilla River** | Redbreast sunfish | One per month | Two per week |
| | Largemouth bass, Spotted sunfish | One per month | One per month |
| **Econfina River** | Redbreast sunfish, Spotted sunfish | One per month | One per week |
| | Largemouth bass | One per month | One per month |
| **Fenholloway River** | Spotted sunfish | Two per week | Two per week |
| **Ichetucknee River** | Spotted sunfish | One per week | Two per week |
| **Lake Butler** | Redear sunfish | Two per week | Two per week |
| | Black crappie, Bluegill | One per week | Two per week |
| **Lake Lochloosa** | Black crappie, Bluegill, Redear sunfish | Two per week | Two per week |
| | Largemouth bass less than 15 inches | One per week | Two per week |
| | Warmouth | One per month | Two per week |
| | Largemouth bass 24 inches or more | One per month | One per week |
| **Lake Octahatchee** | Bluegill | One per month | One per week |
| | Largemouth bass | DO NOT EAT | DO NOT EAT |
| **Lake Sampson** | Redear sunfish | Two per week | Two per week |
| | Bluegill, Warmouth | One per week | Two per week |
| | Chain pickerel, Largemouth bass | One per month | One per week |
| | Black crappie | One per month | One per month |
| **Lake Santa Fe** | Redear sunfish, Bluegill | Two per week | Two per week |
| | Largemouth bass | One per month | One per month |

**TABLE 4.6 (Continued)**

**2016 FLORIDA DEPARTMENT OF HEALTH FISH CONSUMPTION ADVISORIES, 2016**

| Waterbody | Species | Women of Childbearing age, young children NUMBER OF MEALS* | All other individuals NUMBER OF MEALS* |
|---|---|---|---|
| **Newnans Lake** | Black crappie, Bluegill, Brown bullhead catfish | One per week | Two per week |
| | Largemouth bass | One per month | One per month |
| **Orange Lake** | Bluegill, Brown bullhead catfish, Redear sunfish, Black crappie | Two per week | Two per week |
| | Largemouth bass less than 15 inches | One per week | Two per week |
| | Warmouth | One per month | Two per week |
| | Largemouth bass 24 inches or more | One per month | One per week |
| **Otter Creek** | Redbreast sunfish | One per week | Two per week |
| | White catfish | One per month | One per week |
| | Spotted sunfish | One per month | Two per week |
| **Santa Fe River (Lower-downstream of rise)** | Bluegill, Channel catfish, Redear sunfish, Redbreast sunfish | One per week | Two per week |
| | Spotted sunfish, Spotted bullhead catfish | One per month | Two per week |
| | Brown bullhead catfish | One per month | One per week |
| | Largemouth bass | One per month | One per week |
| **Santa Fe River (Upper-upstream of sink)** | Bluegill | One per week | Two per week |
| | Spotted sunfish | One per month | Two per week |
| | Black crappie, Channel catfish, Redbreast sunfish, Redear sunfish, Warmouth | One per month | One per week |
| | Largemouth bass | One per month | One per month |

**TABLE 4.6 (Continued)**

**2016 FLORIDA DEPARTMENT OF HEALTH FISH CONSUMPTION ADVISORIES, 2016**

| Waterbody | Species | Women of Childbearing age, young children NUMBER OF MEALS* | All other individuals NUMBER OF MEALS* |
|---|---|---|---|
| **St. Johns River North of SR 415 including Lakes George and Monroe (Lower River)** | Bluegill, Redear sunfish, Spotted sunfish, Brown bullhead catfish, Striped bass, Channel catfish, White catfish | Two per week | Two per week |
| | Black crappie, Warmouth Redbreast sunfish | One per week | Two per week |
| | Spotted sunfish, Largemouth bass | One per month | Two per week |
| **Steinhatchee River** | Spotted sunfish, Redbreast sunfish, Redear sunfish | One per month | One per week |
| | Largemouth bass | DO NOT EAT | One per month |
| **Suwannee River System (Including Alapaha, Suwannee, and Withlacoochee Rivers) (see separate advisory for Santa Fe River)** | Spotted bullhead catfish, White catfish | One per week | Two per week |
| | Redbreast sunfish, Redear sunfish, Spotted sunfish | One per month | Two per week |
| | Bluegill, Brown bullhead catfish, Channel catfish, Largemouth bass | One per month | One per week |
| | Black crappie | One per month | One per month |
| **Waccasassa River and tributaries (including Otter Creek and Wekiva** | Redbreast sunfish | One per week | Two per week |
| | Spotted sunfish | One per month | Two per week |
| | White catfish | One per month | One per week |
| | Largemouth bass | One per month | One per month |
| **Wekiva River (Waccasassa River tributary)** | Redbreast sunfish | One per week | Two per week |
| | White catfish | One per month | One per week |
| | Spotted sunfish | One per month | Two per week |

**TABLE 4.6 (Continued)**

**2016 FLORIDA DEPARTMENT OF HEALTH FISH CONSUMPTION ADVISORIES**

| Waterbody | Species | Women of Childbearing age, young children NUMBER OF MEALS* | All other individuals NUMBER OF MEALS* |
|---|---|---|---|
| **Withlacoochee River North (Suwannee tributary)** | Spotted bullhead catfish, White catfish | One per week | Two per week |
| | Redbreast sunfish, Redear sunfish, Spotted sunfish | One per month | Two per week |
| | Bluegill, Brown bullhead catfish, Channel catfish, Largemouth bass | One per month | One per week |
| **Withlacoochee River South** | Bluegill, Redear sunfish | Two per week | Two per week |
| | Spotted sunfish, Redbreast sunfish | One per month | Two per week |
| | Largemouth bass | One per month | One per week |

Source: Your Guide to Eating Fish Caught in Florida, Florida Department of Health, 2016.

## b. Total Maximum Daily Loads

Section 303(d) of the federal Clean Water Act requires states to submit lists of surface waters that do not meet applicable water quality standards (impaired waters) after implementation of technology-based effluent limitations, and establish Total Maximum Daily Loads for these waters on a prioritized schedule. Total Maximum Daily Loads establish the maximum amount of a pollutant that a water body can assimilate without causing violations of water quality standards. Florida submitted a list of Total Maximum Daily Load waterbodies to the U.S. Environmental Protection Agency, Region 4, in 1998. The list was prepared by the Florida Department of Environmental Protection with input from the water management districts. The U.S. Environmental Protection Agency issued its final list of north central Florida Total Maximum Daily Load waterbodies in 2014.

Table 4.7, below, presents the U.S. Environmental Protection Agency-approved list of north central waterbodies which do not meet applicable water quality standards. The table also identifies the water quality parameters to be addressed through the development of Total Maximum Daily Loads.

As of June 2007, Total Maximum Daily Loads have been finalized for only one north central Florida watershed; the Fenholloway River (including Bevins/Boggy Creek). The Total Maximum Daily Load report includes a map of the waterbody and its watershed. It also identifies the sources of the pollutants. In the case of the Fenholloway River, the Total Maximum Daily Load report notes that discharge from the Buckeye Cellulose pulp mill may move its discharge point from its current location to 1.7 miles upstream from the Fenholloway River estuary. Such an approach is anticipated to meet the established Total Maximum Daily Loads for dissolved oxygen and un-ionized ammonia for the river. The Total Maximum Daily Load report notes, however, that moving the discharge point may increase chlorophyll concentrations to levels in the estuary that would cause a water quality standard violation. To address this issue, Buckeye Cellulose has undertaken additional monitoring and modeling activities. Buckeye Cellulose will also conduct additional nutrient modeling analysis to assess the possible effluent nutrient reductions that might be required to prevent harmful chlorophyl concentrations.

The Total Maximum Daily Load for the Bevins/Boggy Creek portion of the watershed suggests that rural farms with animals with access to streams as a possible source of fecal coliform.

## TABLE 4.7

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi-cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3473A** | Fenholloway at Mouth | ~~Stream~~ Estuary | Dissolved Oxygen~~,~~ | High | Total Managed Daily Loads Finalized by U.S. Environmental Protection Agency, May 2007 |
| **3473B** | Fenholloway Below Pulp Mill | Stream | Dissolved Oxygen, Un-ionized Ammonia, Conductivity | High | Total Managed Daily Loads Finalized by U.S. Environmental protection Agency, May 2007 |
| **3473C** | Fenholloway Above Pulp Mill | Stream | Dissolved Oxygen | High | The impairment may be linked to nutrients. This will remain on the planning list until the causative pollutant can be identified. |
| **3518** | Spring Creek | Stream | Fecal Coliform | Low | |
| **3603** | Bevins/Boggy Creek | Stream | Fecal Coliform | Low | Total Managed Daily Loads Finalized by U.S. Environmental Protection Agency, May 2007. Although not listed in Water Quality Assessment Report: Suwannee, Fecal Coliform Total Managed Daily Loads were nevertheless established by U.S. Environmental Protection Agency for this waterbody. |
| **3422D** | Suwannee Estuary; Gulf of Mexico | Estuary; Coastal | Bacteria (in Shellfish); Fecal Coliform (3) | Low; High | Listed due to downgrade in shellfish classification. The waterbody includes at least one sampling location that has a median fecal coliform most probable number value that exceeds 14 counts per 100 milliliter for the verified period. This parameter is being added to the 303(d) list. |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi-cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3473A** | Fenholloway at Mouth | Estuary | Dissolved Oxygen~~,~~ | High | Total Managed Daily Loads Finalized by U.S. Environmental Protection Agency, May 2007 |
| **3473B** | Fenholloway Below Pulp Mill | Stream | Dissolved Oxygen, Un-ionized Ammonia, Conductivity | High | Total Managed Daily Loads Finalized by U.S. Environmental protection Agency, May 2007 |
| **3473C** | Fenholloway Above Pulp Mill | Stream | Dissolved Oxygen | High | The impairment may be linked to nutrients. This will remain on the planning list until the causative pollutant can be identified. |
| **3518** | Spring Creek | Stream | Fecal Coliform | Low | |
| **3603** | Bevins/Boggy Creek | Stream | Fecal Coliform | Low | Total Managed Daily Loads Finalized by U.S. Environmental Protection Agency, May 2007. Although not listed in Water Quality Assessment Report: Suwannee, Fecal Coliform Total Managed Daily Loads were nevertheless established by U.S. Environmental Protection Agency for this waterbody. |
| **3422D** | Suwannee Estuary; Gulf of Mexico | Estuary; Coastal | Bacteria (in Shellfish); Fecal Coliform (3) | Low; High | Listed due to downgrade in shellfish classification. The waterbody includes at least one sampling location that has a median fecal coliform most probable number value that exceeds 14 counts per 100 milliliter for the verified period. This parameter is being added to the 303(d) list. |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3733** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| **3556** | Weaver Warrior Creek | Stream | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, and biochemical oxygen demand was identified as a causative pollutant. |
| **3705** | Butler (Lilly) Creek | Estuary | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, and biochemical oxygen demand was identified as a causative pollutant. |
| **3706** | Amason Creek | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. It is being added to the 303(d) list. |
| **3724** | Direct Runoff to Gulf | Estuary | Fecal Coliform (3); Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired for this waterbody. The waterbody includes at least one sampling location that has a median fecal coliform most probable number value that exceeds 14 counts per 100 milliliters for the verified period. |
| **3725** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. It is being added to the 303(d) list. |
| **8032A** | Dekle Beach | Beach | Bacteria - Beach Advisory | High | Has advisories for 301 days in 2007. |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **8032C** | Cedar Beach | Beach | Bacteria - Beach Advisory | High | Has advisories for 301 days in 2007. |
| **8032E** | Hagens Cove Beach | Beach | Bacteria - Beach Advisory | High | Has advisories for 266 days in 2007. |
| **8035A** | Suwannee Gulf 7 Shired Island Park | Beach | Bacteria - Beach Advisory | High | Has advisories for 356 days in 2007. |
| **8035B** | Gulf of Mexico (Dixie County-Shellfis h Portion) | Coastal | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. It is being added to the 303(d) list. |
| **3504A** | Olustee Creek | Stream | Dissolved Oxygen; Fecal Coliform | Medium; Low | This is a blackwater stream. |
| **3519S** | Mission Spring | Stream | Nutrients (Algal Mats) | Medium | This is a spring. Impaired due to severe epiphyte algal mat problem, as evidenced by "very poor" Algal Mat Potential rating. |
| **3519T** | Devil's Eye Spring | Stream | Nutrients (Algal Mats) | Medium | This is a spring. Impaired due to severe epiphyte algal mat problem, as evidenced by "very poor" Algal Mat Potential rating. |
| **3519X** | Blue Hole Spring | Stream | Nutrients (Algal Mats) | Medium | This is a spring. Impaired due to severe epiphyte algal mat problem, as evidenced by "very poor" Algal Mat Potential rating. |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3520** | Cannon Creek | Stream | Fecal Coliforms | Medium | |
| **3531** | Rose Creek | Stream | Dissolved Oxygen (biochemical oxygen demand) | Medium | Biochemical oxygen demand was identified as the causative pollutant because it exceeded the biochemical oxygen demand threshold for identification of a causative pollutant (2.0 milligrams/Liter). |
| **3531A** | Rose Creek Sink | Stream | Dissolved Oxygen; Nutrients (Chlorophyll-a) | Medium | The dissolved oxygen impairment was linked to nutrients (Chlorophyll); Annual average for 2006 exceeded the threshold of 20 micrograms/Liter for streams. |
| **3593A** | Lake Crosby | Lake | Nutrients (trophic state index) | Medium | This parameter is impaired for this waterbody because the annual average trophic state index values exceeded the impaired waters rule threshold for clear lakes of 40 trophic state index units in 2011. |
| **3598C** | Alligator Creek | Stream | Fecal Coliform | Low | |
| **3605A** | Santa Fe River | Stream | Nutrients (Algal Mats and Historical Chlorophyll); Dissolved Oxygen | Medium; High | Total Nitrogen is limiting nutrient. |
| **3605F** | Altho Drainage | Stream | Dissolved Oxygen | High | Total nitrogen median exceeded the threshold for streams in the verified period but was based on only 5 samples (10 are required). Linked to algal mats. |
| **3626** | Pareners Branch | Stream | Fecal Coliforms | Medium | |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3644** | Mill Creek Sink | Stream | Dissolved Oxygen; Fecal Coliform | Medium; Low | Dissolved oxygen met verification threshold of impaired waters rule, and total phosphorus was identified as a causative pollutant. |
| **3654** | Monteocha Creek | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for a sample size less than 20. |
| **3671A** | Turkey Creek | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for the sample size and is being added to the 303(d) list. |
| **3678A** | Hague Branch | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for the sample size and is being added to the 303(d) list. |
| **3682** | Blue Creek | Stream | Fecal Coliform | Low | |
| **3325** | Alligator Creek | Stream | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, total phosphorus was identified as the causative pollutant. |
| **3330** | Little Alapaha River | Stream | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, total phosphorus was identified as the causative pollutant. |
| **3314** | Little Aucilla River | Stream | Dissolved Oxygen | Medium | This is a blackwater stream. Met verification threshold of impaired waters rule, total nitrogen and biochemical oxygen demand were identified as causative pollutants. |
| **1329C** | Withlacoochee River | Stream | Mercury (in fish tissue) | High | Verified for impairment based on Florida Department of Health fish consumption advisory data. |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **1329R** | Wilson Head Spring | Spring | Nutrients (Algal Mats) | Medium | This spring has been verified as impaired for nutrients based on "other information" that indicated an imbalance in flora or fauna. Nitrate+nitrite levels range from 0.56 - 0.8 milligrams/Liter during the verified period and is the likely cause of the impairment. |
| **1337** | Withlacoochee River | Stream | Mercury (in fish tissue) | High | Verified for impairment based on Florida Department of Health fish consumption advisory data. |
| **1337A** | Bypass Channel | Stream | Mercury (in fish tissue) | High | Verified for impairment based on Florida Department of Health fish consumption advisory data. |
| **3480** | Bethel Creek | Stream | Fecal Coliform | Low | |
| **3483** | Peacock Slough | Stream | Nutrients (Algal Mats) | Medium | Placed on the verified list based on algal mats and elevated nitrate concentrations in the planning period. |
| **3496A** | Low Lake | Lake | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, and total phosphorus and biochemical oxygen demand were identified as a causative pollutants. |
| **3528Z** | Lafayette Blue Springs | Stream | Nutrients (Algal Mats) | Medium | Placed on the verified list based on algal mats and elevated nitrate concentrations in the verified period. |
| **2688** | Hatchet Creek | Stream | Fecal Coliform; Nutrients (Historic Chlorophyll-a) | Low; Medium | The median value of 127 total nitrogen/total phosphorus ratio is about ten, suggesting phosphorus and nitrogen co-limiting. |
| **2695** | Little Hatchet Creek | Stream | Dissolved Oxygen; Fecal Coliform | Medium; Low | Flows from Gum Root Swamp. Elevated nutrients may contribute. |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **2696** | Possum Creek | Stream | Fecal Coliform | Low | |
| **2705A** | Prairie Creek | Stream | Dissolved Oxygen | Medium | Met the verification threshold and total nitrogen was identified as the causative pollutant. |
| **2705B** | Newnans Lake | Lake | Dissolved Oxygen | Medium | Met the verification threshold and total nitrogen and total phosphorus were identified as the causative pollutants. |
| **2709** | Sunland Drain | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for the sample size. |
| **2710** | Unnamed Drain | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for a sample size less than 20. |
| **2713** | Little Orange Creek | Stream | Fecal Coliform | Low | |
| **2717** | Kanapaha Lake | Lake | Dissolved Oxygen (Nutrients and biochemical oxygen demand) | Medium | This parameter is impaired for this waterbody based on the number of exceedances for the sample size. |
| **2718** | Bivens Arm Outlet | Stream | Dissolved Oxygen; Nutrients (Chlorophyll-a) | Medium | Met the verification threshold and total nitrogen and total phosphorus were identified as the causative pollutants; This parameter is impaired for this waterbody because the annual average chlorophyll-a values exceeded the impaired waters rule threshold for streams of 20 micrograms/Liter. |
| **2718B** | Bivens Arm | Lake | Nutrients (trophic state index); Turbidity | Medium | Co-limited by nitrogen and phosphorus based on a median total nitrogen/total phosphorus ratio of 12.31 (65 values) in the verified period. |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **2719** | Lake Alice Outlet | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for a sample size less than 20. |
| **2720** | Alachua Sink Outlet | Stream | Dissolved Oxygen; Fecal Coliform | Medium; Low | Met the verification threshold and total nitrogen was identified as the causative pollutant. |
| **2720A** | Alachua Sink | Lake | Fecal Coliform | Low | |
| **2733** | Camps Canal Reach | Stream | Dissolved Oxygen | Medium | Met the verification threshold and total nitrogen was identified as the causative pollutant. |
| **2738A** | Lochloosa Lake | Lake | Nutrients (trophic state index) | Medium | Co-limited by nitrogen and phosphorus based on a median total nitrogen/total phosphorus ratio of 29.57 (135 values) in the verified period. |
| **2749A** | Orange Lake | Lake | Dissolved Oxygen | Medium | Met the verification threshold and total nitrogen and total phosphorus were identified as the causative pollutants. |
| **2749B** | Orange Lake Drain | Stream | Dissolved Oxygen (Nutrients) | Medium | This parameter is impaired for this waterbody based on the number of exceedances for the sample size. |
| **2751** | Lochloosa Slough | Stream | Dissolved Oxygen (Nutrients) | Medium | This parameter is impaired for this waterbody based on the number of exceedances for the sample size. |
| **2754** | Cross Creek | Stream | Dissolved Oxygen; Nutrients (Chlorophyll-a) | Medium | Met the verification threshold, but unable to determine the causative pollutants; The median value of 45 total nitrogen/total phosphorus ratio is about 14, suggesting phosphorus and nitrogen are co-limiting nutrients. |
| **3573B** | Steinhatchee River | Stream | Fecal Coliform | Low | |
| **2211** | Middle Prong St Marys River | Blackwater | Mercury (in fish tissue) | High | Verified for impairment based on Florida Department of Health fish consumption advisory data. |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **1326** | Sheephead Creek | Estuary | Fecal Coliform (3) | Low | |
| **1328** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| **1332** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| **1333** | Spring Run | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| **1335** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| **3699** | Waccasassa River | Stream | Fecal Coliform | Low | |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3699B** | Waccasassa River | Estuary | Fecal Coliform (3) | High | The waterbody includes at least one sampling location that has a median fecal coliform most probable number value that exceeds 14 counts per 100 milliliters for the verified period. |
| **3729A** | Black Point Swamp | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification); Nutrients (Chlorophyll-a) | High; Medium | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services; This parameter is impaired for this waterbody because the annual average chlorophyll-a values exceeded the impaired waters rule threshold for estuaries of 11 micrograms/Liter in 2005. |
| **3739** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| **3740** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| **3743** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **8037A** | Cedar Key Park | Beach | Bacteria (Beach Advisories) | High | Beach advisories posted for a total 136 days in 2007. |
| **8037B** | Gulf of Mexico (Levy County) | Coastal | Fecal Coliform (Shellfish Environmental Assessment Section Classification); Nutrients (Chlorophyll-a) | High; Medium | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services; Based on the median total nitrogen/total phosphorus ratio of 14.58, total nitrogen and total phosphorus are co-limiting nutrients. |
| **8037C** | Cedar Key | Coastal | Nutrients (Chlorophyll-a) | Medium | Based on the median total nitrogen/total phosphorus ratio of 13.63, total nitrogen and total phosphorus are co-limiting nutrients. |
| **8038** | Waccasassa River Gulf 2 | Coastal | Bacteria (in Shellfish) | Low | Listed due to downgrade in shellfish harvesting classification. |
| **3315Z** | Blue Spring (Madison County) | Spring | Nutrients (Algal Mats) | Medium | This parameter is impaired for this waterbody based on "other information" indicating an imbalance in flora. |
| **3321** | Lake Octahatchee Outlet | Stream | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, and biochemical oxygen demand was identified as a causative pollutant. |
| **3366** | Lake Francis Outlet | Stream | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, and biochemical oxygen demand was identified as a causative pollutant. |
| **3366A** | Lake Francis | Lake | Nutrients (trophic state index) | Medium | This parameter is impaired for this waterbody because the annual average trophic state index values exceeded the impaired waters rule threshold for clear lakes of 40 trophic state index units. |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3364** | Hunter Creek | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for the sample size. |
| **3368** | Little Creek | Stream | Dissolved Oxygen | Medium | This is a blackwater stream. Met verification threshold of impaired waters rule, and total phosphorus was identified as a causative pollutant. |
| **3368** | Little Creek | Stream | Fecal Coliform | Low | This is a blackwater stream. |
| **3375** | Swift Creek | Stream | Fecal Coliform | Low | |
| **3388** | Deep Creek | Stream | Fecal Coliform | Low | This is a blackwater stream. |
| **3389** | Sugar Creek | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for the sample size and is being added to the 303(d) list. |
| **3401** | Camp Branch | Stream | Fecal Coliform | Low | Total maximum daily load established by U.S. Environmental Protection Agency 3/31/2004. |
| **3449** | Rocky Creek near Wellborn | Stream | Dissolved Oxygen | Medium | This is a blackwater stream. Met verification threshold of impaired waters rule, and total phosphorus and biochemical oxygen demand were identified as causative pollutants. |
| **3477** | Falling Creek | Stream | Fecal Coliform | Medium | This parameter is impaired for this waterbody based on the number of exceedances for a sample size less than 20. |
| **3733** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3556** | Weaver Warrior Creek | Stream | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, and biochemical oxygen demand was identified as a causative pollutant. |
| **3705** | Butler (Lilly) Creek | Estuary | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, and biochemical oxygen demand was identified as a causative pollutant. |
| **3706** | Amason Creek | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. It is being added to the 303(d) list. |
| **3724** | Direct Runoff to Gulf | Estuary | Fecal Coliform (3); Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired for this waterbody. The waterbody includes at least one sampling location that has a median fecal coliform most probable number value that exceeds 14 counts per 100 milliliters for the verified period. |
| **3725** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. It is being added to the 303(d) list. |
| **8032A** | Dekle Beach | Beach | Bacteria - Beach Advisory | High | Has advisories for 301 days in 2007. |
| **8032C** | Cedar Beach | Beach | Bacteria - Beach Advisory | High | Has advisories for 301 days in 2007. |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **8032E** | Hagens Cove Beach | Beach | Bacteria - Beach Advisory | High | Has advisories for 266 days in 2007. |
| **8035A** | Suwannee Gulf 7 Shired Island Park | Beach | Bacteria - Beach Advisory | High | Has advisories for 356 days in 2007. |
| **8035B** | Gulf of Mexico (Dixie County-Shellfis h Portion) | Coastal | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. It is being added to the 303(d) list. |
| **3504A** | Olustee Creek | Stream | Dissolved Oxygen; Fecal Coliform | Medium; Low | This is a blackwater stream. |
| **3519S** | Mission Spring | Stream | Nutrients (Algal Mats) | Medium | This is a spring. Impaired due to severe epiphyte algal mat problem, as evidenced by "very poor" Algal Mat Potential rating. |
| **3519T** | Devil's Eye Spring | Stream | Nutrients (Algal Mats) | Medium | This is a spring. Impaired due to severe epiphyte algal mat problem, as evidenced by "very poor" Algal Mat Potential rating. |
| **3519X** | Blue Hole Spring | Stream | Nutrients (Algal Mats) | Medium | This is a spring. Impaired due to severe epiphyte algal mat problem, as evidenced by "very poor" Algal Mat Potential rating. |
| **3520** | Cannon Creek | Stream | Fecal Coliforms | Medium | |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3531** | Rose Creek | Stream | Dissolved Oxygen (biochemical oxygen demand) | Medium | Biochemical oxygen demand was identified as the causative pollutant because it exceeded the biochemical oxygen demand threshold for identification of a causative pollutant (2.0 milligrams/Liter). |
| **3531A** | Rose Creek Sink | Stream | Dissolved Oxygen; Nutrients (Chlorophyll-a) | Medium | The dissolved oxygen impairment was linked to nutrients (Chlorophyll); Annual average for 2006 exceeded the threshold of 20 micrograms/Liter for streams. |
| **3593A** | Lake Crosby | Lake | Nutrients (trophic state index) | Medium | This parameter is impaired for this waterbody because the annual average trophic state index values exceeded the impaired waters rule threshold for clear lakes of 40 trophic state index units in 2011. |
| **3598C** | Alligator Creek | Stream | Fecal Coliform | Low | |
| **3605A** | Santa Fe River | Stream | Nutrients (Algal Mats and Historical Chlorophyll); Dissolved Oxygen | Medium; High | Total Nitrogen is limiting nutrient. |
| **3605F** | Altho Drainage | Stream | Dissolved Oxygen | High | Total nitrogen median exceeded the threshold for streams in the verified period but was based on only 5 samples (10 are required). Linked to algal mats. |
| **3626** | Pareners Branch | Stream | Fecal Coliforms | Medium | |
| **3644** | Mill Creek Sink | Stream | Dissolved Oxygen; Fecal Coliform | Medium; Low | Dissolved oxygen met verification threshold of impaired waters rule, and total phosphorus was identified as a causative pollutant. |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3654** | Monteocha Creek | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for a sample size less than 20. |
| **3671A** | Turkey Creek | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for the sample size and is being added to the 303(d) list. |
| **3678A** | Hague Branch | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for the sample size and is being added to the 303(d) list. |
| **3682** | Blue Creek | Stream | Fecal Coliform | Low | |
| **3325** | Alligator Creek | Stream | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, total phosphorus was identified as the causative pollutant. |
| **3330** | Little Alapaha River | Stream | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, total phosphorus was identified as the causative pollutant. |
| **3314** | Little Aucilla River | Stream | Dissolved Oxygen | Medium | This is a blackwater stream. Met verification threshold of impaired waters rule, total nitrogen and biochemical oxygen demand were identified as causative pollutants. |
| **3480** | Bethel Creek | Stream | Fecal Coliform | Low | |
| **3483** | Peacock Slough | Stream | Nutrients (Algal Mats) | Medium | Placed on the verified list based on algal mats and elevated nitrate concentrations in the planning period. |
| **3496A** | Low Lake | Lake | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, and total phosphorus and biochemical oxygen demand were identified as a causative pollutants. |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3528Z** | Lafayette Blue Springs | Stream | Nutrients (Algal Mats) | Medium | Placed on the verified list based on algal mats and elevated nitrate concentrations in the verified period. |
| **1329C** | Withlacoochee River | Stream | Mercury (in fish tissue) | High | Verified for impairment based on Florida Department of Health fish consumption advisory data. |
| **1329R** | Wilson Head Spring | Spring | Nutrients (Algal Mats) | Medium | This spring has been verified as impaired for nutrients based on "other information" that indicated an imbalance in flora or fauna. Nitrate+nitrite levels range from 0.56 - 0.8 milligrams/Liter during the verified period and is the likely cause of the impairment. |
| **1337** | Withlacoochee River | Stream | Mercury (in fish tissue) | High | Verified for impairment based on Florida Department of Health fish consumption advisory data. |
| **1337A** | Bypass Channel | Stream | Mercury (in fish tissue) | High | Verified for impairment based on Florida Department of Health fish consumption advisory data. |
| **2688** | Hatchet Creek | Stream | Fecal Coliform; Nutrients (Historic Chlorophyll-a) | Low; Medium | The median value of 127 total nitrogen/total phosphorus ratio is about ten, suggesting phosphorus and nitrogen co-limiting. |
| **2695** | Little Hatchet Creek | Stream | Dissolved Oxygen; Fecal Coliform | Medium; Low | Flows from Gum Root Swamp. Elevated nutrients may contribute. |
| **2696** | Possum Creek | Stream | Fecal Coliform | Low | |
| **2705A** | Prairie Creek | Stream | Dissolved Oxygen | Medium | Met the verification threshold and total nitrogen was identified as the causative pollutant. |
| **2705B** | Newnans Lake | Lake | Dissolved Oxygen | Medium | Met the verification threshold and total nitrogen and total phosphorus were identified as the causative pollutants. |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **2709** | Sunland Drain | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for the sample size. |
| **2710** | Unnamed Drain | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for a sample size less than 20. |
| **2713** | Little Orange Creek | Stream | Fecal Coliform | Low | |
| **2717** | Kanapaha Lake | Lake | Dissolved Oxygen (Nutrients and biochemical oxygen demand) | Medium | This parameter is impaired for this waterbody based on the number of exceedances for the sample size. |
| **2718** | Bivens Arm Outlet | Stream | Dissolved Oxygen; Nutrients (Chlorophyll-a) | Medium | Met the verification threshold and total nitrogen and total phosphorus were identified as the causative pollutants; This parameter is impaired for this waterbody because the annual average chlorophyll-a values exceeded the impaired waters rule threshold for streams of 20 micrograms/Liter. |
| **2718B** | Bivens Arm | Lake | Nutrients (trophic state index); Turbidity | Medium | Co-limited by nitrogen and phosphorus based on a median total nitrogen/total phosphorus ratio of 12.31 (65 values) in the verified period. |
| **2719** | Lake Alice Outlet | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for a sample size less than 20. |
| **2720** | Alachua Sink Outlet | Stream | Dissolved Oxygen; Fecal Coliform | Medium; Low | Met the verification threshold and total nitrogen was identified as the causative pollutant. |
| **2720A** | Alachua Sink | Lake | Fecal Coliform | Low | |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **2733** | Camps Canal Reach | Stream | Dissolved Oxygen | Medium | Met the verification threshold and total nitrogen was identified as the causative pollutant. |
| **2738A** | Lochloosa Lake | Lake | Nutrients (trophic state index) | Medium | Co-limited by nitrogen and phosphorus based on a median total nitrogen/total phosphorus ratio of 29.57 (135 values) in the verified period. |
| **2749A** | Orange Lake | Lake | Dissolved Oxygen | Medium | Met the verification threshold and total nitrogen and total phosphorus were identified as the causative pollutants. |
| **2749B** | Orange Lake Drain | Stream | Dissolved Oxygen (Nutrients) | Medium | This parameter is impaired for this waterbody based on the number of exceedances for the sample size. |
| **2751** | Lochloosa Slough | Stream | Dissolved Oxygen (Nutrients) | Medium | This parameter is impaired for this waterbody based on the number of exceedances for the sample size. |
| **2754** | Cross Creek | Stream | Dissolved Oxygen; Nutrients (Chlorophyll-a) | Medium | Met the verification threshold, but unable to determine the causative pollutants; The median value of 45 total nitrogen/total phosphorus ratio is about 14, suggesting phosphorus and nitrogen are co-limiting nutrients. |
| **3573B** | Steinhatchee River | Stream | Fecal Coliform | Low | |
| **2211** | Middle Prong St Marys River | Blackwater | Mercury (in fish tissue) | High | Verified for impairment based on Florida Department of Health fish consumption advisory data. |
| **1326** | Sheephead Creek | Estuary | Fecal Coliform (3) | Low | |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **1328** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| 1332 | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| 1333 | Spring Run | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| **1335** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| **3699** | Waccasassa River | Stream | Fecal Coliform | Low | |
| **3699B** | Waccasassa River | Estuary | Fecal Coliform (3) | High | The waterbody includes at least one sampling location that has a median fecal coliform most probable number value that exceeds 14 counts per 100 milliliters for the verified period. |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3729A** | Black Point Swamp | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification); Nutrients (Chlorophyll-a) | High; Medium | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services; This parameter is impaired for this waterbody because the annual average chlorophyll-a values exceeded the impaired waters rule threshold for estuaries of 11 micrograms/Liter in 2005. |
| **3739** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| **3740** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| **3743** | Direct Runoff to Gulf | Estuary | Fecal Coliform (Shellfish Environmental Assessment Section Classification) | High | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services. |
| **8037A** | Cedar Key Park | Beach | Bacteria (Beach Advisories) | High | Beach advisories posted for a total 136 days in 2007. |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **8037B** | Gulf of Mexico (Levy County) | Coastal | Fecal Coliform (Shellfish Environmental Assessment Section Classification); Nutrients (Chlorophyll-a) | High; Medium | This parameter is impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section of the Florida Department of Agriculture and Consumer Services; Based on the median total nitrogen/total phosphorus ratio of 14.58, total nitrogen and total phosphorus are co-limiting nutrients. |
| **8037C** | Cedar Key | Coastal | Nutrients (Chlorophyll-a) | Medium | Based on the median total nitrogen/total phosphorus ratio of 13.63, total nitrogen and total phosphorus are co-limiting nutrients. |
| **8038** | Waccasassa River Gulf 2 | Coastal | Bacteria (in Shellfish) | Low | Listed due to downgrade in shellfish harvesting classification. |
| **3315Z** | Blue Spring (Madison County) | Spring | Nutrients (Algal Mats) | Medium | This parameter is impaired for this waterbody based on "other information" indicating an imbalance in flora. |
| **3321** | Lake Octahatchee Outlet | Stream | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, and biochemical oxygen demand was identified as a causative pollutant. |
| **3366** | Lake Francis Outlet | Stream | Dissolved Oxygen | Medium | Met verification threshold of impaired waters rule, and biochemical oxygen demand was identified as a causative pollutant. |
| **3366A** | Lake Francis | Lake | Nutrients (trophic state index) | Medium | This parameter is impaired for this waterbody because the annual average trophic state index values exceeded the impaired waters rule threshold for clear lakes of 40 trophic state index units. |
| **3364** | Hunter Creek | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for the sample size. |

## TABLE 4.7 (Continued)

## VERIFIED LIST OF IMPAIRED NORTH CENTRAL FLORIDA WATERS (AS APPROVED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY)

| Water-body Identifi - cation Number | Waterbody Segment | Waterbody Type | Parameter of Concern | Priority | Comments |
|---|---|---|---|---|---|
| **3368** | Little Creek | Stream | Dissolved Oxygen | Medium | This is a blackwater stream. Met verification threshold of impaired waters rule, and total phosphorus was identified as a causative pollutant. |
| **3368** | Little Creek | Stream | Fecal Coliform | Low | This is a blackwater stream. |
| **3375** | Swift Creek | Stream | Fecal Coliform | Low | |
| **3388** | Deep Creek | Stream | Fecal Coliform | Low | This is a blackwater stream. |
| **3389** | Sugar Creek | Stream | Fecal Coliform | Low | This parameter is impaired for this waterbody based on the number of exceedances for the sample size and is being added to the 303(d) list. |
| **3401** | Camp Branch | Stream | Fecal Coliform | Low | Total maximum daily load established by U.S. Environmental Protection Agency 3/31/2004. |
| **3449** | Rocky Creek near Wellborn | Stream | Dissolved Oxygen | Medium | This is a blackwater stream. Met verification threshold of impaired waters rule, and total phosphorus and biochemical oxygen demand were identified as causative pollutants. |
| **3477** | Falling Creek | Stream | Fecal Coliform | Medium | This parameter is impaired for this waterbody based on the number of exceedances for a sample size less than 20. |

Sources: Water Quality Assessment Report: Suwannee, Florida Department of Environmental Protection, September 2014, and Total Managed Daily Loads in Florida, http://www.epa.gov/region4/water/tmdl/florida/#econ.

## c. Fresh Water Wetlands

Wetlands play a vital role in controlling flood waters, tempering the impacts of hurricanes, and providing habitat to native Florida animal species. Vast amounts of Florida, including north central Florida, were originally wetlands. Over time, wetlands have been filled and drained for development, mosquito control, agricultural production, timber harvesting, and mining. Despite a lengthy history of drain and fill practices, the region still contains substantial wetland acreage.

Wetlands identified by the regional plan as Natural Resources of Regional Significance consist of Bee Haven Bay, California Swamp, Dixie County Coastal Fresh Water Wetlands, Fowlers Prairie, Gum Root Swamp, Hixtown Swamp, Lake Alto Swamp, Mallory Swamp, Osceola National Forest/Pinhook Swamp, Paynes Prairie, San Pedro Bay, Santa Fe Swamp, Spring Warrior Swamp, Taylor County Coastal Fresh Water Wetlands, Tide Swamp, and Waccasassa Flats.

### i. Coastal Fresh Water Wetlands

The coastal fresh water wetlands are located adjacent to and landward of the Big Bend Salt Marsh and west of U.S. Highways 19 and 98. Coastal fresh water wetlands moderate the flow of surface water runoff to the Gulf by releasing water during dry periods and storing water during wet periods. The flow of fresh water to the gulf is vital to maintaining the brackish salt marsh environment. As coastal communities grow, it becomes increasingly important to minimize the alteration of coastal fresh water wetlands in order to maintain a healthy salt marsh and to minimize coastal flooding. Growth within coastal communities should not significantly alter the coastal wetland sediment deposition process.

Regionally significant coastal fresh water wetlands comprise 207,373 acres. The Dixie County Coastal Fresh Water Wetlands comprise 155,642 acres while the Taylor County Coastal Fresh Water Wetlands comprise 51,731 acres. Located within the fresh water coastal wetlands are three areas that, in their own right, qualify as Natural Resources of Regional Significance: California Swamp, Spring Warrior Swamp, and Tide Swamp. These areas are described below.

California Swamp

California Swamp is located in southwest Dixie County between Cross City and the Gulf of Mexico. It is adjacent to the Lower Suwannee National Wildlife Refuge and the Big Bend Salt Marsh. California Swamp is a coastal fresh water wetland. The variety of its habitat, wildlife, and its undeveloped nature make California Swamp a Natural Resource of Regional Significance in its own right. The major feature of California Swamp is an extensive cypress-hardwood swamp. However, a wide range of habitat types ranging from tidal marsh near the coast to upland hammocks and pine forest are found within California Swamp.

California Swamp occupies approximately 21,786 acres. It extends from Station Lake to the Big Bend Salt Marsh along Sanders Creek. Its width varies from five miles near California Lake to two miles farther south along Sanders Creek where the forest grades into salt marsh. California Swamp is generally flat, having a relief of approximately two to five feet and a gentle slope to the south. Drainage is poorly developed. In the area from Station Lake southward some flow is channelized through Fishbone and California Creeks into California Lake. From there water moves through Sanders Creek for the remaining five miles to the Gulf.

Although numerous logging roads were established, portions of the lower regions of the swamp are still inaccessible. Dirt roads are passable to California Lake and to a few private hunting camps located in the swamp.

Approximately 94.0 percent of the swamp watershed is forested land. The principal tree species include slash and loblolly pines, black gum, ash, oak, red maple, and cypress. Much of the land adjacent to the swamp has been extensively harvested and is planted pine forests. The swamp has a good population of deer, turkey, and squirrel. Other wildlife species include alligator, bear, raccoon, opossum, mink, and otter. The wetlands near the coast have many varieties of shore birds such as terns, plovers, and sandpipers. Wading birds living within the swamp include large populations of common and cattle egret, white ibis, and limpkin.

In 1973, California Swamp area was added to the Steinhatchee Wildlife Management Area. The now defunct Florida Bureau of Coastal Zone Planning generally outlined the entire Gulf Coastal marsh at the mouth of Sanders Creek and the hardwood swamp inland along the creek as an area deserving preservation status. The remaining areas of the California Lake watershed were also designated as deserving conservation status in the Bureau's management and development plans.

Spring Warrior Swamp

Spring Warrior Swamp is located in Taylor County approximately five miles south of the City of Perry and west of U.S. Highway 19. It comprises approximately 16,039 acres and includes floodplain forest with good stands of cypress and diverse hardwoods. The swamp is an important source of fresh water to the gulf coastal marsh. Drainage is provided from the swamp to the gulf via Spring Warrior Creek. The upland areas of the swamp include live oak, magnolia, cabbage palm, elm, maple, hickory, sweet gum, and others. This habitat is heavily used by spring and fall migratory passerine birds. Both upland and floodplain hardwoods in this area constitute a prime wildlife habitat and a source of raw materials for the timber industry.

Tide Swamp

Tide Swamp is located in southwest Taylor County on the Gulf side of State Road 361 just north of the Steinhatchee River. Tide Swamp comprises 15,236 acres. The swamp was purchased in 1986 by the State of Florida as part of the Big Bend Coastal Tracts acquisition. Tide Swamp is heavily vegetated and includes a variety of softwood and hardwood timber species along with an abundance of mixed grasses and reeds. Its diverse vegetation makes the area appealing to many wildlife species common to north central Florida including game and non-game migratory birds.

Portions of the swamp were previously cleared for forestry products in the 1930s. Proctor and Gamble, the former owners, managed the area for sustained yield timber production, hunting, and recreation in cooperation with the Florida Fish and Wildlife Conservation Commission. The state's management of Tide Swamp now focuses less on timber production and more on wildlife management through controlled burning, food plot maintenance, and some timber harvesting.

Wildlife found in Tide Swamp include whitetail deer, wild turkey, feral hogs, and squirrels. Additionally, numerous wading birds can be seen throughout the year all along the coastline. Migratory ducks and geese can be seen from September through April. Bald eagles and ospreys also frequent Tide Swamp.

Facilities at Tide Swamp are consistent with outdoor recreational uses. The state operates a public beach site at Hagen's Cove and maintains picnic tables and a boat ramp at Dallus Creek. In recognition of the growing popularity of bird watching, the state has constructed an observation tower near Hagen's Cove.

## ii. Inland Wetlands

Inland wetlands consist of wetlands located north and east of U.S. highways 19 and 98. They comprise large areas of north central Florida and perform many valuable functions. Inland wetlands provide habitat for native species and moderate the flow of surface and spring waters to prevent flooding. They are thought to provide the base flow for the region's rivers and springs. Almost every inland fresh water wetland identified as a Natural Resource of Regional Significance consists of a combination of wetlands and uplands. Within the wetland areas proper, virtually every wetland is either seasonal or semi-permanent in nature. Their degree of wetness is dependent upon the amount and timing of annual rainfall. The regional plan recognizes nine inland wetlands as Natural Resources of Regional Significance, eight of which are described below.

Bee Haven Bay

Bee Haven Bay is located north of County Road 6 and Occidental Chemical's phosphate mining area and approximately four miles east of the City of Jasper in Hamilton County. As the name implies, Bee Haven Bay is a bayhead swamp consisting of bay trees, dahoon lolly, cypress, red maple, and other mixed hardwoods. The bay is prime habitat for black bear and other mammals. Drainage of the bay is by Rock Creek to the Suwannee River. The bay contains several species of bay pitcher plants listed as threatened species by the Florida Department of Agriculture and Consumer Services. Bee Haven Bay comprises 7,125 acres. Occidental has donated the mineral rights to Beehaven Bay to the Suwannee River Water Management District.

Gum Root Swamp

Gum Root Swamp is a natural hardwood swamp covering 1,448 acres on the north side of Newnans Lake in eastern Alachua County. The swamp owes its environmental value to its function as a natural filter and purifier for runoff waters for a large watershed.

At its position at the base of the Hatchett Creek watershed, all the waters from the creek as well as overland flow from a wide area pass through the swamp before entering Newnans Lake. These waters are very high in nutrients due to the large amount of surrounding agricultural land and the number of homes in the vicinity. Biological processes occurring in the swamp convert nutrients in the water to cellulose and plant life, leaving the water in a more purified form as it flows into Newnan's Lake. Currently, the large nutrient production in the watershed exceeds the capacity of Gum Root Swamp to assimilate these nutrients and has contributed to the eutrophication of the lake.

A wide, often wet, and heavily vegetated fringe area has helped restrict access and development of the swamp. In this fringe area the dominant forest vegetation includes live oak, laurel oak, and red maple. The predominant understory species include gallberry, palmetto, wax myrtle, red bay, blackberry, and American holly.

Cypress and gum trees predominate the swamp while red maple and bay trees are also abundant. The numbers of sweet gum, wax myrtle, and gallberry increase in density toward the edge of the swamp. Many ferns, mosses, and lichen are evident as undergrowth vegetation. Selective cutting of hardwood occurred

approximately 50 years ago. Abandoned, overgrown tramways as well as debris left over from earlier cuttings have been found among the thick vegetation. The swamp appears to have regained its natural state and no evidence of recent harvesting is apparent. Mixed hardwoods of commercial value exist in the swamp.

Gum Root Swamp is considered to have one of the largest varieties of wildlife species of any area in Alachua County. There are at least two rare or endangered species living in this swamp including a small colony of wood storks and a small number of bald eagles. Other birds which frequent the area include egrets, herons, bitterns, and white ibis. Also identified in the area are anhinga, osprey, loon, cormorant, black and turkey vulture, and turkey. Deer and otter also inhabit the swamp and its marginal areas.

Hixtown Swamp

Hixtown Swamp is located between the cities of Madison and Greenville in central Madison County. It is roughly confined on the north by U.S. Highway 90 and on the south by Interstate 10. Hixtown Swamp comprises approximately 10,289 acres.

The swamp is a wide expanse of wetlands interspersed with islands, peninsulas, and cypress stands. It is surrounded by higher rolling country. The highlands surrounding the swamp often reach elevations approximately 50 feet higher than the swamp. It is the most extensive, undisturbed cypress swamp still found in northern Florida. Many of the islands of pond and bald cypress which were cut around 1900 have returned to sizeable trees of 12 to 18 inches in diameter. The luxuriant undergrowth includes many species commonly found in more northern areas and is almost totally different from the semitropical cypress swamps of south Florida.

A rich diversity of wildlife occurs in the swamp. The area contains one of north Florida's heaviest concentrations of wildlife. In addition to alligator, other large species include otter, raccoon, wildcat, deer, fox, and black bear. Wading birds are abundant, including white ibis, American egret, sandhill crane, great blue heron, Louisiana heron, little green heron, little blue heron, least bittern, common bittern, limpkin, many duck species, black and turkey vulture, osprey, bald eagle and the wood stork.[33]

The highlands surrounding the swamp are largely devoted to farming and cattle grazing. A small amount of pulp cutting and some cypress timbering occurs in the fringe areas. However, there appears to be no large-scale tree harvesting at present. Domestic cattle use pastures abutting the swamp when dry. The adjacent waters of the swamp often provide a source of drinking water to these animals.

Cypress and bottomland hardwoods predominate the isolated hammock islands and in low areas bordering the swamp. Plant species occurring in the fringe area include spruce, slash, loblolly and longleaf pines, bottomland gums, and many varieties of oak, magnolia, and willow. The dense understory consists of way myrtle, sea myrtle, elderberry, green briar, sumac, and wild plum.

The swamp is one of the most productive wetlands in north central Florida. The dominant aquatic vegetation in the swamp is maidencane. Associated species are abundant and consist of frogbit, floating hear, wampee, pickerel weed, cow tongue, golden club, dotted smartweed, watershield, water lily, and a variety of aquatic grasses.

[33]Significant Natural Areas, pg. 54.

Drainage in the marsh is generally in a southeasterly direction with one small stream, Sundown Creek, carrying a majority of the outflow for the area. Several other culverts running beneath I-10 transmit water to southern portions of the swamp.

Lochloosa Conservation Area

The Lochloosa Wildlife Conservation Area is located in southeastern Alachua County and comprises 10,352 acres, including 1,200 acres of Orange Lake. Approximately 62.0 percent of the land area is composed of commercial pine plantation. The remainder is in natural condition and the biological communities are in good health. Lochloosa Forest forms the habitat for several listed species.[34] Approximately 16 active bald eagle nests are in the area.[35] The River Styx rookery, located within the forest, contains one of the two most important wood stork colonies in northern Florida. Between 100 and 125 nesting pairs of wood stork, recognized as an endangered species, nest in the large cypress trees of the rookery.[36] It is one of the few stable and constantly productive rookeries in the state. The few colonies of wood storks in Florida and one colony in Georgia, are all that exist in North America. In addition, the rookery is used as a nesting site by many ospreys and herons.[37]

The River Styx flows through the conservation area into the northern tip of Orange Lake. The river environment is defined by a broad expanse of swamp forest and hammock for two and one-half miles from Camps Canal on the north to Orange Lake on the south. The river's sluggish trace southward is obscured within a 3,500 acre area of swamp, forest, and hardwood hammock. The dense, undisturbed vegetation system gives way to a shallow marsh area at its junction with Orange Lake. The inaccessibility of the area creates a large rookery for colonies of wading birds otherwise sensitive to human encroachment.

Mallory Swamp and San Pedro Bay

Totaling 515,774 acres, Mallory Swamp and San Pedro Bay comprise the largest inland wetland system in the region. They form a nearly continuous band of wetlands through Dixie, Lafayette, and Taylor counties north of U.S. Highway 19. These large wetlands form the headwaters of the streams that comprise the coastal rivers basin, including the Econfina, Fenholloway, and Steinhatchee rivers. Most of the area consists of large tracts owned by timber companies. Between the 1930s and the 1970s, canals were dug to drain the wetlands for pine production but, due to the wetness of the area, were only partially successful. As a result, the area is currently a mixture of pine plantation and wetlands.

[34]Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50, Code of Federal Regulations, Part 17.

[35]Annual Report of the Conservation and Recreation Lands Section Committee, Division of State Lands, Tallahassee, Florida, 1985, pg. 211.

[36] Robert M. Brantley, Executive Director of the Florida Game and Fresh Water Fish Commission, correspondence of March 6, 1984 to Mr. John Bethea, Director, Division of Forestry, Department of Agriculture and Consumer Services, Tallahassee, Florida.

[37]Significant Natural Areas, pg. 82.

Mallory Swamp and San Pedro Bay are of regional significance due to their role in maintaining the hydrologic balance of the coastal rivers and their estuaries. In a natural state, these wetlands serve as a wide, shallow reservoir of both ground and surface waters. They provide the base flow for the coastal rivers through surface runoff and seepage from surficial aquifers. The past drainage efforts have altered the hydrologic balance by releasing too much storm water too quickly, resulting in disruptions to sensitive estuarine ecosystems. Because estuaries are uniquely adapted to, and dependent on, cyclical changes of fresh water inflow, changes to that balance can have significant adverse impacts to the estuary.

The Suwannee River Water Management District in the late 1980s examined the issue at the request of the Steinhatchee River Association, whose members were concerned about declining fisheries in the Steinhatchee River estuary. The District's study determined there was too much water draining too quickly into the river and estuary after storm events, but the hydrologic alterations upstream alone could not be the sole cause for the declining fishery.

The Steinhatchee River study confirmed that the past drainage attempts created significant hydrologic changes in the watershed. The study identified six major canal systems totaling 76 miles. Dug by timber companies, the canals were designed to speed drainage for improved pine tree growth and improved access for logging trucks. The canals caused surface water runoff within the basin to move much faster to the Gulf after heavy rains. Research studies in other Florida waters have shown the runoff interferes with fish using estuaries.

The area timber companies voluntarily agreed to change practices to allow the land to retain more water after rains. Those changes include installing flashboard culverts, allowing canals to become overgrown with vegetation and reducing road elevations to allow water to overflow from roadside canals into adjacent wetlands. The results to date have been noticeable downstream with less freshwater flooding after rains. The District has purchased 31,321 acres of Mallory Swamp in southern Lafayette County to help alleviate the concern.

Osceola National Forest/Pinhook Swamp

Lying 15 miles northeast of Lake City and extending through much of Columbia County to the Georgia border, the Osceola National Forest/ Pinhook Swamp area is essentially one continuous wetland system from the Okefenokee Swamp to Interstate Highway 10. The swamp extends eastward from U.S. Highway 441 into Baker County and the Northeast Florida Regional Planning District. Covering 184,350 acres within north central Florida, the swamp is the largest continuous wilderness area in the region.

The northern portion of the area is dominated by Pinhook Swamp, which is predominantly a cypress, gum, and loblolly bay swamp. It is a vast open area which is almost continually flooded, interspersed with dotted pine, cypress, and shrubs in open areas. The swamp is not as aesthetically pleasing as other Natural Resources of Regional Significance within the region but has a unique character due to the bleak wilderness quality of the expansive tree dotted prairie and thick fetter bush and titi-based vegetation around its fringe.

The swamp is very wet with many peat bogs and generally has a very rich humus soil. Pine forests are found in higher areas around the swamp and the southern half of Osceola National Forest. Slash pines are, in many cases, planted in fringe areas, but harvesting has apparently not been on a large scale due to the wetness of the ground. These fringe areas are typical pine flatwoods which give way near the swamp to cypress, slash and long-leaf pine, magnolia, and sweet bay.

The area is a valuable wildlife habitat. Rare, endangered, or protected species included in this habitat are the Black Bear, the Florida sandhill crane, and the bald eagle. It has one-third of Florida's entire bear population. The swamp has a good population of deer and turkey, squirrel, rabbit, otter, beaver, and many varieties of snakes and other reptiles, including alligators. Common birds reported in this area include the anhinga, many species of egrets, heron, and ibis, as well as many duck species, including wood duck. Canadian geese now frequent the area as winter residents.

Drainage of the swamp is very poor. Timber companies have dug a few canals to drain portions of the swamp by channeling runoff water into fringe areas and off of access roads. However, no large scale drainage works have been undertaken. Surface runoff generally flows westerly to the Suwannee River principally through Little Creek with some runoff flowing easterly to St. Mary's River in Baker County.

Santa Fe Swamp

Santa Fe Swamp is located north of Little Santa Fe Lake in northeastern Alachua County and southeastern Bradford County. The swamp in its natural capacity performs valuable services to the region as part of the headwaters of Santa Fe River, contributing to aquifer recharge and serving as an excellent and remote wildlife habitat. Santa Fe Swamp was donated by the Georgia-Pacific Corporation to the Suwannee River Water Management District in 1984.

Santa Fe Swamp encompasses 7,403 acres. The major feature of this area is its extensive hardwood swamp. A 300-acre sandhill community dominated by longleaf pine, turkey oak, and wire grass is found along the eastern side of the swamp. The remainder of the property consists primarily of inaccessible wetlands. The swamp community consists of a mosaic of vegetation types including pine flatwoods, cypress swamps, bayheads, wet prairies, and marshes, portions of which resemble Okefenokee Swamp. The dominant swamp vegetation includes cypress, gum, and bay trees.

Water quality is largely unknown but is probably good based upon limited available records and visual inspection of the Santa Fe River near the swamp. A considerable number of wading birds have been observed in the feeding ponds and prairies, and the area provides habitat for waterfowl and game species. In addition, nesting pairs of bald eagles have been observed in the swamp along with black bear and wood stork.

Animal species inhabiting the area around the Santa Fe River likely reside in the swamp. There are no roads or access to it of any kind. Appearing completely undisturbed and of high aesthetic value, the area is expected to be the habitat of a diverse and abundant wildlife population.

Waccasassa Flats

Occupying approximately 61,653 acres, Waccasassa Flats runs down the center of Gilchrist County. The flats are part of a larger wetland system which runs into Levy County. During the rainy season, waters in the aquifer build up sufficient pressure to spill out of the many sinkholes and ponds scattered throughout the flats to inundate the area.

The area is predominantly comprised of commercial pine plantation. Pine stands are interspersed among numerous cypress ponds, depression marshes, hydric hammock, and other wetland communities. Several lakes (the largest of which is 150 acres), small areas of upland hardwood forest, sandhill, and other minor natural communities contribute to the diversity of the flats.

## d. Lakes

Lakes identified as Natural Resources of Regional Significance include those of relatively large size, those with shorelines under the control of two or more local governments, and those which are environmentally sensitive. Several of the lakes are recognized by the state as Outstanding Florida Waters while others are included in the Suwannee River Water Management District's Surface Water Improvement Management program. Regionally significant lakes are Orange Lake, Santa Fe Lake, Little Santa Fe Lake, Newnans Lake, Lake Lochloosa, Watermelon Pond, Lake Sampson, Lake Butler, Lake Geneva and Alligator Lake.[38] Two lakes are highlighted below.

### i. Alligator Lake

Alligator Lake is 968 acres of lake, wetlands, and flood plain located in central Columbia County. The lake proper consists of two interconnected waterbodies. The northern lake, locally known as "Big Lake" is located within the City of Lake City. The smaller waterbody, known as "Small Lake" is located in unincorporated Columbia County. Alligator Lake owes its regional significance to several plugged sinkholes which are located within the lake. The sinkholes have direct connection to the Floridan Aquifer. Approximately once every five to seven years, one or more of the sinkholes become unplugged, draining the contents of the lake into the Floridan Aquifer. Approximately one-half of the lake was diked and drained by private property owners during the 1950s and 1960s. A Florida State Supreme Court decision (Hill vs. McDuffie) ruled, among other things that the diked area was land, not lake, and that the dike could remain.

The lake is located in an area of low elevation and receives considerable surface water runoff from the city of Lake City. Most of Lake City was developed before enactment of surface water management regulations. As a result, surface waters entering the lake receive little treatment. Alligator Lake was recognized as one of the 50 poorest lakes in the state in terms of water quality by the Florida Department of Environmental Regulation in 1983. The ranking was primarily due to high nutrient levels, chronic algal blooms, and fish kills.[39] In 1988, the Suwannee River Water Management District classified Alligator Lake as a "priority water" in their Surface Water Improvement Management program. It is the only waterbody listed as a "restoration" waterbody on the District's Surface Water Improvement Management program priority list. In 1995, Columbia County applied for and received funding from Florida Communities Trust to purchase the diked portion of Alligator Lake and to restore the lake to its original condition.

### ii. Newnans Lake

Located just east of the city of Gainesville in Alachua County, Newnans Lake is a perched surface waterbody with an area of 6,007 acres and a mean depth of six feet.[40] The lake obtains regional significance for several reasons. The northern lake shoreline is the boundary of Gum Root Swamp, a Natural Resource of

[38]Surface area information was generally obtained from Edward A. Fernald and Donald J. Patton, Water Resources in Florida, Florida State University, Tallahassee, Florida, 1984, pg. 285. The surface area of Alligator Lake, is estimated by the North Central Florida Regional Planning Council, September, 1994.

[39]Myers, V.B. and Edmiston, Florida Lake Classification and Prioritization, Final Report. Project #S004388. Florida Department of Environmental Regulation Technical Report, Tallahassee, Fllorida, 1983.

[40]Ad Hoc Committee for Newnan's Lake Environmental Concerns, Report: 1983 Alachua County, Gainesville, Florida, 1983, pg. 13.

Regional Significance. Prairie Creek, the lake's only surface outflow, flows directly to Paynes Prairie State Preserve. A natural edge of cypress and gum trees in a relatively undisturbed state surrounds the entire lake. Due to a wet shoreline, very little residential development exists next to the lake.

## e. River Corridors

Regionally significant river corridors consist of the Alapaha, Aucilla, Econfina, Ichetucknee, Santa Fe, Steinhatchee, Suwannee and Withlacoochee rivers. In addition, three small streams located in southeastern Alachua County, the River Styx, Prairie Creek, and Cross Creek, are also recognized by the regional plan as Natural Resources of Regional Significance. River corridors consist of the stream channel and the 100-year floodplain.

### i. Alapaha River Corridor

The Alapaha River travels 125 miles from its headwaters in southwestern Georgia to the Suwannee River in Hamilton County. The Alapaha drainage basin contains 1,840 square miles. Only a small portion of the river, approximately 40 miles, flows through north central Florida. Similarly, only 140 square miles of its 1,840 square mile drainage basin is located in the region. The river flow averages 1,346 cubic feet per second.[41]

The Alapaha is similar to the upper Suwannee with high and steep banks winding through undeveloped forest lands. Unlike the Suwannee, the Alapaha is divided into two distinct segments by a group of sinks. The river flows continuously year-round in the northern segment. The northern segment flows into the sinks, channeling a significant portion of the river flow underground. The southern segment flows intermittently. The sinks absorb all of the northern segment waters during periods of low flow. Water flows the entire length of the Alapaha about 60 percent of the time. The river's waters travel through underground limestone channels for 19 miles to re-emerge at Alapaha Rise and possibly Holton Spring.

### ii. Aucilla River Corridor

The Aucilla River begins near the Georgia community of Boston and meanders 69 miles through Florida to the Gulf of Mexico. The river drains approximately 805 square miles and has an average discharge of 436 cubic feet per second.[42]

Forming the boundary between Jefferson, Madison, and Taylor counties, the Aucilla River flows through the Aucilla Wildlife Management Area in northern Taylor County to the St. Marks Wildlife Management Area on the gulf. The Aucilla River provides some of Florida's most unspoiled river vistas available to canoeists and hikers. The river has been designated an Outstanding Florida Water. The state recently purchased property adjacent to the river to protect a unique sink area known as the Aucilla River Sinks, a Natural Resource of Regional Significance in its own right. The river traverses upland forests of longleaf pine and turkey oak, old growth mesic and hydric hardwood forests, cypress and gum swamps, beech-magnolia groves, live oak hammocks, and finally the salt marsh of the St. Marks National Wildlife Refuge.

[41]Water Resources Division, United States Geological Survey, Water Resource Data for Florida, Vol. 4, Northwest Florida, Tallahassee, Florida, 1984.

[42]Water Resource Data for Florida, Vol. 4, Northwest Florida.

Bald eagles, osprey, otters, and turkeys are seen, as are smaller animals such as fox squirrels and raccoons. Many species of birds either nest or migrate through the coastal marsh segment of the river. Indian mounds dating back more than 2,000 years are scattered along it. Much of the river floodplain is owned and managed by timber companies effectively restricting residential development. The two wildlife management areas provide habitat for many plant and wildlife species.

### iii. Econfina River Corridor

Located approximately midway between the Aucilla River and the City of Perry, the Econfina River has a length of approximately 32 miles and a drainage area of 198 square miles. The river has an average discharge of 138 cubic feet per second.[43] Its principal attraction is the relatively natural condition of its banks and estuary. Virtually no residential development has taken place along its entire length. Hardwood forest lines the banks of the river while numerous adjacent lands are in managed pine forest. The river is much wider at the Gulf and forms an important estuary.

Water quality of the river and adjoining salt marsh is very good. The adjoining forests contribute to the quality of the salt marsh by filtering water before it reaches the coast and by acting as a buffer between the salt marsh and the forest industry land to the north. The river corridor is primarily a mixture of hydric and mesic communities. The major ecosystems found on the river include salt marsh, mixed-pine-hardwood community, pine-oak-palm community, and river swamp.

### iv. Ichetucknee River Corridor

Ichetucknee Springs forms the headwaters of this five-mile long river which forms the border between southern Columbia and Suwannee counties. Its clear waters make the river a very popular location for canoeing, rafting, and tubing. The Ichetucknee River is designated by the State of Florida as an Outstanding Florida Water.

The river runs past high limestone banks, river swamp, and marsh shoreline where dominant plant types are ribbon grass, spatterdock, coastal willow, and buttonbush. The swamp area has several beaver lodges. Animals common to the park include turkey, limpkin, apple snail, Suwannee bass, gulf pipe fish, and river otter. Recently, manatees have been sighted in the river.

The river floodplain is mainly composed of sandhills and mesic hammock vegetation. A sandhill community is located in the highest elevations. Common plants include turkey oaks, sand post oak, longleaf pine, bracken fern, and wiregrass. The corridor contains a small area of river swamp which is poorly drained, frequently flooded, and has a dense canopy. Dominant trees include red maple, sweetgum, American elm, Florida ash, and bald cypress.

### v. Santa Fe River Corridor

The Santa Fe River is the largest tributary of the Suwannee, flowing 75 miles from its headwaters at Santa Fe Lake in northeast Alachua County to its confluence with the Suwannee River in northwest Gilchrist County. The river drains a watershed of 1,440 square miles. The Santa Fe has four major tributaries of its own: the Ichetucknee River, New River, Sampson River, and Olustee Creek. Both the Santa Fe River and Olustee Creek are designated as Outstanding Florida Waters. With average recorded flows of more than

[43]Water Resource Data for Florida, Vol. 4, Northwest Florida.

1,500 cubic feet per second, the large volume of surface waters flowing through the river make the Santa Fe a Natural Resource of Regional Significance independent of the Suwannee.[44]

The forest areas which surround the river consist of swamp forest and hammock forest. The swamp forest has an abundant diversity of tree species including sweet gum, tupelo gum, pumpkin ash, Carolina ash, laurel oak, Florida elm, red maple, bald cypress, water hickory and water locust. The intermittently flooded areas of the river swamp show a preponderance for live oak trees. The overcup oak and river birch species reach the southern limit of their range along the Santa Fe River.

Most wildlife species found in north central Florida can also be found along the Santa Fe River. Bobcats and an occasional black bear may still be found. Wide-ranging species such as deer, grey squirrel, turkey, and otter are also present. Alligators are abundant, particularly in the eastern portion of the river. The bird population is extensive and includes the common egret and heron, pileated woodpecker, limpkin, kingfisher, red shouldered hawk, barn owl, several species of warbler, and the rare Mississippi kite.[45]

The Santa Fe River is in a nearly natural state and receives almost no domestic or industrial pollution. The most notable attribute of the upper Santa Fe River is the Santa Fe Swamp, which is owned by the Suwannee River Water Management District. The lower Santa Fe is noted for its many springs. The area between O'leno State Park and the Suwannee River confluence is the center of the range of the Suwannee Bass, a species of very restricted distribution, which is also an excellent game fish. The lower Santa Fe harbors an estimated 80 to 90 percent of the total population of this unique species. The area between the Ichetucknee River and Poe Springs is an important fossil site. Many springs are found along the river, including Poe Spring, Lily Spring, Ginnie Springs, Devil's Eye Spring, Dogwood Spring, July Spring, Blue Spring, Naked Spring, and Rum Island Spring.

### vi. Steinhatchee River Corridor

The Steinhatchee River Corridor forms the border between Dixie and Taylor counties. The Steinhatchee River is approximately 30 miles long and has an average flow of 325 cubic feet per second.[46] The river is formed out of many small tributaries whose headwaters are found in San Pedro Bay, which is in northern Taylor and southern Lafayette counties. Approximately four miles downstream of Steinhatchee Springs, the river disappears underground for a distance of approximately ½ mile. From its resurgence it is possible to canoe the entire distance to the Gulf without portage. Downstream, the river forms a large estuary at the Gulf coast. The town of Steinhatchee, a small fishing village, is located at the river's mouth.

The outstanding feature of the Steinhatchee is its undeveloped nature. Virtually the entire length of the river from Steinhatchee Springs to the town of Steinhatchee is in a relatively natural state. Many hardwood trees line its banks. Another distinctive feature of the river are the extensive tidal flats at its mouth. The river has a relatively large coastal drainage basin of approximately 375,000 acres, most of which is wet forests and titi-based swamps.

[44]Water Resource Data for Florida, Vol. 4, Northwest Florida.

[45]Significant Natural Areas, Gainesville, Florida, 1977, pg. 60.

[46]Water Resource Data for Florida, Vol. 4, Northwest Florida.

## vii. Suwannee River Corridor

The Suwannee River Corridor consists of the 100-year floodplain of the Suwannee River. The Suwannee River Corridor serves an important role in the region by linking inland wetlands to Gulf coastal marshes. The river also plays an important role in the control of fresh water flooding. No flood control structures are found along the river within the State of Florida. Instead, the Suwannee relies upon its large floodplain to control flood waters. The Suwannee River is the setting of many natural features including an abundance of fresh water springs, sinks, and underwater caves. The river is widely used as a recreational resource for camping, boating, canoeing, skindiving, and fishing.

The Suwannee River is the second largest Florida river in terms of water flow and is one of the most important water resources in the region. The river is 235 miles in length, of which 207 miles traverse north central Florida. From its headwaters in the Okefenokee Swamp in southern Georgia, the river flows south across the Northern Highlands and into the Gulf Coastal Lowlands, eventually draining 9,950 square miles into its estuary at the Gulf of Mexico. The Suwannee forms the borders of seven north central Florida counties and drains all, or portions of, ten eleven counties within the region.[47] The Suwannee River estuary is a complex system of diverse natural communities and is a major nursery for commercial fish and shellfish.

The Suwannee has a flow of approximately one billion gallons per day at its entrance to the State of Florida and empties seven billion gallons per day into the Gulf of Mexico.[48] Unlike many rivers, the Suwannee's water quality is generally better downstream than up. The headwaters of the Suwannee, the Okefenokee Swamp in Georgia, produce a dark-colored water flow high in tannic and humic acids from the decay of lush swamp vegetation. Downstream springs provide the Suwannee with a high quality water source. The Suwannee is fed by more than 50 springs. During periods of drought the springs are a major source of the Suwannee's water.

The Suwannee has relatively few tributaries compared with most rivers due to the basin's well-draining sands and underlying limestone channels. Instead of having many tributaries as sources of water, the great number of sinks and lakes in the region collect rain and local runoff before it can reach the Suwannee. Thus the soils and sinkholes contribute to water pressure deep inside the aquifer, helping to promote the flow of high quality spring water to the Suwannee.

The Suwannee River flows across sediments formed over a time span of 40 million years. Many of these sediments, deposited in large deltas, estuaries, and shallow ocean environments, are composed of limestone, dolostone, and other sandy materials. The dissolution of underlying limestone produces scenic rock outcroppings, sinkholes, and the many springs along the river. This diversification of geologic features greatly contributes to its scenic and recreational value.

The vegetation along the river adds to its scenic beauty. Its forested banks are unique in that they traverse every major terrestrial habitat in Florida. Fresh water marsh and swamp forests occur at its headwaters while salt marsh can be found at the river's mouth. The variety, size, and geographic location of its plant communities are noteworthy.

[47]Except Taylor County.

[48]Water Resource Data for Florida, Vol. 4, Northwest Florida.

The river and its heavily forested floodplains provide excellent habitat for many fish and animal species, most notably the Suwannee black bass, Okefenokee pigmy sunfish, West Indian manatee and Atlantic sturgeon. The sturgeon have historically been a mainstay of fishermen all along the Gulf coast. However, due to over-fishing, dam construction, and river pollution, their numbers have declined to the point where it is considered an endangered species on the Mississippi River. The Suwannee River is the only river in the eastern Gulf of Mexico which supports a normally functioning population of Atlantic sturgeon. In the spring, adult sturgeons migrate upstream from their wintering grounds over the continental shelf to spawning areas in shallow portions of the upper Suwannee. Adults return to the Gulf of Mexico in the fall. Juveniles may remain in fresh or brackish water for three to five years before entering the open ocean.[49] West Indian manatees occur in the lower Suwannee River during the warmer months of the year. During the winter months, they concentrate at Manatee Springs, one of six natural warm water refuges within the state for this endangered species.[50]

Thirty-nine species of amphibians, 73 species and subspecies of reptiles, 232 species and subspecies of birds, and 42 species and subspecies of mammals are present within the Suwannee River Corridor.[51] The large number of species may be attributable to the river's diverse and undeveloped habitat. The river forms an important dividing line that abruptly terminates the range of a number of species. Some animal species such as the alligator snapping turtle, wood thrush and marsh hawk reach the southern and eastern limits of their range on the northeast bank of the Suwannee. Other species reach their westerly and northerly limits at the river, such as the Florida crow and the Florida black bass.[52] Forested areas along the river support white-tailed deer and wild turkey. Black bear can be found in small numbers.

Small game species occurring in the watershed include bobwhite quail, mourning dove, grey squirrel, woodcock and common snipe. The Suwannee River estuary has abundant habitat for waterfowl. Many duck species use the river including mallard, pintail, red-breasted merganser, black duck, and gadwall.

The Suwannee has not been significantly degraded due to human use. The river's water quality is high and its banks are relatively free of streamside development. Recreational use of the Suwannee River and its tributaries (Alapaha, Ichetucknee, Santa Fe, and Withlacoochee rivers) is increasing as the region's population grows and people from around the state become increasingly aware of its recreational resources. Potential for conflicts and resource degradation (e.g., bank and shoreline erosion, water pollution, manatee collisions, etc.) increases in direct proportion to increased use of the river system.

[49]Angelo D. Becasso, Nick Fotheringham, Alice E. Redfield, Ronald L. Frew, William M. Levitan, Joel E. Smith, and Jarrett O. Woodrow, Jr., Gulf Coast Ecological Inventory: User's Guide and Information Base, Dames and Moore, Bethesda, Maryland, 1982, pg. 132.

[50] Gulf Coast Ecological Inventory: User's Guide and Information Base., pg. 130.

[51] Gulf Coast Ecological Inventory: User's Guide and Information Base, pg. 132.

[52]S. David Webb, "A Short Report on the Ecology of the Suwannee River Drainage", Florida State Museum, Gainesville, Florida, 1970, pg. 4-7.

The Florida Fish and Wildlife Conservation Commission has the primary responsibility for establishing boating safety zones. Local governments have limited responsibility for establishing boating safety zones, which in turn are enforced by the Florida Fish and Wildlife Conservation Commission, the Florida Marine Patrol, and local law enforcement agencies. There are no consistent, enforceable boating traffic controls currently in effect on the Suwannee or its tributaries. An opportunity exists for state agencies and local governments to coordinate in the development of a comprehensive boating safety and resource protection strategy for the Suwannee River system.

## viii. Withlacoochee River Corridor

The Withlacoochee River begins its 108-mile journey to the Suwannee near Tifton, Georgia. Flowing southeasterly, it joins the Suwannee near Ellaville at Suwannee River State Park. Some 28 miles of the river lies within Florida, forming the border between Madison and Hamilton counties. The river flows through some of the state's most picturesque wetlands, with its varying river channel exhibiting such features as sandy beaches and impressive limestone outcroppings. Several springs feed the Withlacoochee and add to its scenic qualities, including Withlacoochee Blue Spring, Suwanacoochee Spring, and Morgan Springs. Approximately 2,120 square miles are contained within the Withlacoochee drainage basin in Georgia and Florida. The river itself has a recorded discharge at the Suwannee ranging from 93 to 2,060 cubic feet per second with an average flow of approximately 1,000 cubic feet per second.[53]

The river is accessible by small boats and canoes. Shoals and shallow areas severely limit powerboat access. Only one public boat launch is on the Withlacoochee, with canoes and other small boats primarily launched at road crossings. The Withlacoochee River Canoe Trail was the first river canoe trail established in Florida. The Florida Department of Environmental Protection maintains the trail in cooperation with the Coastal Plain Area Tourism Council of Valdosta, Georgia. The trail begins north of Valdosta and ends 56 miles downstream at its confluence with the Suwannee River.

The ecology of the Withlacoochee River is similar to the Suwannee. Forest types vary considerably. Longleaf and slash pine forest located in the sandhills give way to bottomland forest near the river. Oak and pine form the predominant tree types. The forests along the river's bank are harvested primarily for pulpwood. There are very few areas with residential development along the river, and these are located near the river's mouth at its junction with the Suwannee. The remainder of the river corridor is in a relatively natural condition.

Wildlife species occurring within the river corridor include a year-round population of wood duck. Beaver, once trapped out of the river for their fur, are active and contributing to tree damage. Deer, gray and red fox, and a variety of bird species including the kingfisher and many species of swallow are abundant. A fish survey of the river by the Florida Fish and Wildlife Conservation Commission identified 31 species including Suwannee bass, warmouth, blue gill, shellcracker, red breast sunfish, spotted sucker, several species of shiner, and shad in the river.

Agricultural runoff and industrial pollution affect the river's water quality. The latter results from the discharge of approximately 11.7 million gallons per day of paperboard mill wastewater into the Withlacoochee River near Clyattville, Georgia. Nutrient overloads and low levels of dissolved oxygen in the river are caused, at least in part, by these effluents. Runoff from adjacent agricultural lands is the likely source of high levels of coliform bacteria and phosphate found in the river.

[53]Water Resource Data for Florida, Vol. 4, Northwest Florida.

Despite the pollution concerns regarding small segments of the river, it remains essentially an undeveloped natural river affording excellent recreation potential. The varied character of the river itself, besides the profuse natural vegetation and absence of development, creates a very impressive aesthetic appearance offering a pleasing, and perhaps primitive, river experience.

### ix. Cross Creek, Prairie Creek and River Styx Corridors

Cross Creek, Prairie Creek, and the River Styx are small perennial streams in southeastern Alachua County. Cross Creek is the smallest of the three at approximately one mile in length. It is designated an Outstanding Florida Water and connects two regionally significant lakes, Orange Lake and Lake Lochloosa, both of which are also designated as Outstanding Florida Waters. At six miles in length, the River Styx is the longest of the three streams. The River Styx is also designated as an Outstanding Florida Water and connects Paynes Prairie State Preserve to Orange Lake. Prairie Creek is approximately two miles in length and connects Newnans Lake, a Natural Resource of Regional Significance, to Paynes Prairie State Preserve.

## f. Springs

More than 100 springs exist in the region, most of which are found along the Suwannee and Santa Fe rivers. Most of the springs issue under artesian pressure from the Floridan Aquifer with an average water temperature of 70 degrees Fahrenheit.[54] Regionally significant springs are identified in Table 4.1. Most regionally significant springs flow into the Suwannee River system. These springs provide significant volume to the flow of the river and affect the river's water quality. During periods of low water tables, the springs occasionally act as sinkholes; whereby, the Suwannee discharges its flow to the Floridan Aquifer. The springs are a primary source of recreation, providing locations for camping, canoeing, swimming, and snorkeling. In addition, north central Florida springs are internationally famous among cave divers.

Groundwater that maintains the region's springs is susceptible to contamination from activities occurring within spring capture zones. Spring capture zones are similar to water wellhead capture zones. They represent a geographic area near the spring where, if groundwater is contaminated, it will be disgorged by the spring at the earth's surface. Similar to wellhead capture zones, spring capture zones can be delineated by treating springs as pumping wells and using the U.S. Environmental Protection Agency's Wellhead Protection Area computer model to determine the size and shape of the capture zones. Spring capture zones have not been delineated for north central Florida springs. Delineation is important in order to protect the water quality of north central Florida springs and the surface waters supplied by springs. Three of the region's springs are highlighted below.

[54]Jack C. Rosenau, et. al., Springs of Florida, Florida Bureau of Geology, Tallahassee, Florida, 1977, pg. 4. Spring classes are based upon their rate of discharge. The Bureau identifies eight classes, or magnitudes, of springs. First magnitude springs discharge an average of 100 cubic feet or more of water per second. Second magnitude springs discharge between ten and 100 cubic feet per second. Third magnitude springs discharge between one to 10 cubic feet per second. By way of comparison, eighth magnitude springs discharge less than one pint per minute. The regional plan recognizes all first and second magnitude springs and their runs, a total of 105 springs, as Natural Resources of Regional Significance.

## i. Ginnie Spring

Located on the Santa Fe River in northeast Gilchrist County and northwest Alachua County, Ginnie Spring is associated with nine other nearby springs: Poe, Lily, Devil's Pond, Dogwood, July, Blue, Rum Island, Naked, and Poe. They are in a natural woodland setting easily accessible from each other. Much of the plant life near the springs is in a near natural state. Large species of cypress, oak, and maple trees surrounded by a dense undergrowth of natural vegetation, occur along the adjacent Santa Fe River and the spring group. A privately-owned campground surrounds Ginnie Spring.

Ginnie Spring is a large clear water spring with depths to 40 feet and is one of the most popular scuba-diving springs in the region. Devil's Eye Spring is in the middle of three boils in one of the most beautiful combinations of springs in the state. The spring contains a multi-caved tunnel leading to the Santa Fe River.

## ii. Holton Spring and Holton Creek

Holton Spring and its run to the Suwannee River, Holton Creek, are located on the north side of the Suwannee River approximately one mile east of the Alapaha River in Hamilton County. Holton Spring is one of the region's 18 first magnitude springs. More importantly, it is one of the few remaining first magnitude springs in a relatively undisturbed, natural state.[55] Endangered species found in the area include the gopher tortoise and Suwannee cooter. The area also contains the cedar elm, an endangered tree. The area contains the largest known population of cedar elm in Florida with an estimated 100 to 1,000 individual trees.[56]

## iii. Withlacoochee Blue Spring

Withlacoochee Blue Spring is approximately five miles east of the City of Madison on the west bank of the Withlacoochee River in Madison County. The site is widely used by Madison and Hamilton county residents for recreational activities. The spring has also gained a national reputation for cave diving.

Withlacoochee Blue Spring is a first magnitude spring with an average flow of 78 million gallons per day. The spring pool is 90 feet wide and 30 feet deep. A clear run travels approximately 150 feet from the spring to the Withlacoochee River. Vegetation around the spring consists of high pine lands and sandhills on the west giving way to a dense hardwood forest along the river. The vegetation is diverse with many large trees contributing to the aesthetic appearance of the site.[57]

[55]Suwannee River Preserve Design Project, pg. 55.

[56]Ibid, pg. 55.

[57]Significant Natural Areas, pg. 69.

# B. Problems, Needs and Opportunities

The Council identifies the following Natural Resources of Regional Significance problems, needs, and opportunities:

1. A need exists to preserve Big Bend coastal and marine resources identified as Natural Resources of Regional Significance for future generations.

2. A need exists to maintain an adequate supply of high-quality groundwater for all of north central Florida for future generations.

3. A need exists to increase our knowledge of the relationship between ground and surface waters, the surface water needs of native species and natural systems, including minimum flows necessary to the survival of native species and natural systems.

4. A need exists to protect all sources of recharge to the Floridan Aquifer from activities which would impair these functions or cause a degradation in the quality of recharging waters.

5. A need exists to ensure the survival of flora and fauna native to the region.

6. A need exists to ensure the survival of all listed species currently found in the Regional Ecological Greenways Network.[58]

7. A need exists for the state to protect the identified attributes of the habitats of listed species within the Regional Ecological Greenways Network.[59]

8. A need exists to plan and manage Planning and Resource Management Areas identified as Natural Resources of Regional Significance.

9. A need exists to maintain the quantity and quality of the region's surface water systems identified as Natural Resources of Regional Significance.

10. A need exists to map the capture zones of all springs identified as Natural Resources of Regional Significance.

11. An opportunity exists for state agencies and local governments to coordinate in the development of a comprehensive boating safety and resource protection plan for the Suwannee River System.

[58]Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50, Code of Federal Regulations, Part 17.

[59]Ibid.

12. A need exists to balance environmental concerns with existing needs for raw materials by industry. The survival of the timber industry is very important to the region as it provides the reason to own and protect much of what is identified in this plan as a Natural Resource of Regional Significance. The use of Best Management Practices is important to the sustainability of forests.

13. A need exists to encourage growth of biomass within the region in light of increasing demand for biomass electrical power generation.

14. As our region contains very sizeable quantities of biomass material for renewable energy production, there is an opportunity to increase the acreage of forested lands, improve the ecological quality of forested lands and provide for renewable energy supplies.

15. There is a need to encourage the sustainability of our forests.

# C. Regional Goals and Policies

## 1. All Natural Resources of Regional Significance

**REGIONAL GOAL 4.1.** Use the natural resources of the region in a sustainable manner.

**Regional Indicators**

1. As of 2015, the number of north central Florida local government comprehensive plans which encourage the use of silvicultural best management practices is unknown.

2. As of 2015, the number of north central Florida local government comprehensive plans Impact which encourage the use of low impact development practices is unknown.

3. As of 2015, the number of north central Florida local government comprehensive plans which encourage the use of energy conservation design principles is unknown.

4. As of 2015, the number of north central Florida local government comprehensive plans which encourage the use of water conservation and reuse strategies is unknown.

5. As of 2015, with the exception of intracounty groundwater transfer by Gainesville Regional Utilities, no interbasin transfer of water occurs in the region.

6. As of 2015, north central Florida has 102.5 megawatts of electrical generation capacity using biomass as the primary fuel source.

**Policy 4.1.1.** Ensure that local government comprehensive plans include provisions which encourage the use of silvicultural best management practices for silviculture uses within Natural Resources of Regional Significance.

**Policy 4.1.2.** Ensure that local government comprehensive plans include provisions which encourage the use of low impact development practices within Natural Resources of Regional Significance.

**Policy 4.1.3.** Ensure that local government comprehensive plans include provisions which encourage the use of energy conservation design principles in order to minimize demand on regional electric power generation facilities.

**Policy 4.1.4.** Ensure that local government comprehensive plans include provisions which encourage the inclusion of water conservation and reuse strategies in order to minimize demand for surface water and groundwater Natural Resources of Regional Significance.

**Policy 4.1.5.** Discourage the transfer of water across water management district boundaries until the receiving jurisdiction has implemented all practicable water supply alternatives and conservation measures, unless it is within a county which is located within two water management districts.

**Policy 4.1.6.** Discourage the transfer of groundwater and surface water across water management district boundaries, as provided for in Policy 4.1.5, where the current and projected water needs of the area from where the water is taken cannot be met, unless it is within a county which is located within two water management districts.

**Policy 4.1.7.** Encourage cooperative efforts to develop local and regional water supplies within water management districts, instead of the transport of water across water management district boundaries, and use water from sources nearest the area of use whenever practicable.

**Policy 4.1.8.** Encourage water management districts to take into account and to not violate the minimum flows and levels of waterbodies located within adjacent water management districts when preparing water supply plans and when issuing consumptive use permits.

**Policy 4.1.9.** Ensure that local government comprehensive plans do not include provisions relying upon Regional Plan Policies 4.1.5 and 4.1.6 contained herein as encouragement or justification to require the issuance of a local government permit for the consumptive use of water or the exercise of any other local government regulatory action preempting or having the effect of preempting the exclusive authority of water management districts over the consumptive use of water as authorized by Chapter 373, Florida Statutes.

# 2. Coastal and Marine Resources

## a. Big Bend Salt Marsh, Big Bend Seagrass Beds and Florida Middle Ground

**REGIONAL GOAL 4.2.** Preserve Big Bend coastal and marine resources identified as Natural Resources of Regional Significance for future generations of residents in recognition of their economic and ecological importance to the region.

### Regional Indicators

1. As of May, 2016, the Big Bend Salt Marsh (Dixie, Levy, and Taylor County) coastline comprised 72,641.34 acres.

2. In 2001, that portion of the Big Bend Seagrass Beds extending 6 nautical miles seaward of the Dixie County and Taylor County coastline was comprised of 102,530.5 acres of bays and estuaries, 63,992.3 acres of open water, 7,638.6 acres of tidal flats, 11,515.0 acres of patchy seagrass, 192,556.6 acres of continuous seagrass, and 108,423.7 acres which were unclassified.[60]

3. In 1996, the Florida Middle Ground comprised 132,000 acres.

4. As of May 2016, the Fenholloway River is in violation of U.S. Environmental Protection Agency water quality standards for dissolved oxygen, biochemical oxygen demand, and un-ionized ammonia.

5. As of January 2007, there were 60 National Pollutant Discharge Elimination System permits in the Region.

6. As of January 2015, no offshore oil or natural gas wells are located within 100 miles of the Dixie and Taylor counties coastline.

7. As of January 2015, no offshore oil or natural gas wells are located within the Florida Middle Ground.

**Policy 4.2.1.** Use non-structural water management controls as the preferred water management approach for the coastal areas of the region.

**Policy 4.2.2.** Provide technical assistance to local governments in ensuring the preservation of the region's coastal and marine resources through their local planning processes.

**Policy 4.2.3.** Minimize the need for excavating and/or filling of the region's coastal wetlands and ensure impacts are mitigated where such activity occurs.

**Policy 4.2.4.** Minimize the impacts of development activities which occur within and/or adjacent to the coastal wetlands.

**Policy 4.2.5.** Remove either the Big Bend Seagrass Beds or an area 35 miles seaward of the coastline of Dixie and Taylor Counties, whichever is of the greater seaward extent, from areas available for oil, gas and mineral leasing in the eastern Gulf of Mexico.

**Policy 4.2.6.** Remove the Florida Middle Ground from areas available for oil, gas and mineral leasing in the eastern Gulf of Mexico.

**Policy 4.2.7.** Minimize the need for establishing new channels and maintenance dredging of existing channels within the seagrass beds and mitigate impacts where such activity occurs.

**Policy 4.2.8.** Coordinate land use and water resources planning for coastal and marine resources designated as Natural Resources of Regional Significance among the Council, local governments, and the water management districts through regional review responsibilities, participation in committees and study groups, and ongoing communication.

[60]North Central Florida Regional Planning Council, March 2007. Derived from Seagrass Habitat and Monitoring in Florida's Big Bend, Florida Fish and Wildlife Research Institute and Suwannee River Water Management District, 2006.

**Policy 4.2.9.** Assist in environmental education efforts to increase public awareness of the region's coastal and marine resources through the North Central Florida Tourism Task Force.

**Policy 4.2.10.** Use incentives to encourage future development located within the service area of the unincorporated Town of Suwannee's wastewater treatment plant to hook up to the plant.

**Policy 4.2.11.** Monitor the entire Big Bend Seagrass Beds for a distance of six nautical miles seaward of the coastline and the Florida Middle Ground on a regular basis using a consistent methodology which provides meaningful trend analysis of their health and areal extent.

**Policy 4.2.12.** Ensure that local government comprehensive plans and requests for federal and state funds for development activities reviewed by the Council include adequate provisions for the protection of the Beg Bend Salt Marsh and the Big Bend Seagrass Beds.

# 3. Groundwater Resources

## a. Floridan Aquifer, Areas of High Recharge Potential to the Floridan Aquifer, Ichetucknee Trace, Stream-to-Sink Watersheds and Sinks

**REGIONAL GOAL 4.3.** Maintain an adequate supply of high-quality groundwater to meet the needs of north central Florida residents, in recognition of its importance to the continued growth and development of the region.

**Regional Indicators**

1. As of January 2015, the quantity of potable water contained in the Floridan Aquifer underlying the north central Florida region, it's average daily recharge and discharge, were unknown.

2. In 2012, an estimated 332.9 million gallons per day of water were withdrawn from north central Florida groundwater sources.

3. As of May 2016, north central Florida contained 18 first-magnitude springs, 120 second-magnitude springs, and 82 third-magnitude springs.

4. As of June 2016, the known Nitrate Nitrogen readings for north central Florida first magnitude springs, and their date of measure, were as follows (see Table 4.5):

**Policy 4.3.1.** Water management districts should monitor at regular intervals the water quality and flows of springs identified as Natural Resources of Regional Significance.

**Policy 4.3.2.** Continue to increase the region's knowledge of the relationship between ground and surface waters, the surface water needs of native species and natural systems, including minimum flows necessary to the survival of native species and natural systems.

**Policy 4.3.3.** Provide technical assistance to local governments in developing strategies in their local planning and land development regulations processes which can be used in addressing known water quantity, quality or recharge problem areas within their jurisdictions.

**Policy 4.3.4.** Coordinate land use and water resources planning for groundwater resources designated as Natural Resources of Regional Significance among the Council, local governments, and the water management districts through regional review responsibilities, participation in committees and study groups, and ongoing communication.

**Policy 4.3.5.** Assist in environmental education efforts to increase public awareness of the region's ground water resources through The Original Florida Tourism Task Force.

**Policy 4.3.6.** Identify and map the capture zones of all public water supply wellfields.

**Policy 4.3.7.** Provide technical assistance to local governments in implementing wellfield protection programs based upon capture zones delineated by either the Florida Department of Environmental Protection or the local water management districts when such information becomes available.

**Policy 4.3.8.** Ensure that local government comprehensive plans and requests for federal and state funds for development activities reviewed by the Council include adequate provisions for the protection of the Floridan aquifer, Areas of High Recharge Potential to the Floridan aquifer, the Ichetucknee Trace, as well as Stream-to-Sink Watersheds and Sinks which have been identified and mapped in the regional plan as Natural Resources of Regional Significance.

**Policy 4.3.9.** Encourage local and regional development of alternative water supplies within south Georgia, the Suwannee River Water Management District and the St. Johns River Water Management District, including desalination, conservation, reuse of nonpotable reclaimed water and stormwater, as well as aquifer storage and recovery.

**REGIONAL GOAL 4.4.** Protect all sources of recharge to the Floridan aquifer from all activities which would impair these functions or cause a degradation in the quality of the water being recharged in recognition of the importance of maintaining adequate supplies of high-quality groundwater for the region.

**Regional Indicators**

1. As of May 2016, the Southwest Florida Water Management District, the St. Johns River Water Management District, the Suwannee River Water Management District, Alachua County, and Columbia County had identified and mapped 1,180,502.52 acres of areas of high recharge potential to the Floridan Aquifer within north central Florida.

2. In Fiscal Year 2010-2011, there were 204,586 visitors to Ichetucknee Springs State Park.[61]

3. In 2015, eight sinks were delineated as Natural Resources of Regional Significance in the North Central Florida Strategic Regional Policy Plan.

**Policy 4.4.1.** Coordinate the mapping of high recharge areas in order to assure consistency in identification of such areas near district boundaries.

[61] 2013 Florida Statistical Abstract, Table 19.52.

**Policy 4.4.2.** Update the regional map series delineating Areas of High Recharge Potential to the Floridan Aquifer with a map series depicting High Recharge Areas of the Floridan Aquifer when the latter information becomes available**.**

**Policy 4.4.3.** Assist state and local agencies in developing and implementing strategies for the protection of the Ichetucknee Trace so that activities occurring within the Trace do not adversely impact the water quality and flow of surface waters within Ichetucknee Springs State Park.

**Policy 4.4.4.** Provide technical assistance to local governments in the development and implementation of appropriate local government comprehensive plan policies and land development regulations necessary to maintaining the quantity and quality of ground water recharge in Areas of High Recharge Potential to the Floridan Aquifer, Stream-to-Sink Watersheds, and Sinks.

**Policy 4.4.5.** Ensure that local government comprehensive plans and requests for federal and state funds for development activities reviewed by the Council include adequate provisions for stormwater management and aquifer recharge protection in order to protect the quality and quantity of water contained in the Floridan Aquifer.

**Policy 4.4.6.** Work with the water management districts to develop and apply coordinated review procedures and criteria for reviewing groundwater issues related to federally-assisted projects, local plan amendments and revisions, local comprehensive plan evaluation and appraisal reports, and local comprehensive plan intergovernmental coordination elements.

**Policy 4.4.7.** Minimize the effect of mining activities on water quality and quantity of the Floridan Aquifer.

# 4. Natural Systems

## a. Regional Ecological Greenways Network

**REGIONAL GOAL 4.5.** Protect all listed species within the Regional Ecological Greenways Network.[62]

**Regional Indicator**

As of May 2016 the Regional Ecological Greenways Network comprised 1,861,136 acres in north Central Florida.

**Policy 4.5.1.** Allow development and economic activity within and near the Regional Ecological Greenway to the extent that such development and economic activity does not significantly and adversely affect the functions of the resource as an ecological greenway.

[62]Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50, Code of Federal Regulations, Part 17.

**Policy 4.5.2.** Work with local governments and the Florida Fish and Wildlife Conservation Commission to ensure the survival of all listed species and their habitats found in the Regional Ecological Greenways Network.[63]

**Policy 4.5.3.** Increase citizen awareness on the effects of human activities on listed species and their habitats in the Regional Ecological Greenways Network.[64]

**Policy 4.5.4.** Coordinate planning efforts to protect listed species and their habitats found within the Regional Ecological Greenways Network.[65]

**Policy 4.5.5.** Endangered and threatened species and their habitats within the Regional Ecological Greenways Network shall be protected.[66]

**Policy 4.5.6.** When a land use designation change is proposed or an increase in allowable land use density or intensity is proposed, listed species and their habitat known to exist within the Regional Ecological Greenways Network shall be protected. Protection should include, but not necessarily be limited to, the following:

a) conservation easements;
b) on and offsite mitigation/conservation banks;
c) tax breaks;
d) transferable densities;
e) management agreements; and,
f) agriculture and silviculture best management practices.[67]

**Policy 4.5.7.** Working with private property owners, encourage voluntary protection of listed species and their habitat located on private property within the Regional Ecological Greenways Network through the use of best management practices and public education programs.[68]

**Policy 4.5.8.** Provide technical assistance to local governments in the development of appropriate local government comprehensive plan policies and land development regulations necessary to maintain the identified attributes of listed species and their habitat within the Regional Ecological Greenways Network.[69]

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[63]Ibid.

[64]Loc. cit.

[65]Loc. cit.

[66]Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50, Code of Federal Regulations, Part 17.

[67]Ibid.

[68]Loc. cit.

[69]Loc. cit.

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**Policy 4.5.9.** Support agricultural and silvicultural practices that maintain the function and value of natural systems through the use of best management practices.

**Policy 4.5.10.** Ensure that requests for federal and state funds, federal and state permits, and direct federal and state actions for development activities reviewed by the Council include adequate provisions for the protection of listed species and their habitat within the Regional Ecological Greenways Network.[70]

**Policy 4.5.11.** Ensure that local government comprehensive plans include policies which, for developments within the Regional Ecological Greenways Network require an evaluation to determine the presence of listed species and their habitat and, if such species are found, require the development of a management plan, including modifications to the proposed development as necessary, to ensure the protection of listed species and their habitat.[71]

**Policy 4.5.12.** Ensure that local government comprehensive plans include policies which protect native vegetation and provides for the use of native vegetation, thereby promoting the regeneration of natural habitats within the Regional Ecological Greenways Network.

# 5. Planning and Resource Management Areas

## a. Private Conservation Lands and Public Conservation Lands

**REGIONAL GOAL 4.6.** Protect Natural Resources of Regional Significance identified in this plan as "Planning and Resource Management Areas."

**Regional Indicators**

1. As of May 2016, north central Florida contained 5,861.31 acres of private conservation lands.

2. As of May 2016, north central Florida contained approximately 170,132.95 acres of federally-owned conservation lands.

3. As of May 2016, north central Florida contained 277,268.15 acres of state-owned conservation and recreation lands.

4. As of May 2016, north central Florida contained approximately 308,011.64 acres of water management District-owned conservation lands (including less than fee simple ownership).

**Policy 4.6.1.** Provide technical assistance to local governments in the development of appropriate local government comprehensive plan policies and land development regulations necessary to maintaining areas and water bodies identified as Natural Resources of Regional Significance classified in this plan as "Planning and Resource Management Areas".

[70] Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50, Code of Federal Regulations, Part 17.

[71] Ibid.

**Policy 4.6.2.** Seek the input of local governments and the regional planning council in the preparation of management plans for public conservation lands and private conservation lands identified as Natural Resources of Regional Significance.

**Policy 4.6.3.** Continue to provide input to state and local agencies in reviewing existing or proposed designations of areas or water bodies as one of the categories identified as Natural Resources of Regional significance classified in this plan as "Planning and Resource Management Areas".

**Policy 4.6.4.** Ensure that local government comprehensive plans and requests for federal and state funds for development activities reviewed by the Council include adequate provisions for the protection of Planning and Resource Management Areas identified and mapped in the regional plan as Natural Resources of Regional Significance.

# 6. Surface Water Systems

## a. Fresh Water Wetlands, Lakes, River Corridors and Springs

**REGIONAL GOAL 4.7.** Maintain the quantity and quality of the region's surface water systems in recognition of their importance to the continued growth and development of the region.

**Regional Indicators**

1. As of May 2016, the water management districts had identified 1,363,761.27 acres of fresh water wetlands within the region.

2. As of May 2016, 13 north central Florida lakes were identified as Natural Resources of Regional Significance in the North Central Florida Strategic Regional Policy Plan.

3. As of May 2016, 14 river corridors were designated as Natural Resources of Regional Significance in the North Central Florida Strategic Regional Policy Plan.

4. As of May 2016, 139,918.29 acres of river corridor were designated as Natural Resources of Regional Significance in the North Central Florida Strategic Regional Policy Plan.

5. As of May 2016, 138 North central Florida springs were listed as Natural Resources of Regional Significance in the North Central Florida Strategic Regional Policy Plan.

6. In 2016, 17 north central Florida Natural Resources of Regional Significance were under a consumption advisory for Large-mouth bass.

7. In 2016, 13 north central Florida Natural Resources of Regional Significance were under a consumption advisory for Redbreast Sunfish and Redear Sunfish.

8. In 2016, seven north central Florida Natural Resources of Regional Significance were under a consumption advisory for Brown Bullhead.

9. In 2016, eight north central Florida Natural Resources of Regional Significance were under a consumption advisory for Black Crappie.

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10. In 2016, fourteen north central Florida Natural Resources of Regional Significance were under a consumption advisory for Bluegill.

11. In 2016, 6 north central Florida Natural Resources of Regional Significance were under a consumption advisory for Channel Catfish.

12. In 2016, 7 north central Florida Natural Resources of Regional Significance were under a consumption advisory for White Catfish.

13. In 2016, 15 north central Florida Natural Resources of Regional Significance were under a consumption advisory for Spotted Sunfish.

14. In 2016, one north central Florida Natural Resource of Regional Significance was under a consumption advisory for Chain Pickerel.

15. In 2016, one north central Florida Natural Resource of Regional Significance was under a consumption advisory for Striped Bass.

16. In 2016, five north central Florida Natural Resources of Regional Significance were under a consumption advisory for Warmouth.

17. In 2016, four north central Florida Natural Resources of Regional Significance were under a consumption advisory for Spotted Bullhead Catfish.

18. As of June 2007, minimum flows and levels have been established for the lower Suwannee River, Madison County Blue Spring, and Fanning Spring.

**Policy 4.7.1.** Provide technical assistance to local governments in the development and implementation of appropriate local government comprehensive plan policies and land development regulations necessary to maintaining the quantity and high quality of the region's surface water systems.

**Policy 4.7.2.** Continue the mapping of river floodplains.

**Policy 4.7.3.** Update the regional map series delineating river floodplains as this information becomes available**.**

**Policy 4.7.4.** Work with north central Florida local governments to standardize on a common source for wetland maps contained in local government comprehensive plans.

**Policy 4.7.5.** Use non-structural water management controls as the preferred water management approach for rivers, lakes, springs, and fresh water wetlands identified as Natural Resources of Regional Significance.

**Policy 4.7.6.** Support the coordination of land use and water resources planning for surface water resources designated as Natural Resources of Regional Significance among the Council, local governments, and the water management districts through regional review responsibilities, participation in committees and study groups, and ongoing communication.

**Policy 4.7.7.** Assist in environmental education efforts to increase public awareness of the region's surface water systems through the North Central Florida Tourism Task Force.

**Policy 4.7.8.** Establish and enforce consistent boating safety zones along the Suwannee and Santa Fe rivers.

**Policy 4.7.9.** Assist local governments in establishing consistent regulations for development projects within river corridors identified as Natural Resources of Regional Significance.

**Policy 4.7.10.** Identify and map the capture zones of all springs identified as Natural Resources of Regional Significance. Once delineated, provide technical assistance to local governments in implementing spring protection programs based upon capture zones.

**Policy 4.7.11.** Provide technical assistance to local governments in obtaining grants to establish centralized sewer systems in identified septic tank problem areas.

**Policy 4.7.12.** Ensure that local government comprehensive plans and requests for federal and state funds for development activities reviewed by the Council include adequate provisions for stormwater management, including retrofit programs for known surface water runoff problem areas, and aquifer recharge protection in order to protect the quality and quantity of water contained in the Floridan Aquifer and surface water systems identified as Natural Resources of Regional Significance.

**Policy 4.7.13.** Work with local governments, state and federal agencies, and the local water management districts in the review of local government comprehensive plans as they affect wetlands identified as Natural Resources of Regional Significance to ensure that any potential adverse impacts created by the proposed activities on wetlands are minimized to the greatest extent possible.

**Policy 4.7.14.** Minimize the effect of mining on the surface water quality and seasonal flows of surface waters identified as Natural Resources of Regional Significance.

**Policy 4.7.15.** Encourage water management districts to monitor at regular intervals the quality and quantity of surface waters identified as Natural Resources of Regional Significance.

**Policy 4.7.16.** Assist water quality working groups formed to meet the water quality standards of waterbodies included in the State of Florida 303(d) list.

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# Chapter V
# Regional Transportation

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# Chapter V: Regional Transportation

## A. Conditions and Trends

### 1. Introduction

The region is served by four public transit system service providers, two major and three shuttle/commuter air carriers, one passenger and three freight rail systems, one bus line, and the regional road network. Due to its rural nature, north central Florida is heavily dependent upon automobile and truck transportation. Generally, the existing motor vehicle ground transportation and rail freight transportation systems are adequate.

### 2. Public Transit

Public transit is lightly utilized in north central Florida. The Gainesville Regional Transit System is the region's only community with a fixed-route public transit system. Demand response public transportation services are available throughout the region provided by Big Bend Transit, Inc., Levy County Transit, MV Transportation, Inc., Suwannee River Economic Council, Inc., and Suwannee Valley Transit Authority. The City of Gainesville Regional Transit System provides fixed route service within the City of Gainesville. The Regional Transit System also contracts with MV Transportation, Inc. to provide complementary paratransit service under the Americans with Disabilities Act. Intercity bus transportation is provided by Greyhound Bus Lines. The carrier stops in the following north central Florida municipalities: Gainesville, Hawthorne (bus stop), Waldo (bus stop), Starke, Lake City, and Perry.[1]

The region's rural character and low population density does not easily lend itself to the provision of public transit systems. Correspondingly, only a small percentage of the region's population use public transit. As indicated in Table 5.1 only 2.5 percent of year 2015 north central Florida workers age 16 and over reported using public transportation as their means of transportation to work. Alachua County, which includes Gainesville's fixed-route bus system, had the highest percentage of workers using public transit at 4.5 percent. Hamilton and Madison Counties reported the lowest usage at 0.0 percent. The table also reveals an increase in public transit usage between 2010 and 2015.

[1]Greyhound Bus Lines, Inc., July 8, 2009, http://www.greyhound.com/home/TicketCenter/en/locations.asp?state=fl

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**TABLE 5.1**

**NORTH CENTRAL FLORIDA RESIDENTS USING PUBLIC TRANSPORTATION AS PRIMARY MEANS OF TRAVEL TO WORK WORKERS AGE 16 AND OVER**

| Area | Number of Workers Age 16 and Over | | Number Using Public Transportation | | Percent Using Public Transportation | |
|---|---|---|---|---|---|---|
| | 2010 | 2015 | 2010 | 2015 | 2010 | 2015 |
| **Alachua** | 116,628 | 114,702 | 3,898 | 5,186 | 3.3 | 4.5 |
| **Bradford** | 10,470 | 9,217 | 0 | 12 | 0.0 | 0.1 |
| **Columbia** | 24,555 | 24,760 | 51 | 27 | 0.2 | 0.1 |
| **Dixie** | 5,168 | 4,716 | 5 | 0 | 0.1 | 0.0 |
| **Gilchrist** | 6,468 | 6,143 | 0 | 39 | 0.0 | 0.6 |
| **Hamilton** | 4,392 | 3,865 | 0 | 0 | 0.0 | 0.0 |
| **Lafayette** | 3,319 | 2,649 | 24 | 17 | 0.7 | 0.6 |
| **Levy** | 15,534 | 13,897 | 18 | 36 | 0.1 | 0.3 |
| **Madison** | 7,490 | 5,873 | 0 | 0 | 0.0 | 0.0 |
| **Suwannee** | 15,679 | 15,277 | 47 | 27 | 0.3 | 0.2 |
| **Taylor** | 8,693 | 6,987 | 17 | 6 | 0.2 | 0.1 |
| **Union** | 4,268 | 3,890 | 0 | 25 | 0.0 | 0.6 |
| **Region** | 222,664 | 211,976 | 4,060 | 5,375 | 1.8 | 2.5 |
| **State** | 8,317,203 | 8,432,513 | 160,263 | 178,238 | 1.9 | 2.1 |

Source: U.S. Census Bureau, 2015 American Community Survey, Means of Transportation to Work by Age

# a. Public Transit Service Providers

## i. Big Bend Transit, Inc.

Big Bend Transit, Inc. is the designated Community Transportation Coordinator for Madison and Taylor Counties under Florida's Transportation Disadvantaged Program. Big Bend Transit, Inc. provides demand-responsive public transportation services within Madison and Taylor counties. Transportation services are provided to employment centers as well as to social service, health, medical, and shopping facilities. Intra- and inter-county transportation service is provided within/from each of the rural counties in the service area with an emphasis on inter-county service to Leon County, which provides a high concentration of employment opportunities and specialized medical services.

## ii. Gainesville Regional Transit System

The City of Gainesville Regional Transit System operates ten fixed main bus routes which serve the City of Gainesville and the adjacent surrounding urbanized area of Alachua County. The fixed route system operates on a radial pattern with seven of its ten routes originating at a downtown transfer point. The University of Florida contracts with the Gainesville Regional Transit System to provide campus shuttles. The Regional Transit System also contracts with MV Transportation, Inc. to provide complementary paratransit service under the Americans with Disabilities Act.

Between 1999 and 2007, Gainesville Regional Transit System fixed route ridership increased by 170.9 percent, from 3,299,933 to 8,939,334.[2] The growth in ridership was primarily due to the University of Florida student government providing a subsidy to the Gainesville Regional Transit System in exchange for allowing university students to ride the system free of charge.

## iii. Levy County Transit

Levy County Transit is the designated Community Transportation Coordinator for Levy County under Florida's Transportation Disadvantaged Program. Levy County Transit is operated by Levy County Board of County Commissioners. Demand response public transportation services are provided primarily for medical purposes. Intra- and inter-county transportation services are provided with an emphasis on inter-county service to the City of Gainesville for specialized medical services.

## iv. MV Transportation, Inc.

MV Transportation, Inc. is the designated Community Transportation Coordinator for Alachua County under Florida's Transportation Disadvantaged Program. MV Transportation, Inc., operates a demand response public transportation service within Alachua County. Transportation services are provided to employment centers as well as to social service, health, medical, shopping and recreational facilities. The City of Gainesville Regional Transit System also contracts with MV Transportation, Inc. to provide complementary paratransit service under the Americans with Disabilities Act.

[2]Gainesville Regional Transit System, June 2000, and Gainesville Regional Transit System, Fiscal Year 2007 Ridership by Route, (http://www.go-rts.com/pdf/FY07_Ridership.pdf)

### v. Suwannee River Economic Council, Inc.

Suwannee River Economic Council, Inc. is the designated Community Transportation Coordinator for Bradford, Dixie, Gilchrist, Lafayette and Union Counties. Intra- and inter-county demand response transportation services are provided with an emphasis on inter-county service to Alachua County for specialized medical services.

### vi. Suwannee Valley Transit Authority

Suwannee Valley Transit Authority offers a variety of transportation services within Columbia, Hamilton, and Suwannee counties. These range from a weekly service which brings rural residents to Jasper, Lake City, and Live Oak, to daily commuter runs which carry workers to several major employment locations. Other services provided by the Suwannee Valley Transit Authority include the Gainesville Medical Bus which is a daily run which connects Jasper, Lake City, and Live Oak to regional medical facilities located in Gainesville. The Suwannee Valley Transit Authority also provides services to various human services agencies within its three-county area as well as charter services for groups needing special transportation requirements. The Suwannee Valley Transit Authority is the designated Community Transportation Coordinator for Columbia, Hamilton, and Suwannee counties under Florida's Transportation Disadvantaged Program.

## b. Demand Response Public Transportation Service and the Transportation Disadvantaged

Demand response public transportation services are available in all north central Florida counties. Designated community transportation coordinators provide public transportation as part of Florida's Transportation Disadvantaged Program. The purpose of the program is to provide transportation services to the transportation disadvantaged in a manner that is cost-effective, efficient, and reduces fragmentation and duplication of services.[3] Transportation services for the transportation disadvantaged are provided through the systems using a variety of vehicles, including mini-buses, vans, mini-vans and automobiles. Many of the vehicles used are specially equipped to serve the needs of the disabled and public transit riders. Designated Community Transportation Coordinators receive government public transit grants serve the general public, including the transportation disadvantaged general public. All of the coordinated transportation systems in the region heavily rely upon local, state, and federal financial assistance.

The Florida Commission for the Transportation Disadvantaged serves as the policy development and implementing agency for the state's transportation disadvantaged program. Major participants which implement the program at the county level include:

> The Official Planning Agency, a Metropolitan Planning Organization or designated entity which performs long-range transportation disadvantaged planning and assists the Florida Commission for the Transportation Disadvantaged and the Local Coordinating Board in implementing the transportation disadvantaged program within a designated service area;

[3]The transportation disadvantaged are those persons who, due to physical or mental disability, income status, or age are unable to transport themselves or to purchase transportation and are, therefore, dependent upon others to obtain access to health care, employment, education, shopping, social activities, or other life-sustaining activities, or children who are handicapped or high risk or at-risk as defined in s.411.202, Florida Statutes and 427.011(1), Florida Statutes.

The Local Coordinating Board, a group with a diverse membership appointed by the Official Planning Agency which identifies local service needs, advises the Community Transportation Coordinator on the coordination of services, and serves as an advisory body to the Florida Commission for the Transportation Disadvantaged in its designated service area;

The Community Transportation Coordinator, a public, private non-profit, or private for-profit entity functioning as a sole provider, partial brokerage or complete brokerage which is responsible for, among other things, the delivery of transportation disadvantaged services originating in its designated service area;

Purchasers of transportation services such as those available through the Florida Commission for the Transportation Disadvantaged; and

Transportation operators, which are either public, private non-profit, or private for-profit entities which contract with a partial or complete brokerage Community Transportation Coordinator to provide transportation services within a coordinated transportation system.

Table 5.2 identifies the Official Planning Agency, Local Coordinating Board, and Community Transportation Coordinator for each of the counties within the region. The transportation services provided or arranged by Community Transportation Coordinators include program trips subsidized by government or social services agencies and general trips subsidized by state Transportation Disadvantaged Trust Fund trip/equipment grants or other sources. A general trip is one made by a transportation disadvantaged person or member of the general public to a destination of his or her choice. A program trip is one made by a client of a government or social service agency for the purpose of participating in a program of that agency. Examples include Medicaid, congregate meal, day training and day treatment program trips. Examples include medical, shopping, employment, and social/recreational trips. As can be seen in Table 5.2, the North Central Florida Regional Planning Council directly serves as the official planning agency for nine of the region's counties. The Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area is the official planning agency for Alachua County and is staffed by the Council.[4]

[4]See Coordination Outline, page VII-4, for additional information regarding the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area and the transportation disadvantaged program.

## TABLE 5.2

## NORTH CENTRAL FLORIDA
## TRANSPORTATION DISADVANTAGED PROGRAMS

| Area | Planning Agency | Community Transportation Coordinators |
|---|---|---|
| **Alachua** | Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area<br>2009 N.W. 67th Place<br>Gainesville, FL 32653-1603 | MV Transportation, Inc.<br>3713 SW 42nd Ave<br>Gainesville, FL 32608<br>(sole provider) |
| **Bradford** | North Central Florida Regional Planning Council<br>2009 N.W. 67th Place<br>Gainesville, FL 32653-1603 | Suwannee River Economic Council, Inc.<br>P.O. Box 70<br>Live Oak, FL 32060<br>(partial brokerage) |
| **Columbia** | North Central Florida Regional Planning Council<br>2009 N.W. 67th Place<br>Gainesville, FL 32653-1603 | Suwannee Valley Transit Authority<br>1907 Voyles St.<br>Live Oak, FL 32060<br>(partial brokerage) |
| **Dixie** | North Central Florida Regional Planning Council<br>2009 N.W. 67th Place<br>Gainesville, FL 32653-1603 | Suwannee River Economic Council, Inc.<br>P.O. Box 70<br>Live Oak, FL 32060<br>(sole provider) |
| **Gilchrist** | North Central Florida Regional Planning Council<br>2009 N.W. 67th Place<br>Gainesville, FL 32653-1603 | Suwannee River Economic Council, Inc.<br>P.O. Box 70<br>Live Oak, FL 32060<br>(sole provider) |
| **Hamilton** | North Central Florida Regional Planning Council<br>2009 N.W. 67th Place<br>Gainesville, FL 32653-1603 | Suwannee Valley Transit Authority<br>1907 Voyles St.<br>Live Oak, FL 32060<br>(partial brokerage) |
| **Lafayette** | North Central Florida Regional Planning Council<br>2009 N.W. 67th Place<br>Gainesville, FL 32653-1603 | Suwannee River Economic Council, Inc.<br>P.O. Box 70<br>Live Oak, FL 32060<br>(sole provider) |
| **Levy** | North Central Florida Regional Planning Council<br>2009 NW 67th Place<br>Gainesville, FL 32653-1603 | Levy County Transit<br>970 E. Hathaway Ave., Ste A<br>Bronson, FL 32621<br>(sole provider) |
| **Madison** | North Central Florida Regional Planning Council<br>2009 N.W. 67th Place<br>Gainesville, FL 32653-1603 | Big Bend Transit, Inc.<br>P.O. Box 1721<br>Tallahassee, FL 32302<br>(partial brokerage) |
| **Suwannee** | North Central Florida Regional Planning Council<br>2009 N.W. 67th Place<br>Gainesville, FL 32653-1603 | Suwannee Valley Transit Authority<br>1907 Voyles St.<br>Live Oak, FL 32060<br>(partial brokerage) |
| **Taylor** | Taylor County Board of County Commissioners<br>P.O. Box 620<br>Perry, FL 32347 | Big Bend Transit, Inc.<br>P.O. Box 1721<br>Tallahassee, FL 32302<br>(partial brokerage) |
| **Union** | North Central Florida Regional Planning Council<br>2009 N.W. 67th Place<br>Gainesville, FL 32653-1603 | Suwannee River Economic Council, Inc.<br>P.O. Box 70<br>Live Oak, FL 32060<br>(sole provider) |

Source: North Central Florida Regional Planning Council, April 2016.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

The National Center for Transit Research developed a methodology for estimating the general and critical need of the transportation disadvantaged population based on the most current U.S. Census Bureau demographic and socio-economic data available. The general transportation disadvantaged population includes the estimates of all disabled, elderly, low income persons and children who are 'high-risk" or "at-risk."

The critical need transportation disadvantaged population includes individuals who, due to severe physical limitations or low incomes, are unable to transport themselves or purchase transportation and are dependent upon others to obtain access to health care, employment, education, shopping, social activities or other life sustaining activities.

Table 5.3 presents 2017 to 2022 transportation disadvantaged general and critical need population forecasts for north central Florida counties and the region as a whole. Forecasted annual rates of increase in the transportation disadvantaged general population range from 5.9 percent for Alachua and Suwannee Counties to 0.5 percent for Madison County. Forecasted rates of increase in the transportation disadvantaged critical need population range from 5.9 percent in Dixie County 0.5 percent in Suwannee County.

## TABLE 5.3

## PROJECTED TRANSPORTATION DISADVANTAGED POPULATION

| Area/Group | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Percent Increase 2017-2022 |
|---|---|---|---|---|---|---|---|
| **Alachua** | | | | | | | |
| **General** | 99,421 | 100,420 | 101,429 | 102,448 | 103,478 | 104,518 | 5.1 |
| **Critical Need** | 13,447 | 13,582 | 13,719 | 13,857 | 13,996 | 14,136 | 5.1 |
| **Bradford** | | | | | | | |
| **General** | 9,150 | 9,196 | 9,242 | 9,289 | 9,336 | 9,383 | 2.5 |
| **Critical Need** | 1,693 | 1,701 | 1,710 | 1,718 | 1,727 | 1,736 | 2.5 |
| **Columbia** | | | | | | | |
| **General** | 26,731 | 27,000 | 27,273 | 27,548 | 27,825 | 28,106 | 5.1 |
| **Critical Need** | 4,989 | 5,039 | 5,090 | 5,141 | 5,193 | 5,246 | 5.2 |
| **Dixie** | | | | | | | |
| **General** | 7,461 | 7,546 | 7,631 | 7,718 | 7,805 | 7,893 | 5.8 |
| **Critical Need** | 1,437 | 1,453 | 1,469 | 1,486 | 1,503 | 1,520 | 5.8 |
| **Gilchrist** | | | | | | | |
| **General** | 8,528 | 8,616 | 8,704 | 8,793 | 8,883 | 8,974 | 5.2 |
| **Critical Need** | 1,766 | 1,784 | 1,802 | 1,821 | 1,839 | 1,858 | 5.2 |
| **Hamilton** | | | | | | | |
| **General** | 6,477 | 6,518 | 6,560 | 6,602 | 6,645 | 6,688 | 3.3 |
| **Critical Need** | 1,442 | 1,451 | 1,461 | 1,470 | 1,480 | 1,489 | 3.3 |
| **Lafayette** | | | | | | | |
| **General** | 3,707 | 3,744 | 3,782 | 3,820 | 3,858 | 3,897 | 5.1 |
| **Critical Need** | 815 | 823 | 831 | 840 | 848 | 857 | 5.2 |
| **Levy** | | | | | | | |
| **General** | 18,851 | 19,042 | 19,236 | 19,431 | 19,628 | 19,827 | 5.2 |
| **Critical Need** | 3,532 | 3,568 | 3,604 | 3,641 | 3,677 | 3,715 | 5.2 |
| **Madison** | | | | | | | |
| **General** | 8,431 | 8,440 | 8,449 | 8,458 | 8,467 | 8,475 | 0.5 |
| **Critical Need** | 1,710 | 1,712 | 1,714 | 1,716 | 1,717 | 1,719 | 0.5 |
| **Marion** | | | | | | | |
| **General** | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| **Critical Need** | n/a | n/a | n/a | n/a | n/a | n/a | n.a |
| **Suwannee** | | | | | | | |
| **General** | 19,454 | 19,677 | 19,903 | 20,131 | 20,362 | 20,595 | 5.9 |
| **Critical Need** | 3,587 | 3,628 | 3,670 | 3,712 | 3,754 | 3,797 | 5.9 |
| **Taylor** | | | | | | | |
| **General** | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| **Critical Need** | n/a | n/a | n/a | n/a | n/a | n/a | n.a |
| **Union** | | | | | | | |
| **General** | 4,978 | 5,021 | 5,064 | 5,107 | 5,151 | 5,195 | 4.4 |
| **Critical Need** | 951 | 959 | 967 | 976 | 984 | 992 | 4.3 |
| **Region** | | | | | | | |
| **General** | 213,189 | 215,220 | 217,273 | 219,345 | 221,438 | 223,551 | 4.9 |
| **Critical Need** | 35369 | 35700 | 36037 | 36378 | 36718 | 37065 | 4.8 |

n/a = Not Available
Source: National Center for Transit Research, Forecasting Paratransit Services Demand, June 2013.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

Table 5.4 presents 2000 to 2022 annual trip demand forecasts for north central Florida counties. As illustrated in the table, regional annual transportation disadvantaged annual trip demand is projected to increase by 9.2 percent during this time period. Additionally, the projected demand shows little variation at the county level, ranging from 11.0 percent in Madison County to 9.1 percent in most north central Florida counties.

## TABLE 5.4

## PROJECTED TRANSPORTATION DISADVANTAGED ANNUAL TRIP DEMAND

| Area | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Percent Change |
|---|---|---|---|---|---|---|---|
| **Alachua** | 5,490,001 | 5,582,782 | 5,681,597 | 5,782,162 | 5,884,506 | 5,988,662 | 9.1 |
| **Bradford** | 423,350 | 430,843 | 438,469 | 446,230 | 454,128 | 462,167 | 9.2 |
| **Columbia** | 1,567,971 | 1,594,470 | 1,622,692 | 1,651,414 | 1,680,644 | 1,710,391 | 9.1 |
| **Dixie** | 398,121 | 404,849 | 412,015 | 419,308 | 426,729 | 434,282 | 9.1 |
| **Gilchrist** | 616,427 | 626,845 | 637,940 | 649,940 | 660,723 | 672,418 | 9.1 |
| **Hamilton** | 493,873 | 502,220 | 511,109 | 520,156 | 529,362 | 538,732 | 9.1 |
| **Lafayette** | 254,240 | 258,537 | 263,113 | 267,770 | 272,509 | 277,333 | 9.1 |
| **Levy** | 1,072,418 | 1,091,400 | 1,110,718 | 1,130,378 | 1,150,385 | 1,170,747 | 9.2 |
| **Madison** | 565,336 | 574,336 | 585,066 | 595,422 | 605,961 | 627,602 | 11.0 |
| **Suwannee** | 1,357,289 | 1,380,227 | 1,404,657 | 1,429,520 | 1,454,822 | 1,480,573 | 9.1 |
| **Taylor** | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| **Union** | 292,034 | 296,970 | 302,226 | 307,575 | 313,019 | 318,560 | 9.1 |
| **Region** | 12,531,060.00 | 12,743,479.00 | 12,969,602.00 | 13,199,875.00 | 13,432,788.00 | 13,681,467.00 | 9.2 |

Source: National Center for Transit Research, Forecasting Paratransit Services Demand, June 2013.

As indicated in Table 5.5, north central Florida paratransit ridership decreased by 19.9 percent between Fiscal Years 2013-14 and 2014-15, declining from 517,180 trips in Fiscal Year 2013-14 to 414,276 trips in Fiscal Year 2014-15. Hamilton and Columbia Counties experienced the largest percentage declines during this time period, at 59.7 and 67.0 percent, respectively. Lafayette and Suwannee Counties experienced the largest percentage increase in ridership during this period, with both counties recording a 10.9 percent increase.

**TABLE 5.5**

**NORTH CENTRAL FLORIDA PARATRANSIT RIDERSHIP**
**FISCAL YEARS 2013-14 AND 2014-15**

| Area | Fiscal Year 2013-14 | Fiscal Year 2014-15 | Percent Change |
|---|---|---|---|
| **Alachua** | 110,757 | 102,557 | (7.4) |
| **Bradford** | 22,203 | 22,752 | 2.5 |
| **Columbia** | 58,206 | 23,446 | (59.7) |
| **Dixie** | 6,608 | 6,651 | 0.7 |
| **Gilchrist** | 4,105 | 3,814 | (7.1) |
| **Hamilton** | 12,749 | 4,202 | (67.0) |
| **Lafayette** | 3,419 | 3,791 | 10.9 |
| **Levy** | 57,480 | 46,318 | (19.4) |
| **Madison** | 18,667 | 19,025 | 1.9 |
| **Taylor** | 19,404 | 19,356 | (0.2) |
| **Suwannee** | 21,264 | 23,592 | 10.9 |
| **Union** | 10,336 | 9,761 | (5.6) |
| **Region** | 345,198 | 285,265 | (17.4) |
| **Region, w/o Alachua** | 234,441 | 182,708 | (22.1) |

Source: 2013/14 and 2014/15 Annual Performance Reports, Florida Commission for the Transportation Disadvantaged, Tallahassee, Florida.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

Table 5.6 indicates that paratransit funding for north central Florida Transportation Disadvantaged service providers decreased by 13.0 percent during this period, from $16,195,194 in Fiscal Year 2013-14 to $14,084,883 in Fiscal Year 2014-15. Levy, Madison and Taylor Counties experienced increased funding during this period while the remaining counties experienced decreased funding. Hamilton County experienced the largest percentage decline in funding, dropping by 82.3 percent during this period.

**TABLE 5.6**

**NORTH CENTRAL FLORIDA PARATRANSIT FUNDING**
**FISCAL YEARS 2013-14 AND 2014-15**

| Area | Fiscal Year 2013-14 | Fiscal Year 2014-15 | Percent Change |
|---|---|---|---|
| **Alachua** | $3,372,245 | $3,147,636 | (6.7) |
| **Bradford** | $601,554 | $552,849 | (8.1) |
| **Columbia** | $1,472,658 | $890,819 | (39.5) |
| **Dixie** | $427,324 | $423,851 | (0.8) |
| **Gilchrist** | $347,462 | $237,455 | (31.7) |
| **Hamilton** | $1,006,396 | $177,641 | (82.3) |
| **Lafayette** | $313,161 | $215,813 | (31.1) |
| **Levy** | $1,643,938 | $1,802,136 | 9.6 |
| **Madison** | $681,045 | $706,358 | 3.7 |
| **Suwannee** | $1,026,835 | $688,199 | (33.0) |
| **Taylor** | $606,794 | $649,601 | 7.1 |
| **Union** | $369,231 | $284,987 | (22.8) |
| **Region** | $11,868,643 | $9,777,345 | (17.6) |
| **Region w/o Alachua** | $8,496,398 | $6,629,709 | (22.0) |

Source: 2013/14 and 2014/15 Annual Performance Reports, Florida Commission for the Transportation Disadvantaged, Tallahassee, Florida.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

# 3. Regionally Significant Transportation Facilities

Regionally significant transportation facilities are those facilities used to provide transportation between cities located both within and outside the region and other specially designated facilities. They include one airport, two interstate highways, 10 U.S. highways, 28 state roads, and six public transit service providers.[5]

**TABLE 5.7**

**REGIONALLY SIGNIFICANT TRANSPORTATION FACILITIES**

| Type | Name | Description | Length (miles) |
|---|---|---|---|
| **Airport** | Gainesville Regional Airport | Gainesville | n/a |
| **Public Transit Service Provider** | MV Transportation, Inc. | Designated coordinated community transportation provider for Alachua County | n/a |
| **Public Transit Service Provider** | Big Bend Transit, Inc. | Designated coordinated community transportation provider for Madison and Taylor Counties | n/a |
| **Public Transit Service Provider** | Gainesville Regional Transit System | Fixed-route public transit service provider for Gainesville and nearby urbanized, unincorporated Alachua County | n/a |
| **Public Transit Service Provider** | Levy County Transit | Designated coordinated community transportation provider for Levy County | n/a |
| **Public Transit Service Provider** | Suwannee Valley Transit Authority | Designated coordinated community transportation provider for Columbia, Hamilton and Suwannee Counties | n/a |
| **Public Transit Service Provider** | Suwannee River Economic Council, Inc. | Designated coordinated community transportation provider for Bradford, Dixie, Gilchrist, Lafayette and Union Counties | n/a |
| **Regional Road Network - Interstate Highways** | I-75 | From Hamilton County line at the Georgia border to the Alachua County/ Marion County line (Strategic Intermodal System) | 96 |
| **Regional Road Network - Interstate Highways** | I-10 | From the Madison County/Jefferson County line to the Columbia County/Baker County line (Strategic Intermodal System) | 80.5 |
| **Regional Road Network - State Road** | SR 2 | From Columbia County. - Georgia border to Columbia County - Baker County line | 1.0 |

[5] North central Florida regionally significant facilities and resources, as defined in Rule 27E.005, Florida Administrative Code, consist of Regionally Significant Emergency Preparedness Facilities identified in Table 3.2, Natural Resources of Regional Significance identified in Table 4.1, Regionally Significant Transportation Facilities identified in Table5. 7, and Regionally Significant Facilities and Resources, identified in Section VI.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 5.7(Continued)

## REGIONALLY SIGNIFICANT TRANSPORTATION FACILITIES

| Type | Name | Description | Length (miles) |
|---|---|---|---|
| **Regional Road Network - State Road** | SR 6 | From I-10 to U.S. 41 | 1.5 |
| **Regional Road Network - State Road** | SR 10A | From US 90 to US 90 | 4.0 |
| **Regional Road Network - State Road** | SR 14 | From I-10 to SR 53 | 5.5 |
| **Regional Road Network - State Road** | SR 18 | From SR 121 to SR 231 | 4.5 |
| **Regional Road Network - State Road** | SR 20 | From SR 26 to Alachua County - Putnam County line (Strategic Intermodal System) | 18.0 |
| **Regional Road Network - State Road** | SR 21 | From Putnam County Line to Clay County line | 3.6 |
| **Regional Road Network - State Road** | SR 24 | U.S. 301 to Cedar Key | 72.2 |
| **Regional Road Network - State Road** | SR 26 | From US 19/98 to Alachua County - Putnam County line (Strategic Intermodal System) | 56.5 |
| **Regional Road Network - State Road** | SR 26A | From SR 26 to SR 26 | 2.0 |
| **Regional Road Network - State Road** | SR 47 | From US 441 to US 129 | 41.0 |
| **Regional Road Network - State Road** | SR 51 | From US 129 to terminus in unincorporated community of Steinhatchee | 53.0 |
| **Regional Road Network - State Road** | SR 53 | From Madison County - Georgia border to I-10 | 19.0 |
| **Regional Road Network - State Road** | SR 100 | From US 90 to Bradford County - Clay County line (Strategic Intermodal System) | 46.1 |
| **Regional Road Network - State Road** | SR 120 | From US 441 to SR 23 | 2.5 |
| **Regional Road Network - State Road** | SR 121 | From Union Co. - Baker Co. line to US 19/98 | 85.5 |
| **Regional Road Network - State Road** | SR 145 | From Madison Co. - Georgia border to SR 53 | 16.0 |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 5.7(Continued)

## REGIONALLY SIGNIFICANT TRANSPORTATION FACILITIES

| Type | Name | Description | Length (miles) |
|---|---|---|---|
| **Regional Road Network - State Road** | SR 222 | From I-75 to entrance to to SR 26 (Strategic Intermodal System) | 14.3 |
| **Regional Road Network - State Road** | SR 226 | From SR 24 to SR 331 | 2.3 |
| **Regional Road Network - State Road** | SR 231 | From Florida Department of Corrections Lake Butler Receiving and Medical Center to SR 121 | 3.0 |
| **Regional Road Network - State Road** | SR 235 | From US 441 to SR 121 | 21.2 |
| **Regional Road Network - State Road** | SR 238 | From US 441 to SR 100 | 15.0 |
| **Regional Road Network - State Road** | SR 247 | From US 129 to US 90 | 15.5 |
| **Regional Road Network - State Road** | SR 320 | From Manatee Springs State Park to US 19/Alt 27/98 | 5.8 |
| **Regional Road Network - State Road** | SR 329 | From SR 20 to SR 331 | 4.0 |
| **Regional Road Network - State Road** | SR 331 | From I-75 to SR 20 (Strategic Intermodal System) | 6.0 |
| **Regional Road Network - State Road** | SR 345 | From NW 70th Avenue to US Alt 27 | 7.6 |
| **Regional Road Network - State Road** | SR 349 | From US 27 to US 19/98 | 24.5 |
| **Regional Road Network - U.S. Highway** | US 19 | From Madison County - Jefferson County line to Levy County - Citrus County line (Strategic Intermodal System) | 125.2 |
| **Regional Road Network - U.S. Highway** | US 27 | From Madison County. - Jefferson County. line to Levy County - Marion County. line | 128.3 |
| **Regional Road Network U.S. Highway** | Alt US 27 | From Gilchrist County - Levy County line to U.S. 27 (Strategic Intermodal System) | 35.0 |
| **Regional Road Network - U.S. Highway** | US 41 | From Hamilton County - Georgia border to I-10 | 37.0 |
| **Regional Road Network - U.S. Highways** | US 41 | From I-10 to U.S. 90 (Strategic Intermodal System) | 4.5 |
| **Regional Road Network -** | US 41 | From U.S. 90 to Levy County - Marion | 74.4 |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 5.7(Continued)

## REGIONALLY SIGNIFICANT TRANSPORTATION FACILITIES

| Type | Name | Description | Length (miles) |
|---|---|---|---|
| **U.S. Highways** | | County line | |
| **Regional Road Network - U.S. Highway** | US 90 | From Jefferson County - Madison County line to U.S. 41 | 80.0 |
| **Regional Road Network - U.S. Highway** | US 90 | From U.S. 41 to SR 100 (Strategic Intermodal System) | 2.1 |
| **Regional Road Network - U.S. Highway** | US 90 | From SR 100 to Columbia County - Baker County line | 8.9 |
| **Regional Road Network - U.S. Highway** | US 98 | From Taylor County - Jefferson County line to Levy County - Citrus County Line | 127.8 |
| **Regional Road Network - U.S. Highway** | US 129 | From Hamilton County - Georgia border to U.S. 19/Alt 27/98 | 87.9 |
| **Regional Road Network - U.S. Highway** | US 221 | From Madison County - Jefferson County line to Perry | 32.7 |
| **Regional Road Network - U.S. Highway** | US 301 | From Bradford County - Clay County line to Alachua County - Marion County. line (Strategic Intermodal System) | 50.5 |
| **Regional Road Network - U.S. Highway** | US 441 | From Columbia County - Georgia border to Alachua County - Marion County line | 69.5 |
| **Regional Rail Line** | CSX Transportation | From Jefferson County - Madison County line to the Columbia County - Baker County line | 85.1 |
| **Regional Rail Line** | CSX Transportation | From Bradford County - Alachua County line to the Alachua County - Marion County line | 33.4 |
| **Regional Rail Line** | CSX Transportation | From Bradford County - Alachua County line to the City of Newberry | 24.2 |
| **Regional Rail Line** | CSX Transportation | From the City of Hawthorne to the Alachua County - Putnam County line | 2.1 |
| **Regional Rail Line** | CSX Transportation | From Alachua County - Bradford County line to the Bradford County - Clay County line | 19.5 |
| **Regional Rail Line** | CSX Transportation | From Alachua County - Bradford County line to the Bradford County - Clay County line | 20.4 |
| **Regional Rail Line** | CSX Transportation | From the City of Gainesville to the Bradford County - Alachua County line in the City of Newberry | 12.4 |

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## TABLE 5.7(Continued)

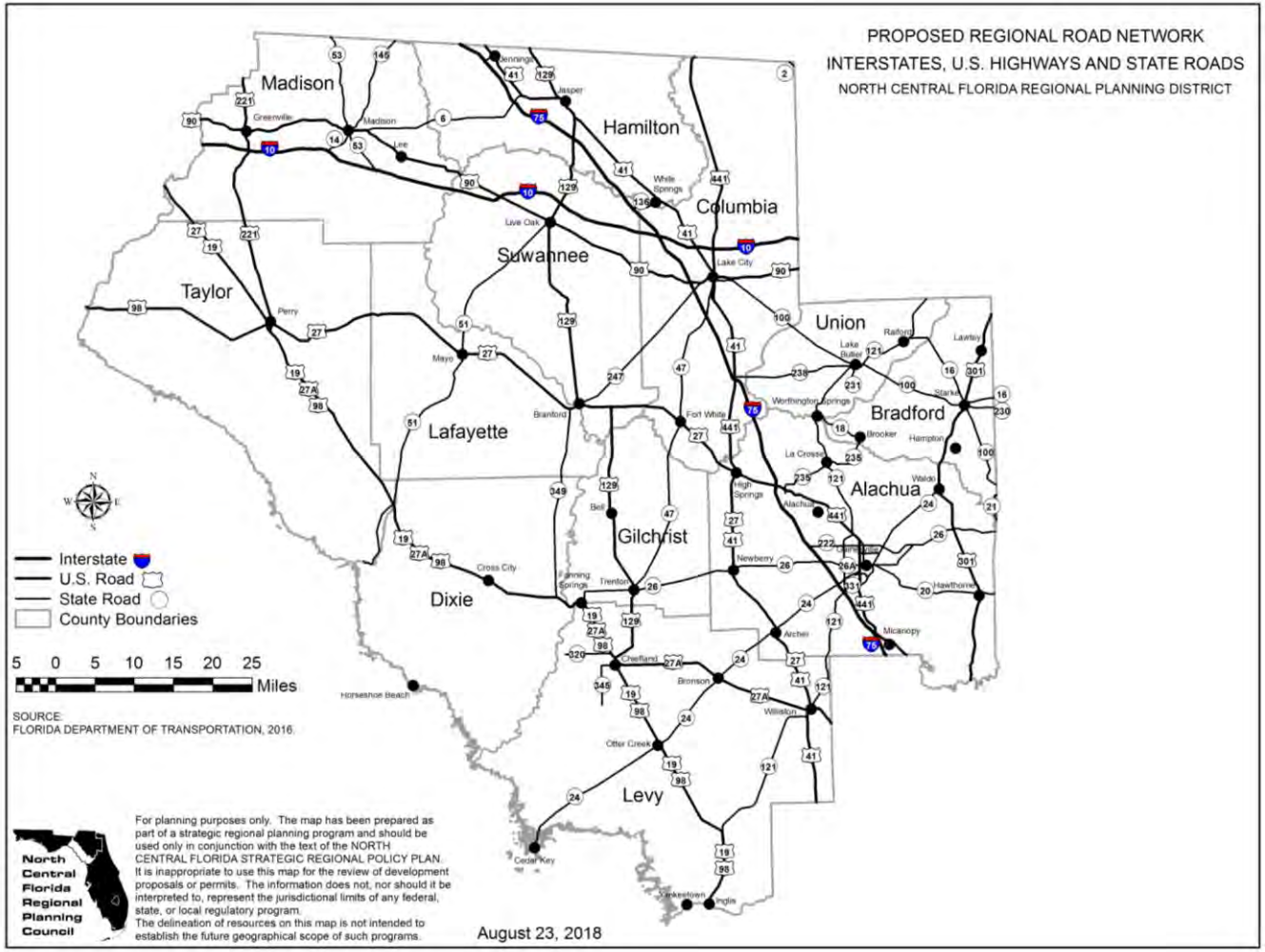
## REGIONALLY SIGNIFICANT TRANSPORTATION FACILITIES

| Type | Name | Description | Length (miles) |
|---|---|---|---|
| **Regional Rail Line** | Florida Northern Railroad | From western Alachua County terminus to the Levy County-Marion County line | 35.5 |
| **Regional Rail Line** | Georgia and Florida Railnet | From Georgia State line - Madison County line to the City of Perry | 48.2 |
| **Regional Rail Line** | Norfolk Southern | From Georgia State line - Columbia County line to the City of Lake City | 47.8 |

n/a = Not Applicable
Source: North Central Florida Regional Planning Council, July 2016.

## ILLUSTRATION 5.1

## NORTH CENTRAL FLORIDA REGIONAL ROAD NETWORK




Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

Gainesville Regional Airport provides commercial air carrier service to north central Florida. The airport is a state-designated Strategic Intermodal System facility. The Gainesville Airport Authority oversees all aspects of airport operations. The Authority is composed of nine members, five of whom are appointed by the City of Gainesville, one by the Alachua County Commission, and three by the Governor.

The airport is serviced by two major airlines providing service to north central Florida. Other major airports providing air service to the region are Jacksonville International Airport, Tallahassee Municipal Airport, Tampa International Airport, and Orlando International Airport.

The airport has one runway with the capacity to safely handle full-sized jet aircraft. The area to the east of the airport is most impacted by the noise, but population density under the flight path is low (four homes were affected by noise when a 1,000 foot runway extension was constructed in the late 1980s). Land to the west of the airport is expected to develop as urban uses, but both the City of Gainesville and Alachua County have adopted land use plans which assure compatible land uses in noise-sensitive areas near the airport.

For the 12 months ending in September 2009, Gainesville Regional Airport experienced a total of 20,470 enplanements and deplanements. For the 12 months ending in September 2014, the airport had 33,814 enplanements and deplanements, representing a 39.5 percent increase.[6]

The Multi-County Regional Airport Task Force was formed in 1987 to address the question of whether or not airport service could be improved by building a new airport located between the cities of Ocala (Marion County) and Gainesville. It was thought at the time that the combined market area of the two cities might be large enough to attract additional air carriers and more through flights than currently provided by Gainesville Regional Airport. The task force concluded that the combined market area was not large enough to attract a significant number of new flights and that the 174 million dollar price tag for a new airport was prohibitive.[7]

## a. Regional Road Network

The regional road network is comprised of interstate highways, U.S. highways and state roads. Overall, the regional road network consists of 1,698.1 miles of roadways, of which 177.2 miles are comprised of interstate highways while 1,520.9 miles are designated as of U.S. highways and state roads. Additionally, 504.4 miles of the regional road network are designated as a part of the Strategic Intermodal System. The regional road network provides good transportation service to the region. With the exception of a few specific segments in Gainesville, the largest municipality in the region, nearly all the regional road network operates at or above the minimum level of service standards contained within local government comprehensive plans.

Chapter 163, Florida Statutes, allows local governments to establish concurrency requirements for local government comprehensive plans. Concurrency requires public facilities to be adequate to service new development. New development cannot occur which will drop roadways below the minimum operating level of service standard established by the local comprehensive plan. The level of service for a road segment is determined by the average travel speed a motorist can reasonably attain through the section. The 2012 Quality/Level of Service Handbook, published by the Florida Department of Transportation, establishes five levels of service ranging from A (free-flowing traffic) to F (highly congested).

[6]Air Traffic Volume and Fuel Flowage for the 12 Months Ending September 30, 2009, Gainesville Regional Airport, and Air Traffic Volume and Fuel Flowage for the 12 Months Ending September 30, 2014, Gainesville Regional Airport.

[7]Multi-County Regional Airport Task Force, Economic/Market Feasibility Study, pp. V-1 - V-13, Aviation Planning Associates, Inc., Cincinnati, OH, January 1989.

## b. Transportation Concurrency and Proportionate Share

Chapter 163, Florida Statutes, make**s** traditional transportation concurrency management optional for local government comprehensive plans. If local governments rely on traditional transportation concurrency, Chapter 163, Florida Statutes, authorize**s** the local government to establish minimum level of service level standards for all state roads, including state roads which are part of the Strategic Intermodal System. Additionally, local governments relying on traditional level of service standards must also allow mitigation of transportation impacts through the use of proportionate-share.

The dollar amount of proportionate share mitigation is determined through a transportation impact study of the project to determine which road segments will fail to meet level of service standards as a result of the development, what it will cost to modify the failing facilities to meet level of service standards, and what proportion of the trips on the failing road network are attributable to the project. The percentage is multiplied by the costs of the transportation projects needed to restore level of service for the failing facilities to determine an amount of money, which is the developer's proportionate-fair share payment.

## c. Transportation Planning Best Practices

While north central Florida local governments are financially unable to fund traditional transportation concurrency, adverse impacts to the regional road network can be minimized through sound transportation planning. Transportation Planning Best Practices for north central Florida local governments could include enhancing road network connectivity, providing parallel local routes to the Regional Road Network, incorporating access management strategies, and developing multimodal transportation systems. By relying on transportation planning best practices, urban development can still be directed to incorporated municipalities, urban service areas, and urban development areas while minimizing transportation infrastructure costs and declines in level of service. Examples of policy areas which could be addressed in local government comprehensive plans to implement these transportation planning best practices include the following.

Enhance Road Network Connectivity by

Establishing a comprehensive system of street hierarchies with appropriate maximum spacing for local, collector, and arterial street intersection and arterial spacing, including maximum intersection spacing distances for local, collector, and arterial streets;

Establishing a thoroughfare plan and right-of-way preservation requirements to advance the development of arterial and collector streets throughout the jurisdiction;

Limiting or discouraging the use of cul-de-sacs and dead-end streets, limiting the maximum length of cul-de-sacs and dead end streets, and encouraging the use of traffic calming devices and strategies as an alternative to dead end streets and cul-de-sacs;

Encouraging street stubs for connections to future development requiring connections to existing street stubs/dead end streets when adjacent parcels are subdivided/developed in the future, and requiring developments to connect through to side streets at appropriate locations;

Encouraging the creation of paths that provide shortcuts for walking and cycling where dead-end streets exist, mid-block bike paths and pedestrian shortcuts, and limiting the maximum spacing between pedestrian/bicycle connections as well as; or

Limiting or discouraging gated communities and other restricted-access roads.

Provide Parallel Local Routes and Other Alternative Local Routes to the Regional Road Network.

Planning and mapping parallel roadway and cross street networks to provide a clear framework for implementing alternative routes to the Regional Road Network;

Adding segments of the parallel roadway and cross street networks to the capital improvements program;

Encouraging developer participation in implementing the system through fair share agreements as a condition of development approval for Regional Road Network concurrency mitigation; or

Encouraging the establishment of a long-term concurrency management system plan for accomplishing the parallel local routes and interparcel cross-access in selected areas.

Promote Access Management Strategies by

Requiring large commercial developments to provide and/or extend existing nearby local and collector streets and provide street connections with surrounding residential areas so residents may access the development without traveling on the Regional Road Network;

Requiring shopping centers and mixed-use developments to provide a unified access and circulation plan and require any outparcels to obtain access from the unified access and circulation system;

Properties under the same ownership or those consolidated for development will be treated as one property for the purposes of access management and will not received the maximum potential number of access points for that frontage indicated under minimum access spacing standards;

Existing lots unable to meet the access spacing standards for the Regional Road Network must obtain access from platted side streets, parallel streets, service roads, joint and cross-access or the provision of easements;

Establishing minimum access spacing standards for locally maintained thoroughfares and use these to also guide corner clearance;
Maintaining adequate corner clearance at crossroad intersections with the Regional Road Network;

Encouraging sidewalk connections from the development to existing and planned public sidewalk along the development frontage;
Encouraging cross-access connections easements and joint driveways, where available and economically feasible;

Encouraging closure of existing excessive, duplicative, unsafe curb cuts or narrowing of overly wide curb cuts at the development site;

Encouraging safe and convenient on-site pedestrian circulation such as sidewalks and crosswalks connecting buildings and parking areas at the development site;

Encouraging intersection and/or signalization modifications to improve roadway operation and safety;

Encouraging the addition of dedicated turn lanes into and out of development;

Encouraging the construction of public sidewalks along all street frontages, where they do not currently exist;

Encouraging the widening of existing public sidewalks to increase pedestrian mobility and safety;

Encouraging the deeding of land for the addition and construction of bicycle lanes;

Encouraging the provision of shading through awnings or canopies over public sidewalk areas to promote pedestrian traffic and provide protection from inclement weather to encourage walking;

Encouraging the construction of new road facilities which provide alternate routes to reduce congestion; or

Encouraging the addition of lanes on existing road facilities, especially where it can be demonstrated that the road will lessen impacts to the Regional Road Network.

Develop Multimodal Transportation Systems by

Encouraging development at densities within urban areas which support public transit;

Providing one or more park-and-ride lots to encourage carpooling and ridesharing, and the use of public transit among inter-city commuters;

Providing a system of sidewalks and/or bike paths connecting residential areas to schools, shopping, and recreation facilities;
Establishing an interlocal agreement with an existing public mass transit system provider to provide regular daily inter-city transit service for inter-city commuters; or

Establishing a local public mass transit system.

### d. Regional Review of Local Government Comprehensive Plans and Plan Amendments

Transportation impact analysis of local government comprehensive plans and plan amendments conducted by the Council are generally limited to applicable road segments within one-half mile of the property which is the subject of the comprehensive plan and/or plan amendment. The analysis assumes that the subject property is developed to the maximum allowable intensity of use permitted by the Future Land Use Map category. The analysis does not include a trip distribution, although a trip distribution is used by the Council if a trip distribution is provided by the local government. In lieu of a trip distribution analysis, the Council examines what would happen if all of the trips were distributed to all directions of functionally classified road segments. If the resulting analysis finds that a segment of the regional road network will not meet level of service standards, the Council includes an Objection in its report. The Council recommends that the local government conduct a trip distribution analysis for the amendment and should the analysis result in adverse impacts, modify the amendment to prevent the adverse impacts. Such modification could include a reduction in the size of the subject property, a reduction in maximum allowable intensity of use, or a lowering of the adopted level of service standard of adversely impacted regional road segments.

## 4. University of Florida Campus Master Plan and Impacts to Regional Transportation Facilities

Section 240.155, Florida Statutes, requires the University of Florida to prepare a campus master plan to address the impacts of campus development on off-site public facilities. The data and analysis on which the plan is based must identify the projected impacts of campus development on off-site infrastructure. Campus master plans are required by Section 240.155(5), Florida Statutes, to be consistent with the State Comprehensive Plan and not to conflict with local government comprehensive plans.

Florida Statutes also require the university and applicable local governments to enter into a campus development agreement. The agreement must identify any deficiencies in service which the proposed campus development will create or contribute and identify all improvements to facilities and services necessary to eliminate the identified deficiencies. Section 240.155(13), Florida Statutes, states that the Board of Regents is responsible for paying its fair share of the costs for removing deficiencies to affected services and facilities. Identification of the board's fair share must be included in the agreement. Once the campus development agreement is completed, all campus development may proceed without further review by the host local government provided such development is consistent with the adopted campus master plan and associated campus development agreement. In 2016 enrollment at the University of Florida main campus was 52,286 students.

### a. Context Area

Rule 6C-202(3), Florida Administrative Code, defines the Context Area as an area surrounding the University, within which on-campus development may impact local public facilities and services and natural resources, and within which off-campus development may impact university resources and facilities. The size of the Context Area may be defined by natural or man-made functional or visual boundaries, such as areas of concentration of off-campus student-oriented housing and commercial establishments, stormwater basins, habitat range, or other natural features.

## b. Impacts to Regional Transportation Facilities

The following segments of the regional road network within the Context Area are projected to operate below the adopted minimum level of service standard contained in local government comprehensive plans by 2015:

1. I-75 from the southern Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area boundary to State Road 222 (Northwest 39th Avenue);
2. U.S. 441 (West 13th Street) from State Road 24 (Archer Road) to Northwest 29th Avenue;
3. State Road 24 (Archer Road) from Southwest 75th Street to Southwest 16th Avenue;
4. State Road 26 (West Newberry Road) from Northwest 122nd Street to Northwest 8th Avenue;
5. State Road 121 (West 34th Street) from State Road 331 to Northwest 16th Avenue; and
6. State Road 331 (Williston Road) from Southwest 8th Avenue to U.S. 441 (West 13th Street).

## c. Transportation Demand Management

One of the most significant developments mitigating University-related transportation impacts in the last 10 years is the implementation of an agreement between the Gainesville Regional Transit System and the University to provide University students and employees with prepaid, unlimited access to transit service. The agreement has led to enhancements to the Gainesville Regional Transit System service, including an increase in number of buses, a decrease in headtimes (intervals between buses), and expanded hours of operation for certain bus routes heavily used by University students. A student transportation fee was added in 1998 at a rate of $0.19 per credit hour to pay for the additional service. The fee has been increased over the years to a rate of $9.44 per credit hour in the 2015-16 school year. As a result, Gainesville Regional Transit System bus ridership has increased from 2.9 million passengers in 1998 to 10.3 million in 2015. The Campus Master Plan Transportation Element contains a number of policies continuing the relationship between the University and Gainesville Regional Transit System.

## d. Off-Campus Park-and-Ride

The University operates two park-and-ride facilities on the western edge of its main campus (Park and Ride Lot #1, located near SW 34th Street at the Cultural Plaza, and Park and Ride Lot #2, located on Hull Road west of SW 34th Street). Furthermore, campus shuttle buses connect the park and ride lots, as well as other on-campus parking facilities, to the main campus. Additionally, Campus Master Plan Transportation Element Policy 3.1 of Goal 2.0 calls for the University to participate with the City and the County and the Gainesville Regional Transit System to examine the feasibility of park and ride facility development and expanded transit service. While the Campus Master Plan proposes the construction of an additional 1,000 parking space near the Ben Hill Griffin, Jr., Stadium and the Stephen C. O'Connell Center adjacent to State Road 26, it also proposes the construction of an additional 888 parking spaces in the western portion of the campus in areas which are currently used, essentially, as park and ride facilities.

Although the University has established and is proposing to expand its park and ride facilities, the current and proposed parking facilities continue to require automobile drivers to use roads which are, or are projected to be, operating below the minimum level of service standard contained in local government comprehensive plans by 2015. The Campus Master Plan Transportation Element Data and Analysis Report notes a trend of student populations moving from west of Interstate Highway 75 to areas closer to campus in the downtown and the West 13th Street corridor. Such movement may make the establishment of park-and-ride facilities unfeasible if located a significant distance from student residences.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

### e. On-Campus Housing

The Campus Master Plan indicates that on-campus housing is currently available for approximately 25 percent of the student population. The Housing Data and Analysis Report notes that an additional 835 housing units are needed to maintain the current percent level. In conjunction with increased enrollment, the Capital Improvements Element of the Campus Master Plan calls for two on-campus housing construction projects with the intent of increasing the number of students residing on campus by approximately 800. One of the projects is only partially funded and the other project is completely unfunded. Nevertheless, should neither of these two on-campus housing projects are constructed, the percentage of students housed on-campus will be 20.3 percent in 2015.

The 2005-2015 Campus Master Plan goal targeting 22 percent of main campus enrollment to be housed on-campus did not anticipate university-controlled housing facilities being developed off of the main campus. The housing physically located on main campus can satisfy the 22 percent goal; however, the off-campus housing will be part of the University-controlled inventory. This off-campus housing will function the same as on-campus housing. Housing assignments, scheduling, furnishings, data connectivity, supervision and disciplinary action will be managed by the University Department of Housing and Residence Education. The anticipated off-campus housing will be located in close proximity to the main campus and away from single-family residential areas. It will also be located in areas consistent with the City of Gainesville Comprehensive Plan. The University will count these off-campus units toward the 22 percent target in the future with a clarification that the goal is for housing in university-controlled residential facilities. The addition of Cypress Hall, the expansion of on-campus fraternities and sororities as well as the additional of beds in other on-campus housing facilities are anticipated to exceed the University goal of 22 percent university-controlled student housing by 2025.

### f. Evening Classes

Campus Master Plan Transportation Element Policy 7.4.3 states that the University shall continue to expand, where appropriate, distance learning and evening class offerings to reduce the peak hour travel demand and its impact on roads and parking. Additionally, the University Campus Master Plan Data and Analysis report indicates that, during 2005, 642 class meetings occurred after 5:00 pm on weeknights. The report notes that this represents an increase of 49 class meetings since 1999, and that 274 more students were served by evening classes in 2005 compared to 1999.

### g. Prohibitions on Freshmen Parking On-Campus

Campus Master Plan Transportation Element Policy 4.1 of Goal 2.0 calls for the University to restrict parking overall availability for lower division students, combined with incentives and opportunities to use public transit, as an alternative to driving.

## 5. Livable Community Reinvestment Plan

Regional Plan Policy 5.6.3 calls for the Council to assist the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area in implementing the vision statement entitled, The Livable Community Reinvestment Plan. The plan serves as a policy and program guide for the development of the Gainesville Metropolitan Area transportation system over 25 years. The plan also guides the City of Gainesville and Alachua County in the update of their growth management plans and the Florida Department of Transportation in the preparation of its five-year work program. As such, the plan outlines the priority list of transportation projects which can be funded with available revenue sources over 25 years.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

The Year 2035 Transportation Plan includes a strategic vision for integrating transportation and land use decisions in the Gainesville area. The vision statement states:

> *"The Gainesville Urbanized Area will have a multimodal transportation system that integrates land use and transportation planning and investments to promote community well-being through good healthy relations with the region's other communities and natural systems. Specific outcomes will be:*
>
> *1. sustainable, safe, secure, energy efficient and livable land use patterns and complementary context-sensitive transportation networks that provide mobility choices within and between compact, mixed-use, multimodal-supportive development;*
>
> *2. balanced east-west Gainesville Urbanized Area growth to reduce socioeconomic disparity through increased transportation mobility and accessibility;*
>
> *3. transportation infrastructure investments that direct growth to existing infill an redevelopment areas;*
>
> *4. greenbelts to preserve natural and agricultural lands between all municipalities in the Alachua County region through compact land use patterns served by express transit service and park-and-ride facilities; and*
>
> *5. a network of Rapid Transit Facilities connecting regional employment centers in order to enhance the economic competitiveness of the area."*

The Livable Community Reinvestment Plan is the framework upon which the economic strength of the Gainesville Metropolitan Area, its development character, and its continued quality of life rests. Transportation decisions made in the past have shaped the way the area has developed and how it continues to grow today. Decisions made today will shape how the area grows and how its transportation system will function in the future. As the economic and institutional center of north central Florida, the successful implementation of The Livable Community Reinvestment Plan strategic vision statement is of regional importance.

The Year 2035 Long Range Transportation Plan of the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area includes recommended transportation modifications on or adjacent to the University of Florida campus. These include the construction of the Cross Campus (Bicycle and Pedestrian) Greenway from Archer Road to SW 34th Street; the Hull Road Parking Area Bicycle Pedestrian Facility from SW 34th Street to the end of the Hull Road Parking Area; the State Road 26 (University Avenue) Multimodal Emphasis Corridor Study from Gale Lemerand Drive to Waldo Road; and the US 441 Multimodal Emphasis Corridor Study from NW 33rd Avenue to Archer Road. Also included in this Plan are several projects to implement bus rapid transit service, including a proposed Bus Rapid Transit project on Archer Road that will serve portions of the University of Florida Campus and the Shands Teaching Hospital area. Policy 1.1.1 of the 2005 - 2015 Campus Master Plan Transportation Element states that the University will cooperate with Gainesville, Alachua County, the Florida Department of Transportation, and the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area in the planning, implementation, and updating of multimodal strategies and projects outlined in the Long Range Transportation Plan. Regional Policy 5.6.1 calls for the Council to coordinate with Gainesville Regional Transit System, the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area, the University, Gainesville, and Alachua County to assist in implementing the Livable Communities Reinvestment Plan.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

# B. Problems, Needs and Opportunities

The Council identifies the following regional transportation problems, needs, and opportunities:

1. A need exists to provide public transit services to the north central Florida transportation disadvantaged.

2. A need exists to increase ridership on north central Florida fixed-route public transit systems.

3. A need exists to mitigate transportation impacts to the regional transportation facilities associated with increased enrollment at the University of Florida.

4. An opportunity exists to minimize adverse transportation impacts to segments of the regional road network which service the University of Florida by relocating proposed on-campus parking lots to off-campus locations and operating a series of shuttle buses between the off-campus parking lots and the campus.

5. A need exists to maximize the use of the Gainesville Regional Airport before constructing a new regional airport.

6. A need exists to direct urban development to existing north central Florida municipalities and urban areas.

7. A problem exists with the use of traditional transportation concurrency assessments within many small north central Florida municipalities and urban areas which cannot allow new development due to segments of the Regional Road Network which are either at or near capacity.

8. An opportunity exists to provide policy guidance at the regional level which results in sound transportation planning within small north central Florida municipalities and urban areas while also encouraging urban development within small north central Florida municipalities and urban areas and thereby discouraging urban sprawl.

# C. Regional Goals and Policies

## 1. Regional Road Network

**REGIONAL GOAL 5.1.** Mitigate the impacts of development to the Regional Road Network as well as adverse extrajurisdictional impacts while encouraging development within urban areas.

**Regional Indicators**

1. In 2016, the Regional Road Network consisted of 216.8 miles of Interstate highways, 993.4 miles of U.S. Highways and 678.9 miles of State roads.

### a. Local Government Comprehensive Plans

Table 5.8 below summarizes Regional Policies 5.1.1 through 5.1.4.

**TABLE 5.8**

**SUMMARY OF REGIONAL PLAN POLICIES 5.1.1 THROUGH 5.1.4**
**LOCAL GOVERNMENT COMPREHENSIVE PLANS**

| Area | Local Government Comprehensive Plans Containing Transportation Planning Best Practices | Regional Plan Determination of Impacts |
|---|---|---|
| Municipalities, Urban Service Areas, Urban Development Areas | Yes | Adequately Mitigated |
| Municipalities, Urban Service Areas, Urban Development Areas | No | Florida Department of Transportation Level of Service E |
| Rural Areas | Yes | Florida Department of Transportation Level of Service E |
| Rural Areas | No | Florida Department of Transportation Level of Service D |

Source: North Central Florida Regional Planning Council, 2011.

**Policy 5.1.1.** Within municipalities, urban service areas, or urban development areas where local government comprehensive plans include goals and policies which implement Transportation Planning Best Practices, adverse impacts to the Regional Road Network are adequately. Such local government comprehensive plans and plan amendments within municipalities, urban service areas, or urban development areas shall not be subject to a regional planning council determination of Regional Road Network or extrajurisdictional impacts.

**Policy 5.1.2.** Within municipalities, urban service areas, and urban development areas where local government comprehensive plans do not include goals and policies implementing Transportation Planning Best Practices, local government comprehensive plans and plan amendments shall be subject to a regional planning council determination of Regional Road Network and extrajurisdictional impacts based on the minimum level of service standard of E as determined by the Florida Department of Transportation Quality/Level of Service Handbook.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

**Policy 5.1.3.** Outside municipalities, urban service areas, and urban development areas where local government comprehensive plans include goals and policies implementing Transportation Planning Best Practices, local government comprehensive plans and plan amendments shall be subject to a regional planning council determination of Regional Road Network and extrajurisdictional impacts based on the minimum level of service standard of E as determined by the Florida Department of Transportation Quality/Level of Service Handbook.

**Policy 5.1.4.** Outside municipalities, urban service areas, and urban development areas where local government comprehensive plans do not include goals and policies implementing Transportation Planning Best Practices, local government comprehensive plans and plan amendments shall be subject to a regional planning council determination of Regional Road Network and extrajurisdictional impacts based on the minimum level of service standard of D as determined by the Florida Department of Transportation Quality/Level of Service Handbook.

# 2. Coordination and Assistance

**REGIONAL GOAL 5.2.** Coordinate with and assist state agencies, transportation planning organizations and local governments to implement an energy-efficient, interagency coordinated transportation system.

**Regional Indicator**

As of January 2016, the Council provides staff services to the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area.

**Policy 5.2.1.** Provide technical assistance to local governments in preparing and updating Traffic Circulation Elements in local government comprehensive plans to implement an energy-efficient, interagency coordinated transportation system.

**Policy 5.2.2.** Coordinate with the Florida Department of Transportation regarding proposed modifications to the Regional Road Network to assure consistency with local government comprehensive plans which implement an energy-efficient, interagency coordinated transportation system.

**Policy 5.2.3.** Review proposals for road widening and new transportation corridors for impacts upon natural resources of regional significance and adjacent local governments.

**Policy 5.2.4.** Provide technical assistance to local governments seeking funds for transportation modifications which implement an energy-efficient, interagency coordinated transportation system.

## a. University of Florida

**REGIONAL GOAL 5.3.** Mitigate adverse impacts to regional transportation facilities associated with enrollment growth at the University of Florida.

**Regional Indicator**

During the fall 2016 semester, the University of Florida had no off-campus park-and-ride lots.

**Policy 5.3.1.** Construct off-campus parking lots and garages which serve the University of Florida and operate a series of University-sponsored shuttle buses between the parking lots and the campus instead of constructing additional parking spaces on the campus.
**Policy 5.3.2.** Maintain the percentage of students living on-campus at 22.0 percent.

**Policy 5.3.3.** Provide an evening division of classes in order to reduce off-campus impacts on the regional road network during peak hour traffic periods.

**Policy 5.3.4.** Adopt transportation demand management strategies such as carpools, vanpools, public transit, bicycling, incorporating public transit costs in University of Florida student activity fees, and walking to encourage use of the multi-modal corridors for modes of travel other than single-occupant automobiles.

**Policy 5.3.5.** Adopt measures such as prohibiting freshmen from purchasing parking decals to park on campus in order to reduce the demand for parking facilities and encouraging freshmen to use public transit, bicycles, and walking while traveling to and from the University area.

## b. Gainesville Regional Airport

**REGIONAL GOAL 5.4.** Maximize the use of the Gainesville Regional Airport before developing a new regional airport.

**Regional Indicator**

For the 12 months ending in September 2014, Gainesville Regional Airport had a total of 33,814 enplanements and deplanements.[8]

**Policy 5.4.1.** Coordinate development plans of the Gainesville Regional Airport with the City of Gainesville and Alachua County comprehensive plans to avoid unnecessary conflicts, to ensure the safety of airport operations, and to allow for future increases in the operational capacity of the airport.

## c. Rail Lines

**REGIONAL GOAL 5.5.** Include rail lines and railroads as part of an integrated regional transportation system consisting of the Regional Road Network, regional airports and transit service providers.

**Regional Indicator**

As of 2016, north central Florida has 394.7 miles of rail lines.

**Policy 5.5.1.** Coordinate rail line expansion plans with the Florida Department of Transportation and with local governments to ensure consistency with local government comprehensive plans, to ensure public safety, and to allow for future increases in the operational capacity of rail lines.

**Policy 5.5.2.** Review proposals for new rail lines for impact upon natural resources of regional significance and adjacent local governments.

[8] Air Traffic Volume and Fuel Flowage for the 12 Months Ending September 30, 2014, Gainesville Regional Airport.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

## d. Paratransit Services and the Transportation Disadvantaged

**REGIONAL GOAL 5.6.** Reduce the unmet General Trip demand of the north central Florida Transportation Disadvantaged population.

**Regional Indicators**

1. In fiscal year 2014-15, 414,276 paratransit trips occurred in the region by north central Florida paratransit service providers.

2. In Fiscal Year 2014-15, north central Florida paratransit service providers reported annual operating revenues of $14,084,883.

**Policy 5.6.1.** Improve mobility options for low-income, elderly and disabled citizens.

**Policy 5.6.2.** Increase funding for coordinated transportation systems for the transportation disabled.

**Policy 5.6.3.** The Council and/or the Metropolitan Transportation Organization for the Gainesville Urbanized Area should provide technical assistance to designated north central Florida local transportation coordinating boards and community transportation coordinators.

## e. Public Transit and Livable Community Reinvestment Plan

**REGIONAL GOAL 5.7.** Increase the percentage of north central Florida residents using public transportation as a primary means of transportation.

**Regional Indicator**

For the 12 months ending in September 2015, Gainesville Regional Transit System fixed route ridership was 10,293,434.[9]

**Policy 5.7.1.** Coordinate with the Gainesville Regional Transit System, the Metropolitan Transportation Planning Agency for the Gainesville Urbanized area, the University of Florida, the City of Gainesville, and Alachua County to provide opportunities through their respective plans and programs for a greater likelihood of increased public transit ridership.

**Policy 5.7.2.** Coordinate with Community Transportation Coordinators and north central Florida local governments to provide opportunities through their respective plans and programs for a greater likelihood of increased public transit ridership.

**Policy 5.7.3.** Assist the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area in implementing the vision statement contained in its Gainesville Metropolitan Area Year 2035 Transportation Plan entitled, The Livable Community Reinvestment Plan.

[9]Fiscal Year 2015 Gainesville Regional Transit System Ridership Report.

# Chapter VI
# Regionally Significant Facilities and Resources

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

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# Chapter VI: Regionally Significant Facilities and Resources

Regionally Significant Facilities and Resources are those facilities and resources identified by the Council as being of regional importance and meets one or more of the following criteria: (1) its uniqueness, function, benefit, service delivery area, or importance is identified as being of regional concern; (2) a facility or resource that requires the participation or involvement of two or more governmental entities to ensure proper and efficient management; or (3) a facility or resource that meets either criteria in 1 or 2 above and is defined to be of state or regional concern or importance in state or federal laws or rules of state or regional agencies adopted pursuant to Chapter 120, Florida Statutes.[1]

Facilities recognized by the North Central Florida Strategic Regional Policy Plan as regionally significant facilities and resources not addressed elsewhere are comprised of cultural facilities, educational institutions, electric power generation stations, hospitals, landfills, military facilities, and state prisons.

Cultural Facilities recognized as regional facilities are those which are either owned or funded (at least in part) by the state or provide cultural opportunities to residents of multiple local jurisdictions.

Educational institutions recognized as regional facilities are those which provide either two or four year college degrees or technical training to residents of multiple local jurisdictions.

Electrical power facilities recognized as regional facilities are those facilities which provide electrical power to multiple local government jurisdictions.

Florida Greenways recognized as regional facilities are those greenways which have been formally recognized as such by the Florida Greenways Commission.

Hospitals recognized as regional facilities are those facilities which provide medical services to residents of multiple local government jurisdictions.

Landfills recognized as regional facilities are those facilities which provide solid waste disposal services to multiple local government jurisdictions.

State prisons are recognized as regional facilities as they hold prisoners whose place of residence is from outside the region. They also represent a significant source of employment for north central Florida residents. Since the majority of prisoners housed in north central Florida prisons are from outside the region, state prisons are considered to be a basic industry for north central Florida.

[1]North central Florida regionally significant facilities and resources, as defined in Rule 27E.005, Florida Administrative Code, consist of Regionally Significant Emergency Preparedness Facilities identified in Table 3.2, Natural Resources of Regional Significance identified in Table 4.1, Regionally Significant Transportation Facilities identified in Table 5.9, and Regionally Significant Facilities and Resources, identified in Section VI.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

# A. Cultural Facilities

Cedar Key Museum State Park
Center for Performing Arts
Florida State Museum
Florida Trail
Forest Capital Museum
Hippodrome State Theater
Marjorie Kinnan Rawlings State Historical Site
Samuel P. Harn Art Museum
Stephen Foster State Folk Culture Center

# B. Educational Institutions

Big Bend Technical College
Bradford-Union County Vocational Technical Center
Central Florida College
Florida Gateway College
North Florida Community College
Santa Fe College
Suwannee-Hamilton Vocational Technical Center
University of Florida

# C. Electric Power Facilities

Electric Power Generating Stations
Electric Transmission Lines of 500 KVA
Electric Transmission Lines of Lesser Voltage That Serve Multi-County Jurisdictions
Electric Substations to Support Above-Referenced Transmission Line Facilities

# D. Florida Greenways

Alapaha River Trail (Hamilton County)
Alapahoochee River Padding Trail (Hamilton County)
Archer Braid Corridor (Alachua County)
Archer Road Corridor (Alachua County)
Aucilla River (Madison and Taylor Counties)
Big Bend Saltwater Paddling Trail (Dixie, Levy and Taylor Counties)
Crooked Creek Paddling Trail (Taylor County)
Cross Florida Greenway Corridor (Levy County)
Dudley Farm Historic State Park (Alachua County)
Econfina River Paddling Trail Corridor (Taylor County)
Fanning Springs State Park (Gilchrist and Levy Counties)
Florida National Scenic Trail (Bradford, Columbia, Hamilton, Madison, Suwannee, Taylor and Union Counties)
FL Circumnavigational Saltwater Paddling Trail (Levy, Dixie and Taylor Counties)
Four Freedoms Trail Corridor (Madison County)
Gainesville to Branford Corridor (Alachua, Columbia and Suwannee Counties)
Gainesville to Hawthorne Corridor (Alachua County)
Gainesville to Newberry Trail Corridor (Alachua County)

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

Ichetucknee River Trail
Lake Santa Fe Corridor (Alachua and Bradford Counties)
Manatee Springs State Park (Levy County)
Nature Coast Trail Corridor (Alachua, Dixie, Gilchrist and Levy Counties)
Nature Coast Trail State Park (Gilchrist and Dixie Counties)
Palatka to Hawthorne Corridor (Alachua County)
Palatka to Lake City Corridor (Bradford, Columbia and Union Counties)
Patono State Paddling Trail (Alachua County)
Santa Fe River State Paddling Trail (Alachua, Columbia, Gilchrist, Lafayette and Suwannee Counties)
State Road 121 Rail Trail Corridor (Alachua and Union Counties)
State Road 320 Trail Corridor (Levy County)
Steinhatchee River Trail (Dixie and Taylor Counties)
Suwannee River Wilderness State Paddling Trail (Columbia, Dixie, Gilchrist, Hamilton, Lafayette, Levy, Madison and Suwannee Counties)
Suwannee/Cedar Key Refuge Paddling Trails (Dixie and Levy Counties)
Troy Springs State Park (Suwannee County)
Waccasassa River Paddling Trail (Levy County)
Waldo Road Corridor (Alachua and Bradford Counties)
Wekiva River Paddling Trail (Levy County)
Withlacoochee Gulf Preserve Paddling Trail (Levy County)
Withlacoochee River (North) (Hamilton and Madison Counties)
Withlacoochee South State Paddling Trail (Levy County)

# E. Historical Facilities

All districts, buildings, and sites listed in the National Register of Historic Places
All pre-historic sites listed in the Florida Master Site File

# F. Hospitals

North Florida Regional Medical Center, Gainesville
Shands Hospitals in Alachua County
Veterans Administration Hospital, Gainesville
Veterans Administration Hospital, Lake City

# G. Landfills

New River Solid Waste Management Association (Baker, Bradford, & Union counties)
Suwannee Valley Solid Waste Management Association (Dixie, Jefferson, Madison, & Taylor counties)

# H. Natural Gas Transmission Lines

Natural Gas Transmission Lines

# I. Military Facilities

Camp Blanding

# J. State Prisons

Columbia Correctional Institution, Columbia County
Columbia Correction Institution Annex, Columbia County
Cross City Correctional Institution, Dixie County
Florida State Prison, Bradford County
Florida State Prison, West Unit, Bradford County
Gainesville Community Correctional Center, Alachua County
Hamilton Correctional Institution, Hamilton County
Hamilton Correctional Institution Annex, Hamilton County
Lake Butler Reception and Medical Center, Union County
Lake City Community Correctional Facility, Columbia County
Lancaster Correctional Institution, Gilchrist County
Lawtey Correctional Institute, Bradford County
Madison Correctional Institution, Madison County
Mayo Correctional Institution, Lafayette County
New River Correctional Institution, Bradford County
New River "O" Unit, Bradford County
Reception and Medical Center, Main Unit, Union County
Reception and Medical Center, West Unit, Union County
Suwannee Correction Institution, Suwannee County
Taylor Correction Institution, Taylor County
Taylor Correction Institution Annex, Taylor County
Union Correctional Institution, Union County

# Chapter VII
# Coordination Outline

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

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# Chapter VII: Coordination Outline

The coordination outline provides an overview of the Council's cross acceptance, dispute resolution, public participation, and related regional planning and coordination activities. It focuses on how the Council helps to resolve inconsistencies among the various (local/regional/state) plans and programs.

## A. Public Participation

The Council actively seeks public participation in all of its endeavors. Every meeting of the Council and its committees is advertised in Florida Administrative Weekly. Additionally, Council and committee meeting notices/agendas are distributed to the news media and directly to interested persons who have requested to be placed on the Council's notification lists. Agendas are also available to the public through the Internet via the World Wide Web. The Council's home page Internet address is http://www.ncfrpc.org.

Citizens participate in Council programs in a variety of ways. Ongoing citizen participation is accomplished by including eight non-voting citizen members on the Council and various Council committees. This format allows direct citizen input at the policy-making level. Also, citizen advisory committees are created for special projects in which more organized citizen input is desirable.

In developing the regional plan, the Council held one public workshop during the early stages of plan formulation to describe the regional planning effort and to receive input from the public regarding the content, structure, and application of the plan as well as to receive input regarding the process of plan formulation and adoption. Additionally, the Council will hold at least three well-advertised meetings at different locations throughout the region to describe the content of the proposed plan submitted to the Executive Office of the Governor and to receive public comment regarding the proposed plan.

## B. Dispute Resolution

The Council has adopted a dispute resolution process (Rule 29C-8, Florida Administrative Code) designed to reconcile differences in planning, growth management, and other issues among local governments, regional agencies, and private interests. The voluntary process attempts to identify and resolve problems early, provide a range of dispute resolution options, appropriately involve all affected parties, and be both time- and cost-effective.

## C. Cross-Acceptance

Chapter 186.505(22), Florida Statutes, states that regional planning councils have the power "to establish and conduct a cross-acceptance negotiation process with local governments intended to resolve inconsistencies between applicable local and regional plans, with participation by local governments being voluntary."

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In order to encourage up-front compatibility among the various regional planning council and local government plans, the North Central Florida Regional Planning Council has established a voluntary cross-acceptance process which can be used to prevent high-profile conflicts between plans of two regional planning Councils, between the regional planning Council and local government plans, and between plans (and plan amendments) being developed by adjacent local governments.

# 1. How the Cross-Acceptance Process Works

The Council's cross-acceptance process consists of an informal, non-binding, staff-level review of local government plans/plan amendments as well as strategic regional policy plans/plan amendments of adjacent regional planning Councils.

The process is initiated when a local government submits a plan or plan amendment to the Council requesting initiation of the process prior to submitting the plan/amendment for review pursuant to Chapter 163, Florida Statutes. For regional plans/amendments, the process begins when the Council receives a request by an adjacent regional planning Council to initiate the cross-acceptance review. Within ten days of receipt of the plan/amendment for review through the cross-acceptance process, the Council staff will make an informal, non-binding, review of the plan or plan amendment. In the case of a local government comprehensive plan/amendment review, the Council will communicate the results of the review to the initiating local government. In the case of a regional plan/amendment review, the Council will communicate the results of the review to the appropriate regional planning Council.

For proposed regional and local plans/amendments, staff review will consist of a determination as to its effects on regional resources or facilities identified in the regional plan and extrajurisdictional impacts on adjacent local governments. The review will include recommendations as to how the plan/amendment can be made to mitigate significant adverse impacts on adjacent local governments as well as ensure its consistency with the Council's regional plan.

# 2. Council's Local Government Comprehensive Plan Review Process and Its Relationship with the Voluntary Cross-Acceptance Process

The Council is authorized to review and comment on local government proposed comprehensive plans and plan amendments by Chapter 163, Florida Statutes. The Council's review of proposed plans/amendments is limited to the effects on regional resources or facilities identified in the regional plan and extrajurisdictional impacts which would be inconsistent with the comprehensive plan of the affected local government. Council review of adopted plans/amendments consists of a determination of consistency of the plan as amended with the regional plan. The Council's review findings are considered by the Department of Economic Opportunity during its compliance review of local plans/plan amendments.

This process must be followed regardless of any agreements reached through or modifications made to local plans/amendments as a result of the Council's voluntary cross-acceptance process. Furthermore, any determination or recommendation made by Council staff through the voluntary cross-acceptance process is subject to review and reversal by the Department through the Chapter 163, Florida Statutes, review process described above, with or without a recommendation to do so by the policy body of the Council.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

The Council's cross-acceptance process does not obligate the local government or adjoining regional planning Council to change its plan/amendment as a result of the process; nor does it obligate the Council to find the plan/amendment consistent with the regional plan through the Council's formal review processes should the local government or adjoining regional planning council implement any or all of the staff recommendations contained in the cross-acceptance review.

# D. Regional Planning and Coordination Activities

The Council conducts a number of various planning activities and programs. These activities and programs include intergovernmental coordination and review, functioning as a regional information center, hurricane preparedness planning, regional public facilities planning, hazardous materials emergency management planning, staffing of the Metropolitan Transportation Planning Organization for the Gainesville urban area, staffing of county transportation disadvantaged programs, and local government technical assistance. These activities and programs are discussed below.

## 1. Intergovernmental Coordination and Review

One of the ways the Council implements its regional plan is through a federal/state/regional review process formally known as the Intergovernmental Coordination and Review process. The Governor has designated the state's ten regional planning Councils as areawide clearinghouses for federally-funded projects that affect local governments in Florida.

The Council reviews these applications/projects to avoid and/or mitigate potential adverse impacts that may be created by an activity in neighboring communities or counties, insure coordination and consistency with local government and comprehensive regional policy plans, and to avoid duplication or conflict with other area programs.

## 2. Regional Information Center

The Regional Information Center is the information service and publication center of the Council. It includes a library, a research service, and public information resources. The Center is often the starting place for many developers, consultants, marketing specialists, media representatives, students, and planners looking for regional statistics and information. The Council is a Florida Census Data Affiliate and an official repository for federal home loan disclosure reports. Data research requests are filled on a regular basis.

# 3. Hurricane Preparedness

In 1990, the Council completed its first five-year update of the regional hurricane evacuation and inland shelter studies. Both regional and county plans were prepared by the Council in 1985. The 1990 regional study focuses on updating the number and location of people who need to evacuate in the event of a hurricane, including any special needs created by disabilities or age. The study includes the location and type of shelter spaces available to accommodate evacuees. Evacuation routes and potential impediments, such as flooding, to the movement of vehicles are also discussed. A technical committee composed of county civil defense directors, representatives of the Florida Division of Emergency Management, and the American Red Cross assisted in this effort.

# 4. Regional Public Facilities

Since 1987 when its comprehensive regional policy plan was initially adopted, the Council has assisted the region's counties in creating regional landfills and regional library systems. In a time when economics, new technologies and/or other factors are forcing local governments to look for safe and cost-effective alternatives, the Council can provide the expertise and forum for developing regional solutions to a number of problems facing local governments in Florida.

# 5. Hazardous Materials

The Emergency Planning and Community Right-to-Know Act, also known as Title III of the Superfund Amendments and Reauthorization Act requires the preparation of local emergency hazardous material response plans. In Florida, hazardous materials emergency response plans have been developed utilizing the eleven regional planning Council districts and state-appointed local emergency planning committees. The emergency response plan for the North Central Florida Region was adopted by the Local Emergency Planning Committee on June 9, 1989, and annually updated in November of each year.

Florida follow-up legislation also requires the state's 67 counties to each prepare or update site-specific hazards analyses. The hazards analyses include site-specific information on facilities that contain extremely hazardous substances. The hazards analyses identify the quantities of hazardous material on-site, the vulnerable zone that could be impacted by a worse-case release, and the probability of a release occurring.

The Local Emergency Planning Committee, with financial assistance from the state, also organizes free training sessions for emergency fire and rescue teams, police, and others whose job is to respond to accidents which may involve hazardous materials. Different levels of training are being provided to the “First Responders” with the first level focusing on how to safely recognize and make proper notifications for possible hazardous materials incidents. The most advanced level is for hazardous materials technicians who will wear chemical protective clothing to stop a toxic release.

# 6. Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area

Through an agreement signed by the Florida Department of Transportation, Alachua County, and the City of Gainesville, the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area was formed to conduct transportation planning activities in the Gainesville urbanized area. This program makes the area eligible to receive federal funds for transportation projects. The Council serves as the staff providing technical and administrative assistance in developing transportation plans and programs.

# 7. Transportation Disadvantaged Program

Another major transportation planning activity of the Council is the Transportation Disadvantaged planning program. Counties are required to develop plans in order to receive state funds to increase transportation services to low-income, elderly, and handicapped persons. The Council serves as the designated official planning agency for nine counties in the region. The Metropolitan Transportation Planning Organization serves as the planning agency for Alachua County while the Taylor County Commission is the designated official planning agency for Taylor County. These agencies are responsible for conducting planning studies needed to increase transportation services to low-income individuals, elderly individuals, and persons with disabilities.

# 8. Local Government Technical Assistance

The Council also offers technical assistance to local governments which do not have available staff or expertise for certain activities. These activities range from comprehensive planning to community development.

## a. Comprehensive Planning Assistance

The Local Government Comprehensive Planning and Land Development Regulation Act requires local governments to prepare and adopt comprehensive plans which are consistent with regional and state comprehensive plans. In addition, local governments are required to adopt land development regulations to implement their comprehensive plans. Since this legislation was initially enacted back in 1975, the Council has assisted nearly every local government in the region with preparing all or a portion of their comprehensive plans and development regulations. Technical assistance on plan amendments and general administration of local planning programs is provided on a continuing basis to many of these same local governments by Council under contract.

## b. Community Development Block Grants

The Council also assists local governments in assessing their community development needs, then applying for and administering Community Development Block Grants. The federal block grant program, administered by Department, helps local governments address the need for housing rehabilitation of low-and moderate-income occupied dwelling units, the need for the commercial revitalization of downtowns, and the need for revitalizing public facilities in neighborhoods occupied by low-and moderate-income persons.

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### c. Florida Recreation Development Assistance Program Grants

The Council also assists local governments in preparing applications for Florida Department of Environmental Protection Florida Recreation Development Assistance Program grant funds, a program designed to assist local governments in the acquisition and development of recreational sites and facilities for the general public.

## 9. Economic Development

The economic development program of the Council consists of economic development planning and technical assistance, and tourism promotion.

### a. Economic Development District

Since the federal Economic Development Administration designation of the region as an Economic Development District in 1978, the Council has continued to maintain a high level of involvement in providing technical assistance to local governments and development authorities in order to promote economic growth.

### b. The Original Florida Tourism Task Force

The Council developed a tourism strategic plan in 1992. Upon completion, the Council entered into a formal agreement with public and private agencies in the region's counties whose representatives form a Tourism Task Force to undertake promotional efforts and other activities for tourism throughout the region. The Council provides in-kind staff assistance to this on-going effort.

# Appendix A
# Dispute Resolution Rule

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018


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# Appendix A: Dispute Resolution Rule

## CHAPTER 29C-8

## RULES OF PROCEDURE AND PRACTICE PERTAINING TO THE REGIONAL DISPUTE RESOLUTION PROCESS



### 29C-8.001 Purpose.

(1) The purpose of the rule is to establish a voluntary regional dispute resolution process to reconcile differences on planning, growth management and other issues among local governments, regional agencies and private interests. The process consists of two basic components: process initiation (initiation and response letters), and settlement meetings; and five optional components: pre-initiation meeting, situation assessments, mediation, advisory decision-making, and reference to other dispute resolution processes (judicial, administrative or arbitration proceedings).

(2) The intent of the regional dispute resolution process is to provide a flexible process to reconcile differences on planning and growth management issues. The process is designed to clearly identify and resolve problems as early as possible, utilize the procedures in a low-to-high cost sequence, allow flexibility in the order in which the procedures are used, provide for the involvement of affected and responsible parties, and provide as much process certainty as possible.

(3) The regional dispute resolution process may be used to resolve disputes involving: extrajurisdictional impacts as provided for in the intergovernmental coordination elements of local comprehensive plans, as required by Section 163.3177, F.S.; inconsistencies between port master plans and local comprehensive plans, as required by Section 163.3178, F.S.; the siting of community residential homes, as required by Section 419.001(5), F.S.; and any other matters covered by statutes which reference the regional dispute resolution process.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

(4) The regional dispute resolution process shall not be used to address disputes involving environmental permits or other regulatory matters unless all of the parties involved agree to initiate use of the regional dispute resolution process.

(5) Use of the regional dispute resolution process shall not alter a jurisdiction's organization's, group's or individual's right to a judicial determination of any issue if that entity is entitled to such a determination under statutory or common law.

(6) Participation in the regional dispute resolution process as a named party or in any other capacity does not convey or limit intervenor status or standing in any judicial or administrative proceedings.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.002 Definitions.**

(1) SITUATION ASSESSMENT is a procedure of information collection that may involve review of documents, interviews and an assessment meeting to identify the issues in dispute, the stakeholders, information needed before a decision can be made, or a recommendation for appropriate dispute resolution procedures.

(2) PRE-INITIATION MEETINGS are opportunities for a party to discuss the suitability of the regional dispute resolution process with the Council staff for resolving their dispute before formally initiating the regional dispure resolution process.

(3) FACILITATION is a procedure in which a neutral party, acting as a facilitator, helps the named parties design and follow a meeting agenda, and assists parties to communicate more effectively throughout the process. The facilitator has no authority to make or recommend a decision.

(4) MEDIATION is a procedure in which a neutral party, acting as a mediator, assists named parties in a negotiation process in exploring their interests, developing and evaluating options, and reaching a mutually-acceptable agreement. A mediator may take more control of the process than a facilitator and usually works in more complex cases where a dispute is more clearly defined.

(5) ADVISORY DECISION-MAKING is a procedure aimed at enhancing the effectiveness of negotiations and helping parties more realistically evaluate their negotiation positions. This procedure may include neutral evaluation, or advisory arbitration in which a neutral party or panel listens to the facts and arguments presented by the parties and renders a non-binding advisory decision.

(6) JURISDICTION is any local, regional, or state government or agency, including special districts, authorities and school boards.

(7) NAMED PARTY shall be any jurisdiction, public or private organization, group or individual which (who) is named in an initiation letter, including the initiating jurisdiction, or is admitted by the named parties to participate in settlement of a dispute pursuant to subsections 29C-8.003(1), (2) and (3), F.A.C. Being a "named party" in the regional dispute resolution process does not convey or limit standing in any judicial or administrative proceeding.

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

(8) REPRESENTATIVE is an individual who is given guidance and authority to act, to the extent possible, by a named party in a regional dispute resolution process case. Subsection 29C-8.003(4), F.A.C., sets forth the designation process.

(9) INITIATION LETTER is a letter from a jurisdiction formally identifying a dispute and asking named parties to engage in this process to resolve the dispute and, at a minimum, attend the initial settlement meeting. Subsection 29C-8.010(2), F.A.C., specifies what must be included in an initiation letter.

(10) RESPONSE LETTER formally notifies the initiator and other named parties that a party is willing to participate in the regional dispute resolution process and, at a minimum, attend at least one settlement meeting. Subsection 29C-8.010(3), F.A.C., specifies what must be included in a response letter.

(11) SETTLEMENT AGREEMENTS may be voluntarily approved by the individual or governing body authorized to bind the named party. Agreements may take the form of memorandums of understanding, contracts, interlocal agreements or other form mutually agreed to by the signatory parties or as required by law. A settlement may be agreed to by some or all of the named parties.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.003 Participation.**

(1) Named parties shall automatically be allowed to participate. Other jurisdictions, public or private organizations, groups, or individuals suggested by named parties in response letters or during regional dispute resolution process meetings or submitting a petition to participate, shall be allowed to become named parties if agreed to by a two-thirds majority of the participating named parties, except as provided for in subsection 29C-8.003(2), F.A.C. Fee allocation agreements may be amended as appropriate.

(2) All initiation and response letters made in accordance with intergovernmental coordination elements of local government comprehensive plans shall only list affected local government jurisdictions as named parties. The named parties may, at the initial settlement or at subsequent regional dispute resolution process meetings, add public or private named parties by mutual agreement of all the current named parties.

(3) Other jurisdictions, public or private organizations, groups or individuals seeking to become named parties shall submit to the North Central Florida Regional Planning Council a written petition to participate, including reasons for the request and information required in subsection 29C-8.010(2), F.A.C. Such jurisdictions, public or private organizations, groups, or individuals shall become named parties if agreed to by a two-thirds majority of the named parties prior to or during regional dispute resolution process meetings, except as provided by subsection 29C-8.003(2), F.A.C. Named parties who do not respond within thirty days of the initiation letter may not participate in the regional dispute resolution process unless they submit a petition for participation.

(4) Each of the jurisdictions, organizations, groups, or individuals participating as named parties in this process shall designate a representative, in writing, or be represented by the chief administrative officer. Such a representative shall have responsibility for representing that party's interest in this process and for maintaining communications with that party throughout the process and, to the extent possible, shall have the authority to act for that party. Jurisdictions are encouraged to designate a representative to participate in the regional dispute resolution process in advance of initiating or receiving a request.

(5) Any named or neutral party may invite individuals or organizations to attend meetings under this process who (which) can provide information and technical assistance useful in the resolution of the dispute. The parties, by agreement, or the presiding neutral shall determine when and under what circumstances such invited parties may provide input.

(6) All communications by a named party called for in this process shall be submitted to all other named parties and the Council in writing.

(7) All named parties who agree to participate in this process commit to a good faith effort to resolve problems or disputes.

(8) Any named party may withdraw from participation in the regional dispute resolution process upon written notice to all other named parties and the Council.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.004 Costs.**

(1) There shall be no charge for processing a regional dispute resolution process initiation request and facilitation of the initial settlement meeting. The Council shall be compensated for situation assessments, facilitation of additional settlement meetings, mediation, technical assistance and other staff services based on reasonable actual costs. Outside professional neutrals shall be compensated at their standard rate or as negotiated by the parties.

(2) The costs of administration, settlement meetings, mediation or advisory arbitration shall be split equally between the named parties or according to another agreed upon allocation. The agreed upon cost allocation shall be documented in a written fee agreement.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.005 Timeframes.**

(1) The initial settlement meeting shall be scheduled and held within forty-five days of the date of receipt of the initiation letter at a time and place convenient to the named parties.

(2) Additional settlement meetings, mediation or advisory decision-making shall be completed within sixty days of the date of the conclusion of the initial settlement meeting.

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(3) All timeframes specified or agreed to in this process may be shortened or extended if agreed to by a two-thirds majority of the named parties.

(4) The parties may, by mutual agreement, utilize procedures in the regional dispute resolution process in any order.

(5) Where necessary to allow this process to be effectively carried out, named parties should defer or seek stays of judicial or administrative proceedings.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.006 Administrative Protocols.**

The Council may adopt administrative procedures to implement this rule. These may address staff and council roles, procedures for situation assessment, selection of neutrals, consumer guides or other matters. Where required pursuant to Section 120.52, F.S., policies and guidelines should be adopted as rules.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.007 Public Notice, Records, and Confidentiality.**

(1) Named parties should provide appropriate opportunities for public input at each step in this process, such as submitting written or oral comments on issues, alternative solutions and impacts of proposed agreements.

(2) Applicable public notice and public records requirements shall be observed as required by Chapters 119 and 120, F.S.

(3) Parties utilizing these procedures agree that no comments, meeting records, or written or oral offers of settlement shall be presented by them as evidence in any subsequent judicial or administrative action.

(4) To the extent permitted by law, mediation under this process will be governed by the confidentiality provisions of applicable laws, which may include Chapter 44, F.S.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.008 Pre-initiation Meeting.**

A jurisdiction, organization, group, or individual contemplating initiation of this process must request an informal pre-initiation meeting with the Council staff in order to ascertain whether the potential dispute would be appropriate for this process.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.009 Situation Assessment.**

(1) A jurisdiction, organization, group, or individual may request that the Council (or other entity if the Council is one of the named parties) perform a situation assessment at any time, before or after initiation of the process.

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(2) The situation assessment may involve examination of documents, interviews and assessment meetings, and shall recommend issues to be addressed, parties that should participate, appropriate resolution procedures, and a proposed schedule.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.010 Formal Initiation of the Process by Jurisdictions.**

(1) A formal process is initiated by an initiation letter from the representative of the governing body of a jurisdiction, other than a regional planning council, to the named parties as provided for in subsections 29C-8.003(1) and (2), F.A.C., and to the Council. The initiation letter must be accompanied by a resolution of the governing body authorizing the specific initiation or by a letter which authorizes its designated representative as defined in this rule to initiate requests utilizing the regional dispute resolution process.

(2) Such an initiation letter shall identify the following: the issues to be discussed; the named parties to be involved in the dispute resolution process; the initiating party's representative and others who will attend; and a brief history of the dispute indicating why it is appropriate for this process.

(3) Named parties shall send a response letter to the Council and all other named parties confirming their willingness to participate in a settlement meeting within thirty days of receipt of the initiation letter. This response letter shall include any additional issues and potential named parties the respondent wishes considered, as well as, a brief history of the dispute and description of the situation from the respondent's point of view.

(4) Upon receipt of an initiation letter, the Council shall assess its interest in the case. If the Council is a named party or sees itself as a potential party, it shall notify the named parties of the nature of its interest and ascertain whether the parties desire an outside facilitator for the initial settlement meeting.

(5) The Council may not initiate the regional dispute resolution process but recommend that a potential dispute is suitable for this process and transmit its recommendation to potential parties who may, at their discretion, initiate the regional dispute resolution process.

(6) The Council shall schedule a settlement meeting within thirty days of the date of receipt of the initiation request.

(7) In the event that a dispute affects jurisdictions involving two or more regions, the process adopted by the region of the initiating jurisdiction shall govern, unless the named parties agree otherwise.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.011 Requests to Initiate Process Submitted by Others.**

(1) Private interests may request any jurisdiction to initiate the process.

(2) Any public or private organization, group, or individual may request that the Council recommend use of this process to address a potential dispute in accordance with subsection 29C-8.010(5), F.A.C. Such a request shall be submitted in writing and shall include the information required for an initiation letter as outlined in subsection 29C-8.010(2), F.A.C.

(3) After reviewing the rationale submitted by and consulting with the requesting organization, group, or individual, the Council will conduct a situation assessment and respond in writing.

(4) If the Council determines that the potential dispute is suitable for the process, it shall transmit that determination in writing to the potential parties. The determination may include a recommendation that one or more of the jurisdictions among the potential parties initiate the procedure. The Council may also suggest that other, resolution processes be considered.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.012 Settlement Meetings.**

(1) Settlement meetings shall, at a minimum, be attended by the named parties' representatives designated pursuant to subsection 29C-8.003(4), F.A.C.

(2) Settlement meetings may be facilitated by a Council staff member or other neutral facilitator acceptable to the named parties and shall be held at a time and place acceptable to the named parties.

(3) At the settlement meeting, the named parties shall consider adding named parties, consider guidelines for participation, identify the issues to be addressed, present their concerns and constraints, explore options for a solution, and seek agreement.

(4) The named parties shall submit a settlement meeting report in accordance with subsection 29C-8.015(4), F.A.C., of this process.

(5) If an agreed-upon settlement meeting is not held or a settlement meeting produces no agreement to proceed to additional settlement meetings, mediation or advisory decision-making, any named party who has agreed to participate in this procedure may proceed to a joint meeting of governing bodies pursuant to Chapter 164, F.S., litigation, an administrative hearing or arbitration, as appropriate.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.013 Mediation.**

(1) If two or more of the named parties submit a request for mediation to the Council, the Council shall assist them in selecting and retaining a mediator or the named parties may request that the Council select a mediator.

(2) All disputes shall be mediated by a mediator who understands Florida growth management issues, has mediation experience and is acceptable to the parties. Named parties may consider mediators who are on the Florida Growth Management Conflict Resolution Consortium rosters or any other mutually-acceptable mediator. Mediators shall be guided by the Standards of Professional Conduct, Florida Rules of Civil Procedure, Rule 10, Part II, Section 020-150.

(3) Named parties shall submit a mediation report in accordance with subsection 29C-8.015(4), F.A.C., at the conclusion of advisory decision-making.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.014 Advisory Decision-making.**

(1) If two or more of the named parties submit a request for advisory decision-making to the Council, the Council shall assist the named parties in selecting and retaining an appropriate neutral party or the named parties may request that the Council make the selection.

(2) All disputes shall be handled by a neutral party who understands Florida growth management issues, has appropriate experience and is acceptable to the named parties.

(3) The named parties shall submit an advisory decision-making report in accordance with subsection 29C-8.015(4), F.A.C., of this process.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.015 Settlement Agreements and Reports.**

(1) The form of all settlements reached through this process shall be determined by the named parties and may include interlocal agreements, concurrent resolutions, memoranda of understanding, plan amendments, deed restrictions, or other forms as appropriate.

(2) Agreements signed by designated representatives may be in the form of recommendations to the named parties and subject to their formal approval.

(3) Agreements may be reached by two or more parties even if all of the named parties do not agree or do not sign a formal agreement.

(4) After settlement meetings, mediation, or advisory decision-making under this process, the named parties shall submit a joint report to the Council which shall, at a minimum, include:

(a) Identification of the issues discussed and copies of any agreements reached;

(b) A list of potentially affected or involved jurisdictions, organizations, groups, or individuals (including those which may not be named parties);

(c) A timeframe for starting and ending informal negotiations, additional settlement meetings, mediation, advisory decision-making, joint meetings of elected bodies, administrative hearings or litigation;

(d) Any additional Council assistance requested;

(e) A written fee allocation agreement to cover the costs of regional dispute resolution process procedures;

(f) A description of responsibilities and schedules for implementing and enforcing agreements reached. The report shall include any statements that any named party wishes to include.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

**29C-8.016 Other Dispute Resolution Processes.**

(1) The regional dispute resolution process is a voluntary opportunity for parties to negotiate a mutual agreement. It may be used before, in parallel with, or after judicial or administrative proceedings.

(2) When appropriate, parties may obtain a stay of judicial or administrative proceedings to provide time for regional dispute resolution process negotiations.

(3) Use of the regional dispute resolution process shall not alter a jurisdiction's, organization's, group's or individual's right to a judicial or administrative determination of any issue if that person is entitled to such a determination under statutory or common law.

(4) Participation in the regional dispute resolution process as a named party or in any other way does not convey or limit intervenor status or standing in any judicial or administrative proceedings.

(5) Other resolution processes that the parties may wish to consider utilizing which exist within Florida Statutes include the following: Intergovernmental Coordination Element, Section 163.3177(h)1. & 2., F.S.; Port Master Plans, Section 163.3178 F.S.; Community Residential Homes, Section 419.001(5) F.S.; Cross Acceptance Negotiation Process, Section 186.505(22) F.S.; Location of Spoil Sites, Section 380.32(14) F.S.; Administrative Procedures Act, Chapter 120 F.S.; Florida Governmental Cooperation Act, Chapter 164, F.S.; Mediation Alternatives to Judicial Action, Chapter 44, F.S.

*Specific Authority 186.509 FS. Law Implemented 186.509 FS. History–New 7-12-94.*

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# Appendix B
# Glossary of Terms

Adopted May 23, 1996, Amended August 28, 1997, February 27, 2003, October 27, 2011 and August 23, 2018

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# Appendix B: Glossary of Terms

**100-year Floodplain:** An area delineated on the Flood Insurance Rate Map series published by the Federal Emergency Management Agency estimated to have a one in 100 chance of flooding in any given year.

**Acquire/Public Acquisition:** Refers to a variety of ownership forms of real property, including fee simple ownership as well as the ownership of specific rights such as land development rights, mineral rights, and timber rights.

**Adverse Transportation Impact:** A transportation facility operating below the adopted level of service standard contained in a local government comprehensive plan for transportation facilities which are not part of the Strategic Intermodal System. A transportation facility which is part of the Strategic Intermodal System operating below the adopted level of service standard established by the Florida Department of Transportation.

**Affordable Housing:** Housing for which annual costs (including utilities, taxes, maintenance, and other associated costs) represents no more than 30 percent of the residing household's annual income.

**Aquifer:** An underground geologic formation holding ground water.

**Assessed Value:** The value of real property established by a tax assessor which is used as a basis for determining ad valorem property taxes.

**Backlogged Roadway:** An unconstrained roadway operating at a level of service below the adopted minimum level of service standards and not programmed for improvement in the first three years of the Florida Department of Transportation adopted work program or the first three years of the five year schedule of improvements in the local government comprehensive plan's capital improvement element. A roadway formally categorized as such in local government comprehensive plans.

**Basic Industries:** Industries whose products are sold or whose profits are otherwise generated beyond the geographic boundaries of the region. North central Florida basic industries include, but are not limited to, agriculture, educational services, health services, manufacturing, and mining.

**Catastrophic Disasters:** Disasters that require massive state and federal assistance, including immediate military involvement, such as a category four or five hurricane that hit a densely populated area.

**Coastal High Hazard Area:** The evacuation zone for a Category 1 hurricane as established in the regional hurricane evacuation study applicable to the local government.

**Comprehensive Economic Development Strategy:** An economic development plan or strategy for the North Central Florida region developed under guidelines established by the U.S. Department of Commerce. The document is the guiding plan for the activities of the North Central Florida Economic Development District.

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**Concurrency Management System:** An ongoing mechanism which ensures that public facilities and services needed to support development is available concurrent with the impacts of such development.

**Cone of Influence:** A depression in the potentiometric surface around a well or spring from which water is withdrawn.

**Constrained Roadway:** A roadway which cannot be widened or enhanced due to physical constraints. A roadway formally categorized as such in local government comprehensive plans.

**Density:** An objective measurement of a number of units per unit of area, such as residents or housing units per acre.

**Economic Development District**: A regional economic development administration district authorized by the U.S. Economic Development Administration that assists local governments within the district with economic development initiatives.

**Ecosystem:** A functional system that includes the organisms of a natural community together with their environment.

**Endangered species:** Animal or plant species that are recognized by federal or state agencies as in imminent danger of extinction or expiration.

**Estuary:** A semi-enclosed coastal body of water having a free connection with the open sea and within which sea water is measurably diluted with fresh water.

**Eutrophication:** The processes that result in a higher concentration of dissolved nutrients in a water body.

**Farm:** means any place from which $1,000 or more of agricultural products were produced and sold or normally would have been sold, during the census year (1992 Census of Agriculture).

**First Magnitude Spring:** A spring which discharges an average of 100 cubic feet or more of water per second.

**First Responders:** Individuals which are most likely to be first to respond to the scene of a hazardous material release. First responders typically include fire fighters, policemen, and county sheriff personnel.

**Florida Greenways (or Greenways):** Florida Greenways are connections linking existing parks, rivers, and wetland systems to create a statewide network of native habitats, open spaces, and linear parks which have been formally recognized as Florida Greenways by the Florida Greenways Commission.

**Focal Species:** Animal species considered by wildlife biologists to be indicator species of overall ecosystem health. If these species are present in an area, then wildlife biologists are confident that species commonly found in association with the focal species are also present.

**Goal:** A long-term end toward which programs and activities are ultimately directed.

**Gross Rent:** The monthly contract rent plus the estimated average cost of utilities (electricity, gas, and water) and fuels (oil, coal, kerosene, wood, etc.) if these are paid for by the renters.

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**Ground Water:** Water occurring in an aquifer below the surface of the land.

**Habitat:** The place where an organism lives, and where one would go to find it. It is the place that provides an organism with essential life needs, such as food, water, cover, space, and mates.

**Hardwood:** Wood from trees such as oaks and beeches used to make lumber.

**Hardwood Hammock:** A densely wooded upland or wetland community with high plant species diversity, which is dominated by oaks, cabbage palms, or other species of hardwood trees.

**Hazardous Material:** One of several hundred thousand chemicals for which the U.S. Occupational Safety and Health Administration requires a Material Safety Data Sheet (MSDS). An MSDS is a legal document which details a chemical's synonyms; physical properties; shipping, handling, and storage procedures; and health hazard, first aid, reactivity, fire, and explosion, and spill and leakage data.

**Household:** One or more persons, related or unrelated, living together in a single housing unit.

**Identified Attributes:** Selected qualities or characteristics of larger ecosystems or habitats which have been identified, described, and mapped through field surveys by qualified wildlife biologists, botanists, and ecologists as necessary to the survival of self-sustaining populations of representative samples of native Florida animal species, plant species, and habitat types.

**Infrastructure:** Man-made structures which serve the common needs of the population such as sewage disposal systems, potable water systems, potable water wells serving a system, solid waste disposal sites and retention areas, stormwater systems, utilities, piers, docks, wharves, breakwaters, bulkheads, seawalls, bulwarks, revetments, causeways, marinas, navigation channels, and roadways.

**Listed Species:** Listed species means an animal species designated as Endangered, Threatened, or Species of Special Concern in Chapter 68A-27.003-68A-27.005, Florida Administrative Code; a plant species designated as Endangered, Threatened, or Commercially Exploited as designated in Chapter 5B-40, Florida Administrative Code, or an animal or plant species designated as Endangered or Threatened in Title 50, Code of Federal Regulations, Part 17.

**Low Income Household:** A household with an annual income between 50 and 80 percent of the median annual income.

**Major Disaster:** A disaster that will likely exceed local capabilities and require a broad range of state and federal assistance, such as a hurricane.

**Marine League:** A unit of linear measure equal to three nautical miles. A nautical mile equals 6,076.12 feet.

**Mesic Hammock:** An upland natural community characterized as an open canopy forest of widely spaced pine trees with little or no understory, but a dense ground cover of herbs and shrubs.

**Minor Disaster:** A disaster that is likely to be within the response capabilities of local government and to result in only a minimal need for state and federal assistance, such as a tropical storm.

**Moderate Income Household:** A household with an annual income between 80 and 120 percent of the median annual income.

**Monthly (Home)owner Costs:** The sum of payments for mortgages, deeds of trust, contracts to purchase or similar debts on the property (including payments for the first mortgage, second or junior mortgages, and home equity loans); real estate taxes; fire, hazard and flood insurance on the property; utilities (electricity, gas, and water); and fuels (oil, coal, kerosene, wood, etc.). It also includes, where appropriate, the monthly condominium fee for condominiums and mobile home costs (personal property taxes, site rent, registration fees, and license fees) for mobile homes.

**Natural Resource of Regional Significance:** A natural resource or system of interrelated natural resources, that due to its function, size, rarity or endangerment retains or provides benefit of regional significance to the natural or human environment (27E-5.002(4), Florida Administrative Code). Natural resources of regional significance may be referred to as "regionally significant resources" in state law and other Strategic Regional Policy Plans.

**Noninstitutionalized Civilian Labor Force:** Persons age 16 and over, excluding inmates of institutions and military personnel, classified as "employed" or "unemployed" by the U.S. Census Bureau.

**Noninstitutionalized Civilian Labor Force Participation Rate:** The percentage of noninstitutionalized civilians age 16 and over who are either employed or are seeking employment.

**Occupation:** A craft, trade, or profession, or other means of earning a living. The occupational classification system developed for the 1990 Census, which consists of 500 specific occupational categories for employed persons arranged into six summary and 13 major occupational groups. This classification was developed by the U.S. Census Bureau to be consistent with the Standard Occupational Classification Manual: 1980, published by the Office of Federal Statistical Policy and Standards, U.S. Department of Commerce.

**Overcrowding:** A dwelling unit with more than 1.0 persons (residents) per room.

**Paratransit:** Those elements of public transit which provide service between specific origins and destinations selected by the individual user with such service being provided at a time that is agreed upon by the user and the provider of the service. Paratransit service is provided by taxis, limousines, 'dial-a-ride' buses, and other demand-responsive operations that are characterized by their nonscheduled, nonfixed route nature (341.031(5), Florida Statutes (1993)).

**Policy:** A way by which programs and activities are conducted to achieve identified goals.

**Poverty Threshold (or Poverty Level/Line):** As defined by the U.S. Census Bureau. The average poverty threshold for a family of four was $12,674 in 1989. Poverty thresholds were applied on a national basis and were not adjusted for regional, state, or local variations in the cost of living. For a fuller discussion of poverty thresholds, see U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population, Social and Economic Characteristics, Florida, Section 2 of 3, pages B-27 through B-29, Washington, D.C., 1992.

**Projects that Promote Public Transportation:** Projects that directly affect the provisions of public transit, including transit terminals, transit lines and routes, separate lanes for the exclusive use of public transit services, transit stops (shelters and stations), office buildings or projects that include fixed-rail or transit terminals as part of the building, and projects which are transit oriented and designed to complement reasonably proximate planned or existing public facilities.

**Public Facilities:** Transportation systems or facilities, sewer systems or facilities, solid waste systems or facilities, drainage systems or facilities, potable water systems or facilities, educational systems or facilities, parks and recreation systems or facilities and public health systems or facilities.

**Public Transit:** The transporting of people by conveyances, or systems of conveyances, traveling on land or water, local or regional in nature, and available for use by the public. Public transit systems may be either governmentally owned or privately owned. Public transit specifically includes those forms of transportation commonly known as 'Paratransit' (341.031(6), Florida Statutes (1993)).

**Recharge:** The process whereby rain water or surface water seeps into the ground and enters an aquifer.

**Regional Indicator(s):** Associated with regional goals. A statement of baseline information against which progress can be measured in the region's five-year evaluation and appraisal report.

**Regulatory Environment:** All government plans, goals, policies, standards, and regulations which directly or indirectly affect land and land development.

**Regional Road Network:** Road segments identified in Table 5.10 of the North Central Florida Strategic Regional Policy Plan. The Regional Road Network also includes all intersections contiguous to the road segments identified in Table 5.10. of the North Central Florida Strategic Regional Policy Plan.

**Rookery:** The nesting or breeding grounds of gregarious (i.e., social) birds or mammals; also a colony of such birds or mammals.

**Salary-income Range:** A salary-income range is a subset of an income class (i.e., Very Low-income, Low-income, Moderate-Income, or Above Moderate-income). An income class is comprised of multiple salary-income ranges. A salary-income range spans a maximum range of $2,500.

**Sandhill Community:** An upland natural community located on a well-drained, natural elevation, ridge, or rolling ridges of sand characterized as a forest of widely spaced pine trees with a sparse understory of turkey oaks and a dense ground cover of grasses and herbs.

**Second Magnitude Spring:** A spring which discharges between ten and 100 cubic feet of water per second.

**Significant and Adverse Transportation Impact:** A transportation impact which is both an adverse transportation impact and a significant transportation impact.

**Significant Transportation Impact:** When traffic uses 5.0 percent or more of the adopted peak hour level of service maximum service volume of a transportation facility.

**Silviculture:** A branch of forestry dealing with the establishment, development, reproduction, and care of forest areas.

**Softwood:** Wood from trees such as pine trees used to make paper and similar products.

**Stream-to-sink Watersheds:** Drainage basins containing one or more sinkholes which, in some cases, have direct connection to the Floridan Aquifer.

**Storm Surge:** The rise in sea water level accompanying the approach of a hurricane. The extent of storm surge varies with the strength of the hurricane, coastal topography, and tides. Storm surge is compounded by wind-driven wave action on top of the surge water level.

**Storm Water Runoff:** Water that originates from the drainage of land surfaces after a rain event.

**Submergence:** The act of covering or overflowing with water.

**Suwannee River System:** The Suwannee River and its major tributaries (i.e., the Alapaha, Ichetucknee, Santa Fe, and Withlacoochee rivers).

**Taxable Value:** That portion of the assessed value of real property which is taxed for purposes of valorem property taxation.

**Tenure:** The ownership status of housing unit residents. Residents are typically classified by the U.S. Census Bureau as either owners or renters.

**Third Magnitude Spring:** A spring which discharges one to 10 cubic feet of water per second.

**Trace:** A course or path.

**Transportation Demand Management:** Strategies designed to reduce the number of trips made by single occupancy vehicles and enhance the regional mobility of all citizens. These strategies include but are not limited to encouragement and enhancement of traditional ridesharing (carpooling and vanpooling), public transportation, alternative work hours (flextime, compressed work week, etc.), non-motorized transportation (bicycle and pedestrian modes), priority of preferential parking for ride-sharers, and development and implementation of shuttle services. Also included in the promotion of telecommuting programs.

**Transportation Disadvantaged:** Those persons who because of physical or mental disability, income status, or age are unable to transport themselves or to purchase transportation and are, therefore, dependent upon others to obtain access to health care, employment, education, shopping, social activities, or other life-sustaining activities, or children who are handicapped or high risk or at-risk as defined in s.411.202, Florida Statutes, (427.011(1), Florida Statutes (1993)).

**Transportation Management Organization:** An organization which is formed by private organizations such as local businesses, corporate employers, and developers and sometimes partnered with local, regional, or state agencies to address community transportation problems.

**Urban Development Area:** A mapped area on a local government comprehensive plan future land use map which identifies areas planned for future urban development. Sometimes referred to as a Designated Urban Development Area or an Urban Service Area in local government comprehensive plans.

**Very Low Income Household**: A household with an annual income below 50 percent of the median annual income.

**Vulnerable Zone:** An area where the estimated chemical concentration from an accidental release is at a level where people's health could be adversely impacted during a worst-case release.

**Wetland:** An area which has hydric soils and hydrophilic vegetation where the ground is saturated for a portion of the year.

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# Appendix C
# Maps of Natural Resources of Regional Significance

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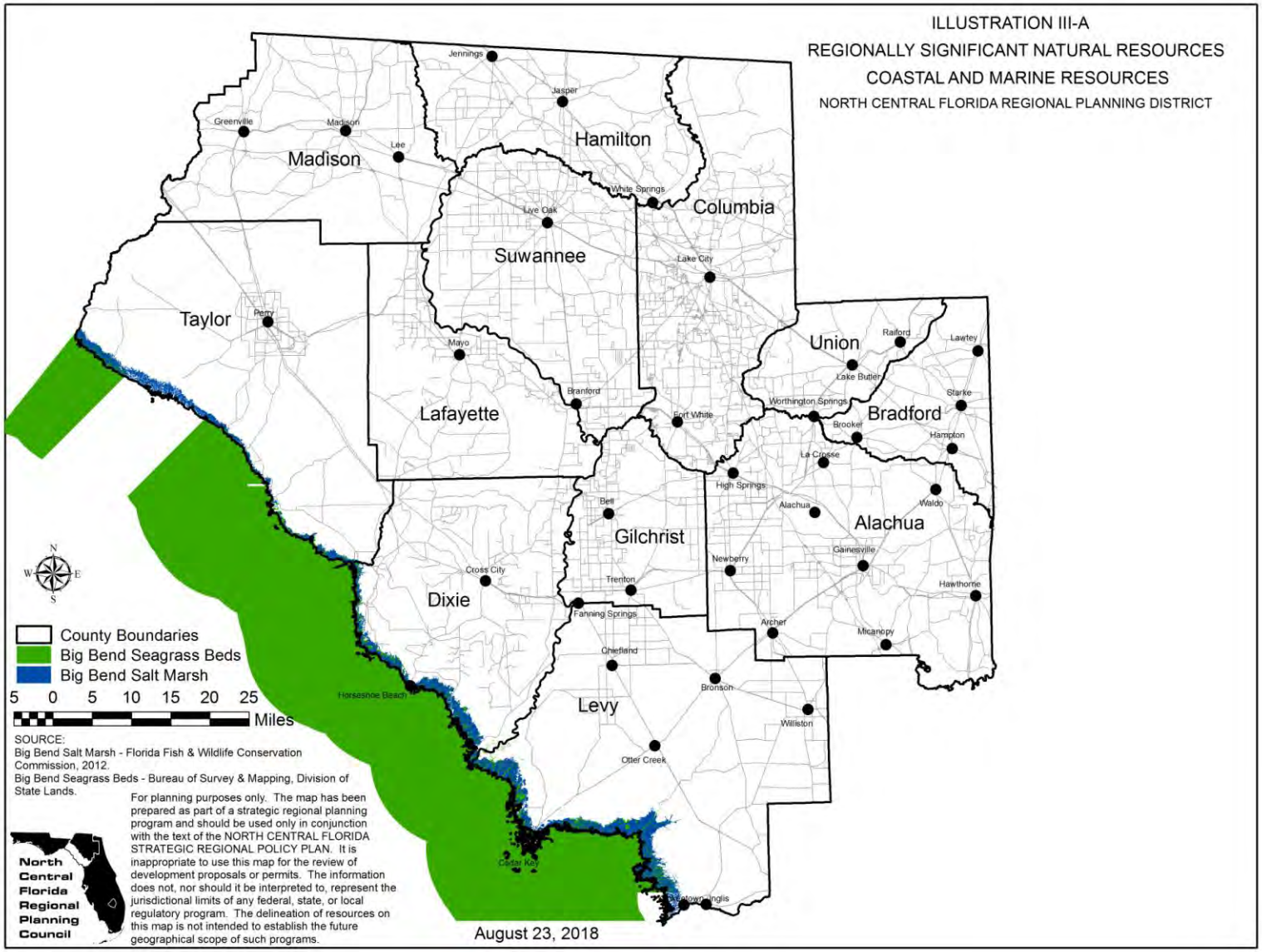


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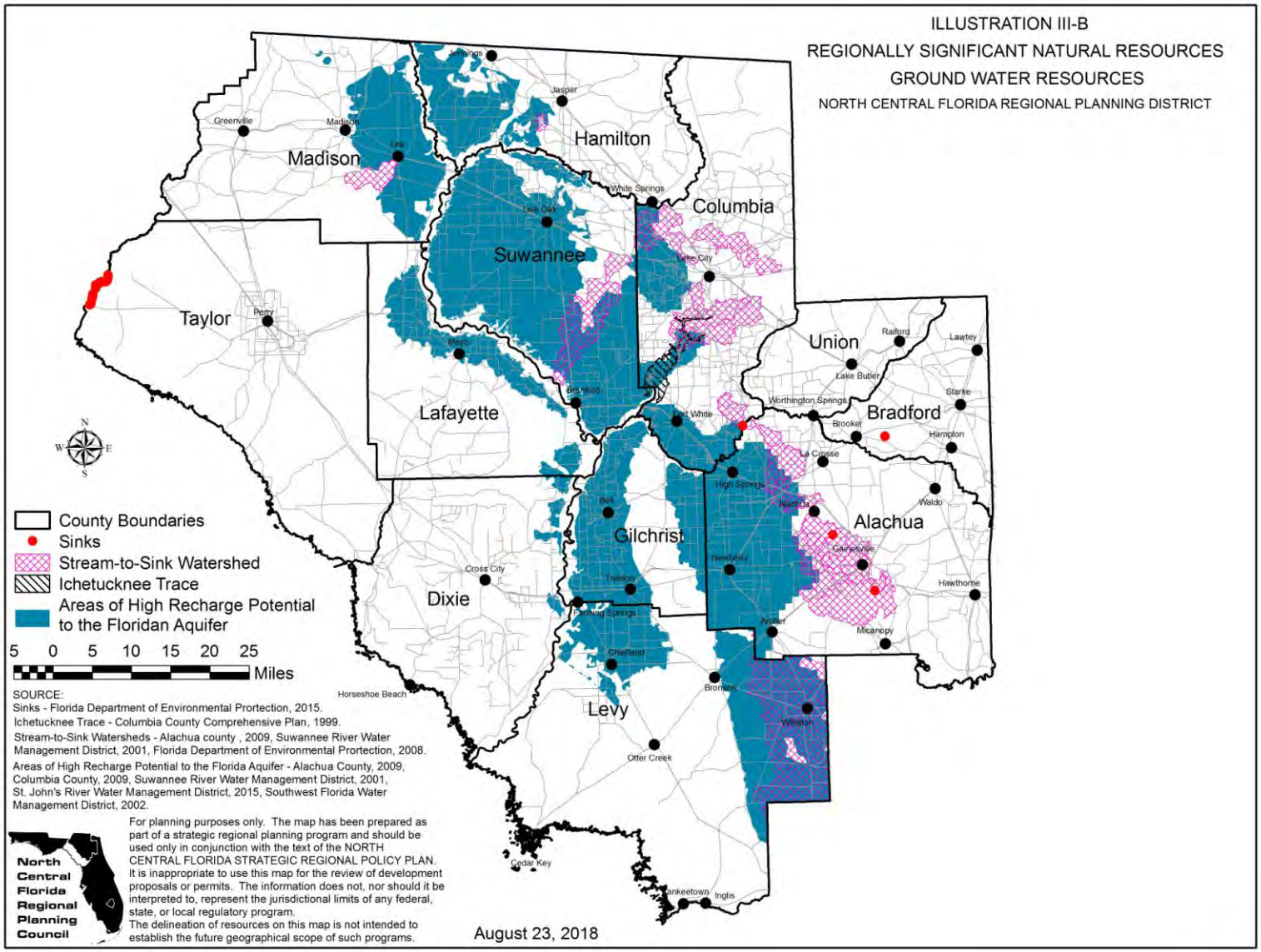


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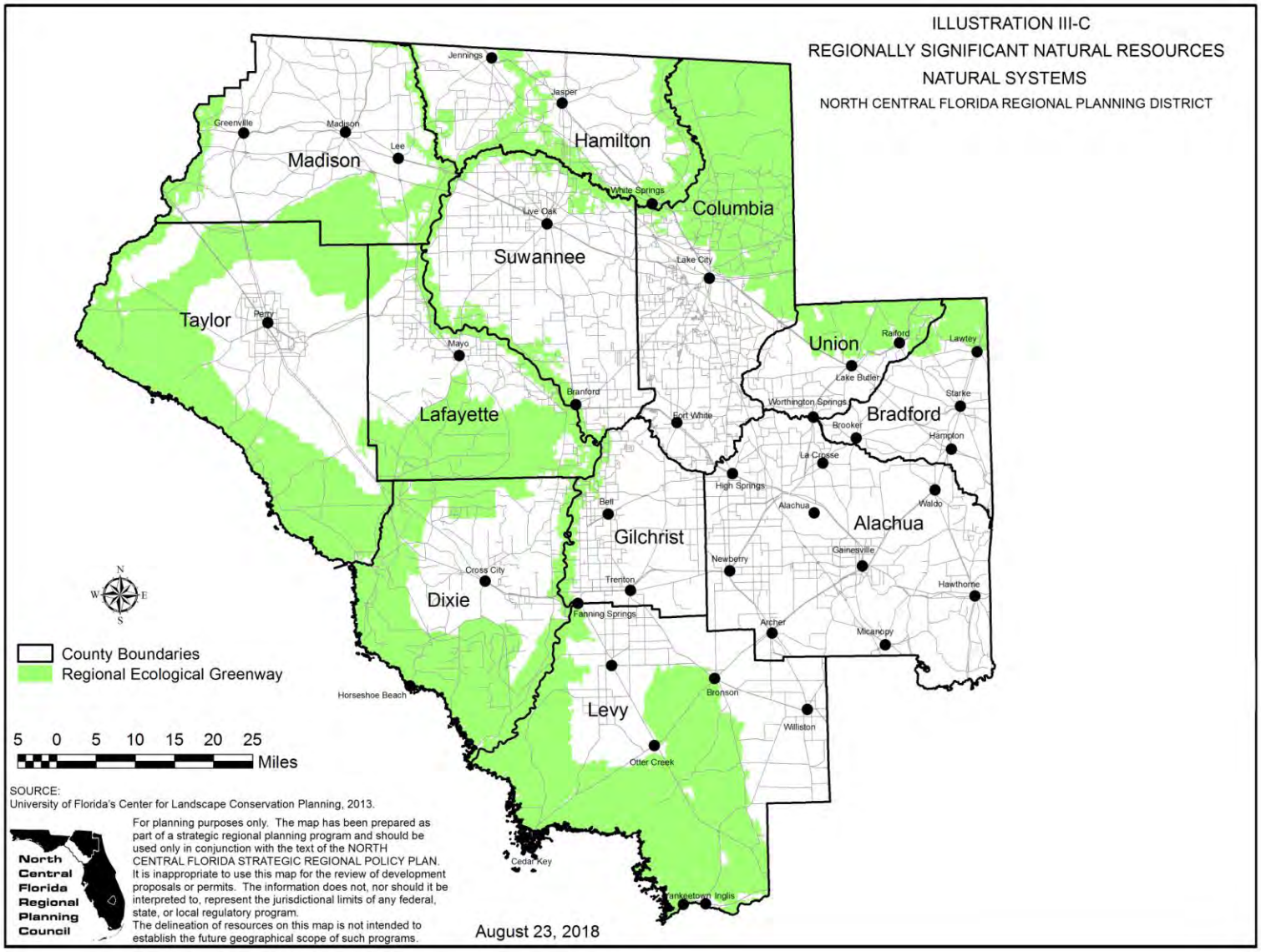


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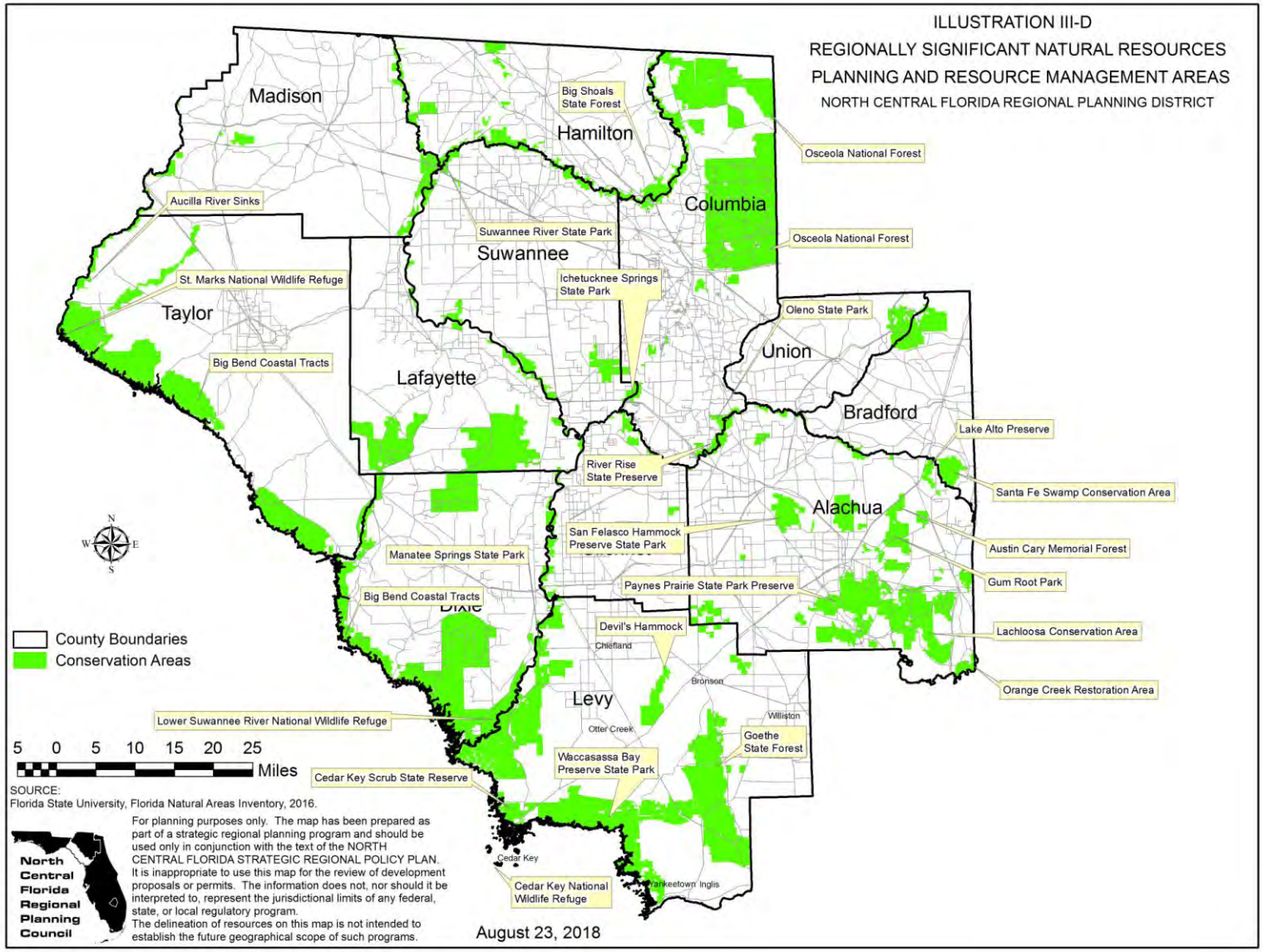


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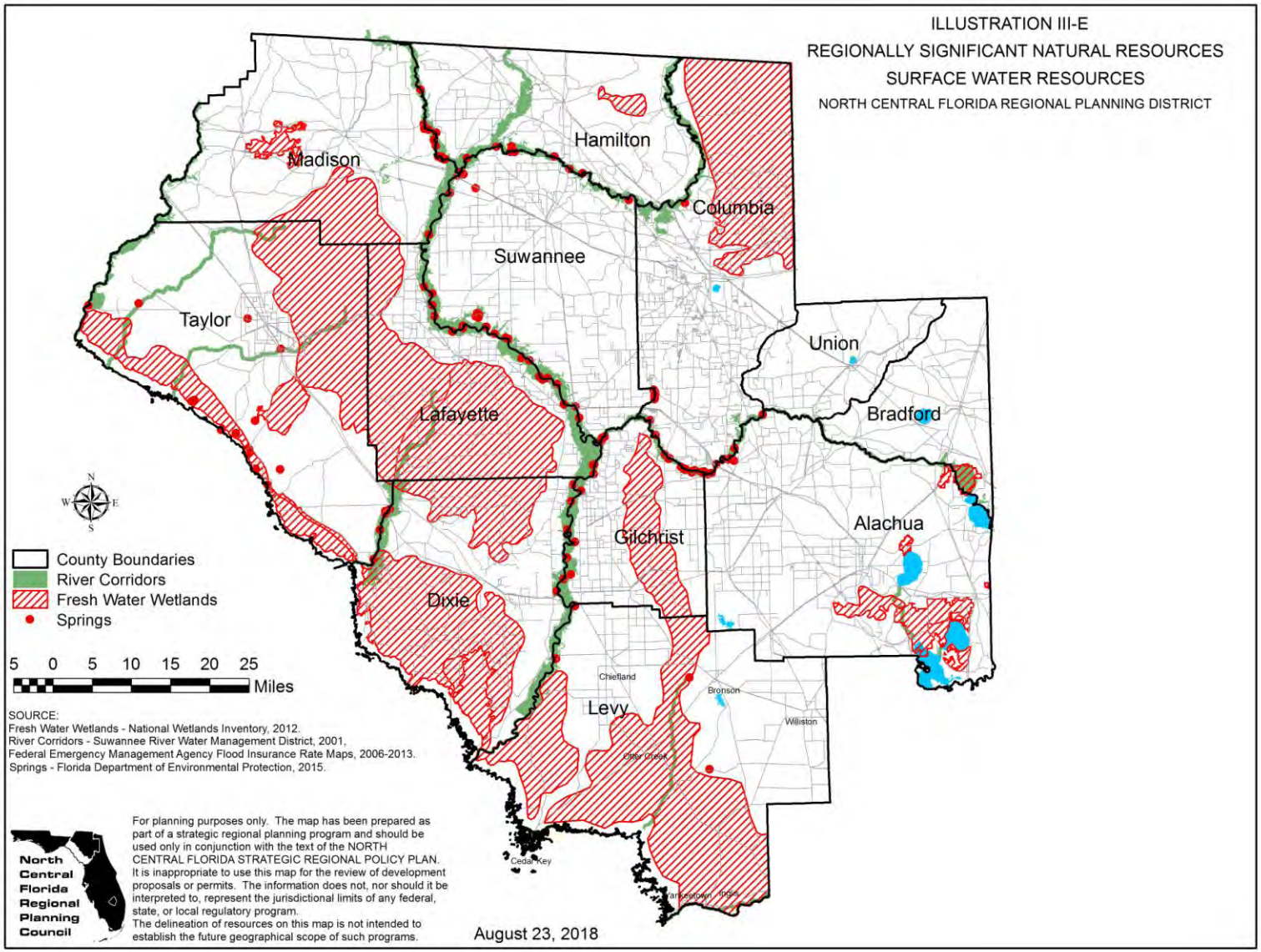


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