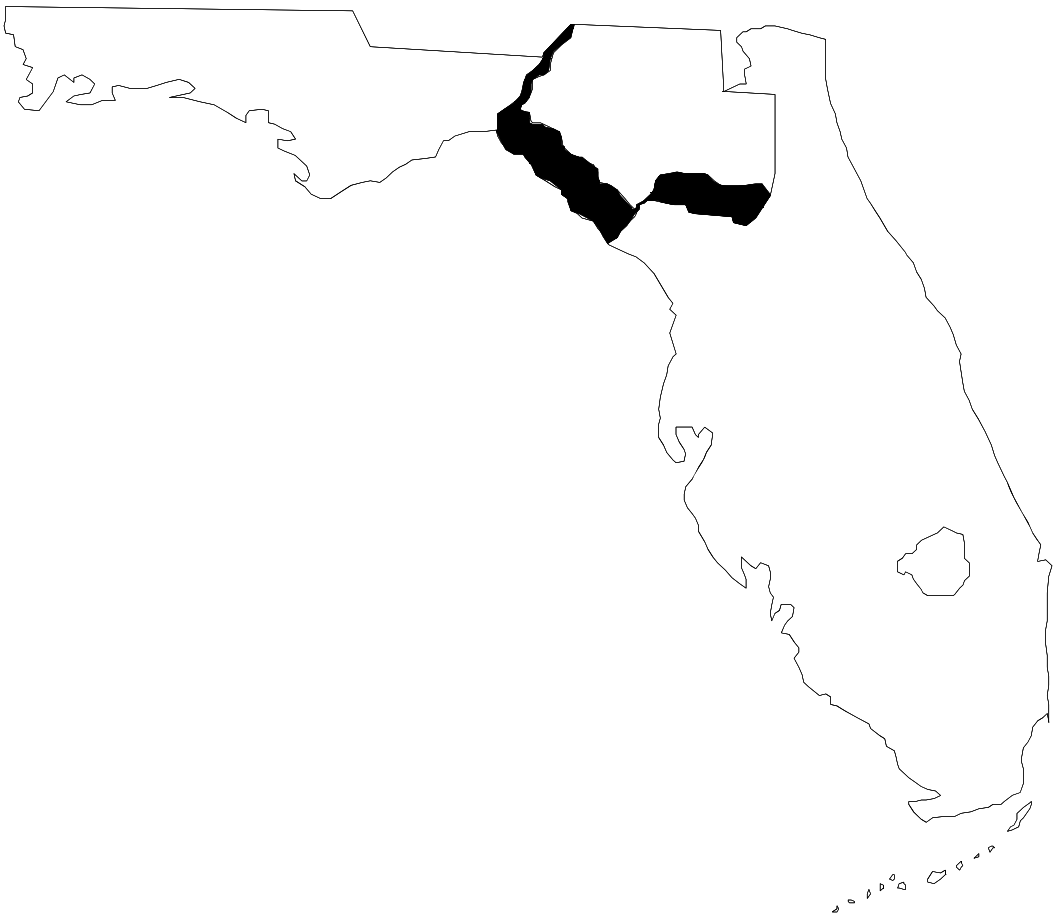
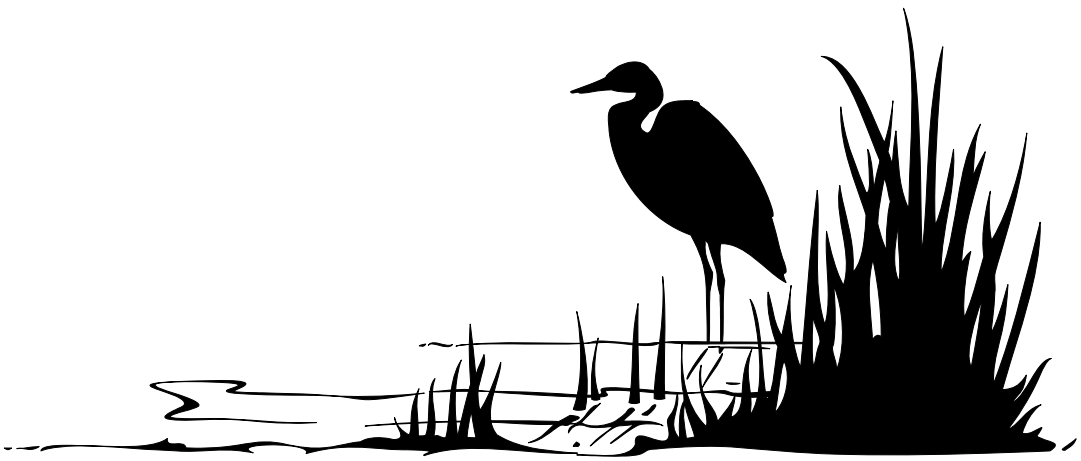
NORTH CENTRAL FLORIDA
STRATEGIC REGIONAL POLICY PLAN





NORTH CENTRAL FLORIDA
STRATEGIC REGIONAL POLICY PLAN

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Florida Department of Community Affairs

North Central Florida Regional Planning Council
2009 NW 67th Place, Suite A
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INTRODUCTION

amended August 28, 1997, and February 27, 2003

INTRODUCTION

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 (SRPP) is intended to be strategic rather than comprehensive in nature and scope. Rule 27E-5.002(9), Florida Administrative Code (F.A.C.), 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 SRPP is not a regulatory document, nor does it create regulatory authority. According to state law, the SRPP 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).

PURPOSE OF THE STRATEGIC REGIONAL POLICY PLAN

The SRPP 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), F.A.C., 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;

(4) To establish goals and policies, in addition to other criteria established by law, that provide a basis for the review of developments of regional impact, regional review of federally assisted projects, and other activities of the regional planning council. In addition, the plan may recommend specific locations or activities in which a project, that due to its character or location, should be a development of regional impact within the region. 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.

CONSISTENCY OF LOCAL GOVERNMENT COMPREHENSIVE PLANS WITH THE STRATEGIC REGIONAL POLICY PLAN

Rule 9J-5.021(1), F.A.C., requires that each local government comprehensive plan in the region be consistent with the SRPP and with the State Comprehensive Plan. Consistency is defined as being compatible with and furthering the regional and state plans. The term "compatible" means that the local plan is not in conflict with the regional and state plans. The term "furthers" means to take action in the direction of realizing goals or policies of the state or regional plan. For purposes of determining consistency of the local plan with the state and regional plan, the state or regional plans 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 plans (9J-5.021(2) F.A.C.).

THE STRATEGIC REGIONAL PLANNING PROCESS

The procedures used to formulate the North Central Florida SRPP are set forth in Rule 27E-5.001, F.A.C. The Council's procedures in developing the SRPP are summarized below.

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.

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 SRPP 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

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, the Florida Department of Community Affairs, the Florida Department of Environmental Protection, the Florida Department of Transportation, the Florida Game and Fresh Water Fish Commission and the Florida Department of Health and Rehabilitative Services.

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.

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.

PLAN ORGANIZATION

The content and format of the SRPP is set forth in Rule 27E-5.004, F.A.C. The organization and content of this plan are summarized below.

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.

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.

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 qualify 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.

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.

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), F.A.C.

EXECUTIVE SUMMARY

amended August 28, 1997, and February 27, 2003

EXECUTIVE SUMMARY

AFFORDABLE HOUSING

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.

Between 1980 and 1990, The region's median contract rent rose at a higher rate than owner-occupied housing when measured on a percentage basis. During this period, the rate of increase in median contract rent was greater than the rate of increase in median annual income in all north central Florida counties. Despite the widening gap, additional 1990 census data suggests the region's households kept pace with housing costs during the 1980s. 61.3 percent of the region's renters spent 25.0 percent or more of their annual income on housing costs in 1980. In 1990, the rate was 61.5 percent. North central Florida homeowners experienced a decrease in the percentage of households spending 25.0 percent or more of their annual income on housing costs, dropping from 28.2 percent in 1980 to 26.1 percent in 1990. The region's experience contrasts somewhat with statewide rates, where a slight decline in housing affordability was experienced by homeowners.

Some north central Florida counties experienced a decline in housing affordability during the 1980s. Dixie, Hamilton, and Union counties experienced noticeable increases in the percentage of renters paying 25.0 percent or more of their annual household income for gross rent between 1980 and 1990. Meanwhile, Columbia, Dixie, Lafayette, Madison, and Suwannee counties experienced increases in the percentage of homeowners spending 25.0 percent or more of their annual household income on housing costs.

The housing affordability issue is particularly acute for renters with household incomes of less than $10,000 per year. In 1990, 87.6 percent of all north central Florida renters earning less than $10,000 per year paid 30.0 percent or more of their annual household income on gross rent. Conversely, no north central Florida renters earning $50,000 or more per year paid 30.0 percent or more of their annual household income on gross rent. The same trend applies to homeowners. In 1990, 53.4 percent of all north central Florida homeowners earning less than $10,000 per year paid 30.0 percent or more of their annual household income for housing costs. Conversely, only 1.5 percent of all north central Florida homeowners earning $50,000 or more per year paid 30.0 percent or more for housing costs.

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.

ECONOMIC DEVELOPMENT

The north central Florida economic base can be characterized as a combination of retail trade, health and educational services, and government employment (state prisons and the University of Florida). Since these industries tend to be low-paying and many involve non-taxable land and structures, this mixture has resulted in below-average median household and per capita incomes, above-average poverty rates, and a below-average local government tax base. Therefore, economic development, enhanced job opportunities, and an improved local government tax base are primary concerns of the regional plan.

As indicated in Table 2.10, north central Florida 1989 per capita income was $11,083, 24.6 percent less than the statewide figure of $14,687. No north central Florida county reported a per capita income figure above the statewide average. Overall, north central Florida unemployment rates are comparable to statewide trends. However, when Alachua County is removed from consideration, the rate of unemployment for the remainder of the region is in excess of the statewide rate. Several north central Florida counties are experiencing some of the highest unemployment rates in the state. Of the 15 Florida counties reporting unemployment rates in excess of 10.0 percent in 1993, five are found in north central Florida.[2] As indicated in Table 2.12, Hamilton County had the highest unemployment rate in the state in January, 1993, at 16.5 percent. Taylor County had the state's third highest unemployment rate at 13.6 percent.

REGIONAL GOAL 2.1. Attract new high paying, value-added industries and expand existing businesses in the region.

REGIONAL GOAL 2.2. Raise the median family income of north central Florida households.

REGIONAL GOAL 2.3. Expand north central Florida food, agriculture, aquaculture, forestry and related industries in order to be a competitive force in state, national, an international marketplaces.

REGIONAL GOAL 2.4. Expand the regional tourism industry.

REGIONAL GOAL 2.5. Maintain a regional unemployment rate of no greater than 4.0 percent.

REGIONAL GOAL 2.6. Ensure adequate public utilities and facilities to serve business and industrial development throughout the region.

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[2]Florida Department of Labor and Employment Security, Bureau of Labor Market Information, Local Area Unemployment Statistics Program, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics. "State of Florida Local Area Unemployment Statistics by County (Not Seasonally Adjusted)." Tallahassee, FL. 1993.

EMERGENCY PREPAREDNESS

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. One weather buoy was installed in the Gulf of Mexico approximately 100 miles southwest of Horseshoe Beach in 1994. The weather buoy contains weather instruments and a radio transmitter. It was the first instrument to identify hurricane force winds in 1995's Hurricane Allison.[3] 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.

North central Florida NOAA weather radio signals coverage has been significantly expanded since the Storm of the Century. As of January, 2000, NOAA weather radio covered approximately 70 percent of the region, including all of the region's coastal areas due to the establishment of a new NOAA weather station. Nevertheless, a need continues to exist for an additional NOAA weather station to serve parts of Columbia, Hamilton, Madison, and Suwannee counties.

Dixie and Taylor counties have four small coastal communities: the unincorporated coastal communities of Jena-Steinhatchee, Dekle Beach-Keaton Beach, Suwannee, and the incorporated Town of Horseshoe Beach. 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 January 1, 2000, Horseshoe Beach, Dekle Beach- Keaton Beach, and Steinhatchee had emergency warning sirens. The unincorporated communities of Suwannee and Jena do not have sirens, although Dixie County is seeking funds for the installation of sirens in these two coastal communities.

HAZARDOUS MATERIALS RELEASES

Under contract with the Florida Department of Community Affairs, the North Central Florida Regional Planning Council serves as staff to the North Central Florida Local Emergency Planning Committee (LEPC). The LEPC was established in 1988 in response to the federal Emergency Planning and Community Right-to-Know Act (EPCRA) which requires the preparation of local emergency response plans for hazardous materials releases which, for the State of Florida, have been developed utilizing the eleven regional planning council districts. Although referred to as a local plan, the LEPC plan is, in fact, a regional plan which addresses all eleven north central Florida counties.

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[3]Mike Rucker, Public Information Officer, Florida Department of Community Affairs, Division of Emergency Management, June, 1995.

The LEPC and county hazardous materials emergency response plans contain a good understanding of hazardous materials located at stationary facilities. Little is known about hazardous materials moving down roads and railroads in the region. 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 could result from releases from trucks and trains passing through the region. A need exists for a commodity flow study of the region's roads and railroads.

When a hazardous materials release occurs, a local fire department or other local government personnel arrive at the scene and determine if local resources are adequate to cope with the release. If the incident requires greater than local resources, the local government contacts one of the region's two regional response teams. One of the response teams is run by the City of Gainesville Fire Department while the other is operated by PCS Phosphate Corporation in Hamilton County. The LEPC is conducting a needs assessment for additional regional response teams to assure a timely response to hazardous materials spills in the western portion of the region.

MUTUAL AID AGREEMENTS

As of January 6, 2000, 41 of the region's 44 local governments had adopted the Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery.[4] 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, Cross City, 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.

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[4]Florida Department of Community Affairs, Division of Emergency Management, "Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery Status Report," Tallahassee, Fl., January 6, 2000.

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. 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). Listed species are also recognized as natural resources of regional significance.[5]

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.

THE FLORIDAN AQUIFER

Between 1990 and 1995, north central Florida experienced a 9.0 percent decline in total estimated north central Florida water withdrawal. Despite significant population growth during this period, estimated total withdrawals statewide increased by only 1.6 percent during this period. Regional withdrawals for residential use decreased by 10.0 percent while institutional and commercial withdrawals increased by 37.7 percent during this period. Statewide, estimated residential withdrawals were flat, increasing by 0.9 percent, while institutional and commercial withdrawals increased by 36.8 percent.[6]

It is difficult to reconcile the decline in estimated water withdrawal with the region's estimated 9.3 percent population increase during this period.[7] The consumption numbers may reflect inherent limitations in the way water withdrawal estimates are reported. Industrial and utility consumption can vary widely, depending on market forces. Agricultural withdrawals can vary widely from year to year, depending on rainfall and annual variations in types of crops.

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[5]Listed species are those plant and animal species classified as Endangered, Threatened, or Species of Special Concern in Florida's Endangered Species, Threatened Species, and Species of Special Concern; Official Lists, published by the Florida Game and Fresh Water Fish Commission.

[6]1994 & 1998 Florida Statistical Abstract, Tables 8.41 & 8.42.

[7]1996 Florida Statistical Abstract, Bureau of Economic and Business Research, University of Florida, Gainesville, Florida, 1997, Table 1.67.

Furthermore, the July 15, 1999, draft Water Management Plan for the Suwannee River Water Management District projects a 20 percent increase in total water consumption within the district by the year 2020.[8] The draft plan notes that significant regional hydrogeological impacts as a result of water withdrawals are not expected due largely to the relatively low absolute increase in overall water use. The draft plan concludes that the Floridan aquifer system retains adequate supplies for the existing and future water needs within the District.

North central Florida has a much higher reliance on ground water than the rest of the state. In 1995, 63.6 percent of all water withdrawn for human use came from ground water sources, compared with 23.9 percent statewide.[9] North central Florida water consumption by type of user is similar to statewide usage.

Sufficient potable supplies are expected to be available to meet the region's present and projected requirements provided there is proper planning and careful management of the water supply. North central Florida must retain adequate water reserves for future water requirements, including the requirements of a growing population as well as north central Florida's natural systems and native species. Water from the Floridan Aquifer is required for the region's springs and rivers to flow, for wetlands to remain wet, and for lakes to remain lakes. The region's vegetation and wildlife are dependent upon the water found within rivers, springs, and wetlands for their survival. However, little is known about the relationships between groundwater and surfacewater, and the surface water needs of native species. Additional information is needed regarding these relationships and needs.

REGIONAL GOAL 4.1. 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 4.2. 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 4.3. 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.

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[8] Water Management Plan 2000 , Review Draft, Suwannee River Water Management District, July 15, 1999, Live Oak, Florida, page 35. Note: The District includes all north central Florida counties with the exception of southeastern Alachua County. The District also includes Jefferson and Levy counties.

[9] 2000 Florida Statistical Abstract, tables 8.41 & 8.42

REGIONAL GOAL 4.4. Protect all listed species located in north central Florida.

REGIONAL GOAL 4.5. Protect natural resources of regional significance identified in this plan as "Planning and Resource Management Areas."

REGIONAL GOAL 4.6. 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 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, nine U.S. highways, 25 state roads, 11 local roads designated as hurricane evacuation routes, and four public transit system providers.

REGIONAL ROAD NETWORK

The regional road network is comprised of interstate highways, U.S. highways, state roads, county roads that serve as hurricane evacuation routes in Dixie and Taylor counties, and local roads which link Regional Facilities or DRIs to interstate, U.S., or state highways. The regional road network consists of approximately 1,359 miles of roadways, of which 177 miles are comprised of interstate highways, 569 miles are U.S. highways, 470 miles are state roads, and 143 miles are local roads used as hurricane evacuation routes. In addition to these segments, the regional road network also comprises segments of local roads linking regional facilities and DRIs to these roads. Additionally, 427.1 miles of the regional road network are designated as a part of the Florida Intrastate Highway 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 of the regional road network operates at or above the minimum level of service standards contained within local government comprehensive plans.

A review of the comprehensive plans of the region's 44 local governments reveals a total of 30.8 miles, 2.3 percent of the regional road network, which are currently operating below the local government's adopted minimum level of services standard. An additional 133.2 miles, 9.9 percent of the regional road network, may drop below the local government's adopted minimum level of service standard by the year 2011. Some segments of the regional road network which may drop below the minimum standard are either being corrected or studies are in progress to determine the means by which the minimum standard can be restored. Of the Approximately 164.0 miles of regional road network identified as either currently operating or projected to operate below the minimum LOS standard, 35.3 miles are scheduled for improvements, and 17 intersection turn lane

projects. Most of the new construction is scheduled to occur within Alachua County.[10]

REGIONAL GOAL 5.1. Maintain a regional road network which operates at or above the minimum level of service standard contained in local government comprehensive plans for those segments located outside Transportation Concurrency Exception Areas.

REGIONAL GOAL 5.2. Mitigate adverse impacts to regional transportation facilities associated with enrollment growth at the University of Florida.

REGIONAL GOAL 5.3. Maximize the use of the Gainesville Regional Airport before developing a new regional airport.

REGIONAL GOAL 5.4 Reduce the unmet General Trip demand of the north central Florida Transportation Disadvantaged population.

REGIONAL GOAL 5.5 Increase the percentage of north central Florida residents using public transportation as a primary means of transportation.

[10]Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area, Fiscal Years 1999/2000 - 2003/2004 Transportation Improvement Program, July, 1999. Florida Department of Transportation, District II, Florida's Adopted Five Year Work Program, July 1, 1999 through June 30, 2004, Lake City, Florida, July 1, 1999.

STRATEGIC REGIONAL SUBJECT AREAS

amended August 28, 1997, and February 27, 2003

AFFORDABLE HOUSING

amended August 28, 1997, and February 27, 2003

AFFORDABLE HOUSING

CONDITIONS AND TRENDS

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, and housing quality. This chapter 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.[11]

Most of the tables reported in this chapter are derived from the 1980 and 1990 censuses. Although the 1990 census data is nearly six years old, it is still the most accurate and up-to-date information available concerning housing affordability in the region. The reported data reveals an unclear and somewhat confusing picture of housing affordability in north central Florida. The nature of the data makes it difficult to report generalizations regarding housing affordability in the region. The 1990 census data reveals that a significant proportion of the population, primarily renters, pay more than they can afford for housing; however, another data source, the U.S. Census Bureau's 1990 Comprehensive Housing Affordability Strategy Database, which is derived from 1990 census data, suggests the region has an ample supply of affordable housing in all but one county for even the lowest income households. With such conflicting data, a careful analysis is necessary to determine what, if any, housing affordability problems exist in north central Florida.

NUMBER OF UNITS CONSTRUCTED

As derived from Table 1.1, the region added 34,477 new residential dwelling units during the 1980s, for a total of 149,697 in 1990. This represents a 29.9 percent increase over the 1980 total of 115,220 units. The number of owner-occupied units increased by 27.6 percent, from 65,565 in 1980 to 84,784 in 1990, while the number of renter-occupied units increased by 28.0 percent, from 36,169 in 1980 to 46,302 in 1990. North central Florida counties experiencing the largest percentage increases in housing units during this period were Gilchrist (53.8%), Dixie (35.8%), Alachua (34.1%), and Suwannee (33.5%). Counties experiencing the smallest percentage increases were Bradford (11.7%), Madison (12.9%), and Taylor (13.3%). While the region enjoyed a healthy percentage increase in new dwelling units during the 1980s, the region's rate of growth was significantly less than the 39.3 percent increase reported statewide.

[11] 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.

TABLE 1.1

CHANGE IN NUMBER OF NORTH CENTRAL FLORIDA DWELLING UNITS, 1980 -1990

Area	1980			1990			Percentage Change, 1980-1990		
	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	58 ,947	30,070	24,537	79,022	38,616	32,642	34.1	28.4	33.0
Bradford	7,249	4,866	1,431	8,099	5,542	1,651	11.7	13.9	15.4
Columbia	13,628	8,963	3,220	17,818	11,509	4,102	30.7	28.4	27.4
Dixie	4,010	2,108	555	5,445	3,235	681	35.8	53.5	22.7
Gilchrist	2,647	1,705	301	4,071	2,806	478	53.8	64.6	58.8
Hamilton	3,342	2,226	678	4,119	2,657	831	23.2	19.4	22.6
Lafayette	1,764	1,106	307	2,266	1,389	332	28.5	25.6	8.1
Madison	5,557	3,709	1,268	6,275	4,196	1,326	12.9	13.1	4.6
Suwannee	8,765	5,996	1,743	11,699	7,950	2,084	33.5	32.6	19.6
Taylor	6,982	4,417	1,409	7,908	5,027	1,374	13.3	13.8	(2.5)
Union	2,329	1,399	720	2,975	1,857	801	27.7	32.7	11.3
Region	115,220	66,565	36,169	149,697	84,784	46,302	27.4	27.6	28.0
w/o Al. Co.	56,273	36,495	11,632	70,675	46,168	13,660	25.6	26.5	17.4
Florida	4,378,691	2,557,079	1,187,175	6,100,262	3,453,022	1,681,847	39.3	35.0	41.7

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Housing: General Housing Characteristics, Florida. Tables 1 & 41. Washington, D.C. 1982.

HOME OWNERSHIP

North central Florida home ownership rates remained constant through the 1980s. In 1990, 64.7 percent of the region's occupied year-round housing units were owner occupied, compared to 64.8 percent in 1980. Alachua County, with its large student population, downwardly skews the region's home ownership rate. Excluding Alachua County, 77.2 percent of the region's 1990 occupied year-round housing units were owner occupied. This figure represents a slight increase over the 75.8 percent rate posted in 1980. The region's 1990 rate of home ownership is comparable to the statewide rate of 67.2 percent. The statewide rate is down slightly from 68.3 percent in 1980.

TABLE 1.2

PERCENTAGE OF OCCUPIED HOUSING UNITS BY TENURE, 1980 AND 1990

Area	1980		1990	
	Owner Occupied Units	Renter Occupied Units	Owner Occupied Units	Renter Occupied Units
Alachua	55.1	44.9	54.2	45.8
Bradford	77.3	22.7	77.0	23.0
Columbia	73.6	26.4	73.7	26.3
Dixie	79.2	20.8	82.6	17.4
Gilchrist	85.0	15.0	85.4	14.6
Hamilton	76.7	23.3	76.2	23.8
Lafayette	78.3	21.7	80.7	19.3
Madison	74.5	25.5	76.0	24.0
Suwannee	77.5	22.5	79.2	20.8
Taylor	75.8	24.2	78.5	21.5
Union	66.0	34.0	69.9	30.1
Region	64.8	35.2	64.7	35.3
w/o Al. Co.	75.8	24.2	77.2	22.8
Florida	68.3	31.7	67.2	32.8

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Housing: General Housing Characteristics, Florida. Tables 1 & 41. Washington, D.C. 1982.

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 dramatic growth in mobile homes during the 1970s. As can be seen in Table 1.3, the number of mobile homes in the region increased from 6,135 in 1970 to 16,886 by 1980, an increase of 10,751 units, or 175.2 percent. The boom in mobile homes continued through the 1980s. By 1990, the number of mobile homes had more than doubled to 36,337, an increase of 19,451 units, or 115.2 percent, over 1980 levels.

North central Florida counties experiencing the largest percentage increases in mobile homes during the 1980s include Dixie (248.0%), Gilchrist (242.5%), Union (230.4%), and Taylor (199.2%). North central Florida counties noting the smallest percentage increases were Bradford (62.6%) and Alachua (64.5%). Although low in terms of percentage increase, Alachua County experienced the largest increase in the absolute number of mobile homes during this time period with an additional 3,996 units.

Statewide, the growth rate of mobile homes has been comparable to the region. Between 1970 and 1980, the number of mobile homes increased by 171.5 percent statewide, nearly equal to the region's 175.2 percent rate. During the 1980s, however, the statewide increase of 85.3 percent lagged the region's robust 115.2 percent rise.

The rapid growth in the region's supply of mobile homes has caused a discernable shift in the percentage of total housing units comprised of mobile homes. In 1970, only 8.8 percent of the region's housing stock was comprised of mobile homes. By 1990, mobile homes accounted for 24.1 percent of the region's housing stock. When Alachua County is removed from consideration, mobile homes comprised 36.5 percent of the remaining region's 1990 housing stock. Mobile homes comprised over 40.0 percent of the 1990 housing stock in Dixie (52.1%), Gilchrist (49.1%), and Suwannee (40.8%) counties.

TABLE 1.3

NUMBER OF MOBILE HOMES AND MOBILE HOMES AS A PERCENTAGE OF TOTAL HOUSING UNITS, 1970, 1980, AND 1990

Area	1970			1980			1990			Change in Mobile Homes			
	Total Housing Units	Mobile Homes		Total Housing Units	Mobile Homes		Total Housing Units	Mobile Homes		1970-80		1980-90	
		Number	Percent of Total		Number	Percent of Total		Number	Percent of Total	Number	Percent	Number	Percent
Alachua	33,538	2,555	7.6	58,947	6,200	10.5	79,022	10,196	12.9	3,646	142.7	3,996	64.5
Bradford	4,626	382	8.3	7,249	1,350	18.6	8,099	2,195	27.1	968	253.4	845	62.6
Columbia	8,450	850	10.1	13,628	2,606	19.1	17,818	5,820	32.7	1,756	206.6	3,214	123.3
Dixie	1,884	256	13.6	4,010	964	24.0	6,445	3,355	52.1	708	276.6	2,391	248.0
Gilchrist	1,253	208	16.6	2,647	583	22.0	4,071	1,997	49.1	375	180.3	1,414	242.5
Hamilton	2,562	291	11.4	3,342	672	20.1	4,119	1,486	36.1	381	130.9	814	121.1
Lafayette	1,036	144	13.9	1,764	391	22.2	2,266	860	38.0	247	171.5	469	119.9
Madison	4,265	250	5.9	5,557	808	14.5	6,275	1,872	29.8	558	223.2	1,064	131.7
Suwannee	5,227	587	11.2	8,765	2,085	23.8	11,699	4,776	40.8	1,498	255.2	2,691	129.1
Taylor	4,991	443	8.9	6,982	878	12.6	7,908	2,627	33.2	435	98.2	1,749	199.2
Union	1,745	169	9.7	2,329	349	15.0	2,975	1,153	38.8	180	106.5	804	230.4
Region	69,577	6,135	8.8	225,220	16,886	14.7	150,697	36,337	24.1	10,751	175.2	19,451	115.2
w/o Al. Co	36,039	3,580	9.9	56,273	10,686	19.0	71,675	26,141	36.5	7,106	198.5	15,455	144.6
Florida	2,526,612	151,544	6.0	4,378,691	411,439	9.4	6,100,262	762,227	12.5	259,895	171.5	350,788	85.3

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Housing: General Housing Characteristics, Florida. Tables 5 & 46. Washington, D.C. 1982.

U.S. Department of Commerce, Bureau of the Census, 1970 Census of Housing: Housing Characteristics for States, Cities, and Counties, Florida. Tables 1 & 29. Washington, D.C. 1972.

As illustrated in Table 1.4, the majority of the region's mobile homes are located outside of incorporated communities. In 1990, fully 86.2 percent of the region's mobile homes were located outside of incorporated communities. The percentage is slightly higher when Alachua County is excluded from the region, rising to 91.0 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 77.5 percent in Union County to a high of 94.5 percent in Columbia County.

Even more telling is the percentage of total housing stock located in unincorporated areas which are comprised of mobile homes. In 1990, 34.8 percent of the region's housing stock located outside of incorporated areas was comprised of mobile homes, compared to 46.7 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 44.7 percent while conventional single-family units comprise 51.4 percent. Mobile homes out-number conventional single-family units in the unincorporated portions of Dixie, Gilchrist, and Suwannee counties and comprise over 50.0 percent of the housing stock in the unincorporated areas of Dixie and Gilchrist counties.

TABLE 1.4

NUMBER AND PERCENTAGE OF MOBILE HOMES AND CONVENTIONAL DETACHED SINGLE FAMILY RESIDENTIAL DWELLING UNITS BY INCORPORATED AND UNINCORPORATED LOCATION, 1990

Area	Total			Percent of Total		
	Mobile Homes	SFR, Detached	Housing Units	Mobile Homes	SFRs	Mobile Homes & SFRs
Alachua	10,196	37,999	79,022	12.9	48.1	61.0
Total Incorporated	1,823	22,362	40,374	4.5	55.4	59.9
Percent	17.9	58.8	51.1			
Unincorporated	8,373	15,637	38,648	21.7	40.5	62.1
Percent	82.1	41.2	48.9			
Bradford	2,195	5,284	8,099	27.1	65.2	92.3
Total Incorporated	292	1,849	2,673	10.9	69.2	80.1
Percent	13.3	35.0	33.0			
Unincorporated	1,903	3,435	5,426	35.1	63.3	98.4
Percent	86.7	65.0	67.0			
Columbia	5,820	10,027	17,818	32.7	56.3	88.9
Total Incorporated	318	3,065	4,633	6.9	66.2	73.0
Percent	5.5	30.6	26.0			
Unincorporated	5,502	6,962	13,185	41.7	52.8	94.5
Percent	94.5	69.4	74.0			
Dixie	3,355	2,862	6,445	52.1	44.4	96.5

TABLE 1.4

NUMBER AND PERCENTAGE OF MOBILE HOMES AND CONVENTIONAL DETACHED SINGLE FAMILY RESIDENTIAL DWELLING UNITS BY INCORPORATED AND UNINCORPORATED LOCATION, 1990

Area	Total			Percent of Total		
	Mobile Homes	SFR, Detached	Housing Units	Mobile Homes	SFRs	Mobile Homes & SFRs
Total Incorporated	374	860	1,299	28.8	66.2	95.0
Percent	11.1	30.0	20.2			
Unincorporated	2,981	2,002	5,146	57.9	38.9	96.8
Percent	88.9	70.0	79.8			
Gilchrist	1,997	1,977	4,071	49.1	48.6	97.6
Total Incorporated	319	530	917	34.8	57.8	92.6
Percent	16.0	26.8	22.5			
Unincorporated	1,678	1,447	3,154	53.2	45.9	99.1
Percent	84.0	73.2	77.5			
Hamilton	1,486	2,314	4,119	36.1	56.2	92.3
Total Incorporated	239	965	1,462	16.3	66.0	82.4
Percent	16.1	41.7	35.5			
Unincorporated	1,247	1,349	2,657	46.9	50.8	97.7
Percent	83.9	58.3	64.5			
Percent	11.4	18.0	16.9			
Unincorporated	762	1,086	1,882	40.5	57.7	98.2
Percent	88.6	82.0	83.1			
Madison	1,872	3,978	6,275	29.8	63.4	93.2
Total Incorporated	169	1,361	1,866	9.1	72.9	82.0
Percent	9.0	34.2	29.7			
Unincorporated	1,703	2,617	4,409	38.6	59.4	98.0
Percent	91.0	65.8	70.3			
Suwannee	4,776	6,133	11,699	40.8	52.4	93.2
Total Incorporated	647	2,181	2,984	21.7	73.1	94.8
Percent	13.5	35.6	25.5			
Unincorporated	4,129	3,952	8,715	47.4	45.3	92.7
Percent	86.5	64.4	74.5			

TABLE 1.4

NUMBER AND PERCENTAGE OF MOBILE HOMES AND CONVENTIONAL DETACHED SINGLE FAMILY RESIDENTIAL DWELLING UNITS BY INCORPORATED AND UNINCORPORATED LOCATION, 1990

Area	Total			Percent of Total		
	Mobile Homes	SFR, Detached	Housing Units	Mobile Homes	SFRs	Mobile Homes & SFRs
Taylor	2,627	4,822	7,908	33.2	61.0	94.2
Total Incorporated	361	2,191	2,898	12.5	75.6	88.1
Percent	13.7	45.4	36.6			
Unincorporated	2,266	2,631	5,010	45.2	52.5	97.7
Percent	86.3	54.6	63.4			
Union	1,153	1,544	2,975	38.8	51.9	90.7
Total Incorporated	259	487	976	26.5	49.9	76.4
Percent	22.5	31.5	32.8			
Unincorporated	894	1,057	1,999	44.7	52.9	97.6
Percent	77.5	68.5	67.2			
Region	36,337	78,264	150,697	24.1	51.9	76.0
Total Incorporated	4,899	36,089	60,466	8.1	59.7	67.8
Percent	13.5	46.1	40.1			9
Unincorporated	31,438	42,175	90,231	34.8	46.7	81.6
Percent	86.5	53.9	59.9			
Region w/o Al. Co.	25,349	40,912	71,598	35.4	57.1	92.5
Total Incorporated	3,076	13,727	20,092	15.3	68.3	83.6
Percent	12.1	33.6	28.1			
Unincorporated	23,065	26,538	51,583	44.7	51.4	96.2
Percent	91.0	64.9	72.0			

Source: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A, Washington, D.C. 1992.

HOUSING QUALITY

PLUMBING FACILITIES

The region experienced a significant reduction in the percentage of units with inadequate plumbing between 1980 and 1990, as illustrated in Table 1.5. In 1980, 3.6 percent of all dwelling units in the region lacked some or all plumbing facilities. By 1990, the percentage was reduced to just 1.1 percent, representing a 58.5 percent decline over 1980 levels. The percentage reduction was not a mere statistical aberration caused by an increase in the number of new units. Rather, the region experienced an actual decline in the number of units lacking some or all plumbing facilities. In 1980, 4,131 dwelling units lacked some or all plumbing facilities. By 1990, the number had dropped to 1,716.

North central Florida housing quality may be considered somewhat below the state average when measured in terms of the percentage of total year-round units lacking some or all plumbing facilities. As illustrated in Table 1.5, the percentage of north central Florida units lacking plumbing facilities was twice as high as the 1990 statewide rate. However, the region's incidence of units lacking some or all plumbing facilities was actually quite low. Only 1.1 percent of the 1990 regional housing stock lacked complete plumbing facilities. The relatively high incidence of inadequate plumbing was most likely due to the rural nature of the region. When Alachua County is removed from consideration, the remaining region's percentage of total 1990 units lacking some or all plumbing facilities jumps to 1.6 percent. Counties with the highest incidence of housing with inadequate plumbing facilities in 1990 were Dixie (2.6%), Madison (2.7%), and Gilchrist (1.9%).

OVERCROWDING

Another measure of housing quality is overcrowding, which is commonly defined as a dwelling unit with more than 1.0 persons (residents) per room. As can be seen in Table 1.6, the region's 1990 percentage of households with more than 1.0 persons per room was 4.7 percent. This figure is lower than the region's 1980 rate of 6.9 percent and is less than the 1990 statewide rate of 5.4 percent. The region's experience favorably contrasts with statewide trends where an increasing percentage of units are overcrowded. The 1990 statewide figure of 5.4 percent was 58.8 percent higher than the 1980 statewide rate of 3.4 percent. With the exception of Alachua and Union counties, every north central Florida county experienced a decline in the percentage of overcrowded units during the 1980s. Nevertheless, Union (9.0%), Hamilton (8.3%), and Madison (7.3%) counties experienced rates of overcrowding in 1990 significantly above the statewide average.

Despite a decline in the percentage of overcrowded housing units, the actual number of overcrowded units increased during the 1980s. As indicated in Table 1.6, the region experienced a 7.6 percent increase in the number of overcrowded units between 1980 and 1990, rising from 5,776 to 6,214.

Union County experienced the largest percentage increase, reporting a 53.8 percent increase in the county's number of overcrowded units. Other counties experiencing substantial increases include Gilchrist (31.5%), Alachua (22.0%), Dixie (8.1%), and Hamilton (7.8%). Nevertheless, most of the increase can be attributed to Alachua County. When Alachua County is removed from regional totals, the remaining region experienced a 2.7 percent decline in total units overcrowded between 1980 and 1990.

TABLE 1.5

NUMBER AND PERCENTAGE OF TOTAL DWELLING UNITS LACKING COMPLETE PLUMBING FACILITIES, 1980 & 1990

	1980			1990			Change, 1980 - 1990	
		Lacking Complete Plumbing Facilities			Lacking Complete Plumbing Facilities		Lacking Complete Plumbing Facilities	
Area	Total Units	Number	Percent	Total Units	Number	Percent	Number	Percent
Alachua	58,947	1,150	2.0	79,022	562	0.7	588	(51.1)
Bradford	7,249	331	4.6	8,099	61	0.8	270	(81.6)
Columbia	13,628	457	3.4	17,818	283	1.6	174	(38.1)
Dixie	4,010	201	5.0	5,445	140	2.6	61	(30.3)
Gilchrist	2,647	134	5.1	4,071	76	1.9	58	(43.3)
Hamilton	3,342	259	7.7	4,119	69	1.7	190	(73.4)
Lafayette	1,764	67	3.8	2,266	28	1.2	39	(58.2)
Madison	5,557	661	11.9	6,275	167	2.7	494	(74.7)
Suwannee	8,765	430	4.9	11,699	153	1.3	277	(64.4)
Taylor	6,982	332	4.8	7,908	142	1.8	190	(57.2)
Union	2,329	109	4.7	2,975	35	1.2	74	(67.9)
Region	115,220	4,131	3.6	149,697	1,716	1.1	2,415	(58.5)
w/o Al. Co.	56,273	2,981	5.3	70,675	1,154	1.6	1,827	(61.3)
Florida	4,378,691	34,243	0.8	6,100,262	27,957	0.5	6,286	(18.4)

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Housing: General Housing Characteristics, Florida. Tables 1 & 46. Washington, D.C. 1982.

TABLE 1.6

OVERCROWDING. NUMBER AND PERCENTAGE OF OCCUPIED YEAR-ROUND HOUSING WITH 1.01 OR MORE PERSONS PER ROOM 1980 AND 1990

	Persons per Room						
	Number				Percent		
	1980		1990		1980	1990	Pct. Chge
Area	0-1.00	1.01 +	0-1.00	1.01 +	1.01 +	1.01 +	1980 -90
Aachua	52197	2,410	68,318	2,940	4.4	4.1	22.0
Bradford	5,919	378	6,943	250	6.0	3.5	(33.9)
Columbia	11,429	754	14,827	784	6.2	5.0	4.0
Dixie	2,465	198	3,702	214	7.4	5.5	8.1
Gilchrist	1,882	124	3,121	163	6.2	5.0	31.5
Hamilton	2,634	270	3,197	291	9.3	8.3	7.8
Lafayette	1,341	72	1,647	74	5.1	4.3	2.8
Madison	4,492	485	5,120	402	9.7	7.3	(17.1)
Suwannee	7,238	501	9,557	477	6.5	4.8	(4.8)
Taylor	5,398	428	6,022	379	7.3	5.9	(11.4)
Union	1,963	156	2,418	240	7.4	9.0	53.8
Region	96,958	5,776	124,872	6,214	6.9	4.7	7.6
w/o Al Co	44,761	3,366	56,554	3,274	7.5	5.8	(2.7)
Florida	3,545,809	198,445	4,857,803	277,066	5.3	5.4	39.6

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing , Florida, Summary Tape File 3A. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Housing: General Housing Characteristics, Florida. Tables 1 & 45. Washington, D.C. 1982.

HOUSING COSTS AND INCOME

During the 1970s, the rate of increase in north central Florida household income did not keep pace with housing costs. As indicated in Table 1.7, the average increase in value for north central Florida owner-occupied dwelling units was 177.6 percent in the 1970s while median contract rent increased by 127.8 percent. However, as indicated in Table 1.8, median household income for north central Florida increased by only 67.7 percent during the same time period.

During the 1980s, income kept pace with the costs of owner-occupied housing but continued to lag increases in contract rents. During this period, the median value of north central Florida owner-occupied housing units rose by 69.9 percent; whereas, the region's median household income increased by approximately 73.7 percent.[12] In fact, as indicated in tables 3.7 and 3.8, the rate of increase in median household income exceeded the rate of increase in the median value of owner-occupied housing in all but three north central Florida counties (Suwannee, Taylor, and Union) during this time period.

As may be expected, given north central Florida's below-average income levels and above-average poverty rates, the region's 1990 median value of owner-occupied units and the median rent of renter-occupied units are correspondingly lower than their respective statewide averages. In 1990, Alachua County had the region's highest median value for owner-occupied dwelling units at $65,500, compared to a statewide median value of $76,500. As indicated in Table 1.7, north central Florida counties with the lowest median values were Hamilton ($33,700), Madison ($38,200), and Dixie ($38,500).

Median values for 1990 contract rents in north central Florida were similarly low. As presented in Table 1.7, no north central Florida county reported a 1990 median monthly rent higher than the statewide average of $481. Alachua County had the highest median rent at $396. North central Florida counties reporting the lowest median monthly contract rents were Hamilton ($242), Madison ($249), and Lafayette ($255).

Between 1980 and 1990, the median contract rent for north central Florida increased by approximately 121.3 percent, which was approximately the same rate of increase experienced during the 1970s, when rates increased by 127.8 percent. During the 1980s, no north central Florida county experienced a rate of increase in median annual income in excess of its rate of increase in median contract rent. The rate of increase in the region's median contract rent was below the statewide median contract rent increase of 131.3 percent. The region's this relatively low percentage increase in median contract rent is skewed by the presence of Alachua County. When Alachua County is removed from consideration, rents increased dramatically for the remaining 10-county area. As indicated in Table 1.7, every north central Florida county, with the exception of Alachua County, experienced a rate of increase in median contract rent in excess of the statewide rate during this time period.

In terms of actual dollars, the region's increase in median monthly contract rent was less than the state average. Statewide, monthly contract rent increased by $199 during the 1980s, compared to the regionwide increase of $141. Similarly, the seemingly small difference between statewide and regional rates of increase in value for owner-occupied housing is actually quite different when viewed in terms of actual dollars. Statewide, the median value of owner-occupied housing increased by $31,400 during the 1980s, compared to the region's increase of $22,123.

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[12]The regionwide figure is the statistical mean of county median values. It does not represent a true median value as this information cannot be obtained from 1990 census publications.

TABLE 1.7
NORTH CENTRAL FLORIDA HOUSING COSTS, 1970, 1980, & 1990

Area	1970		1980		1990		PERCENT CHANGE 1970 - 1980		PERCENT CHANGE 1980 - 1990	
	Median Value Owner Occupied Units	Median Rent Renter Occupied Units	Median Value Owner Occupied Units	Median Rent Renter Occupied Units	Median Value Owner Occupied Units	Median Rent Renter Occupied Units	Median Value Owner Occupied Units	Median Rent Renter Occupied Units	Median Value Owner Occupied Units	Median Rent Renter Occupied Units
Alachua	14,500	90	43,500	196	65,500	396	200.0	117.8	50.6	102.0
Bradford	8,000	47	29,000	107	47,400	320	262.5	127.7	63.4	199.1
Columbia	9,900	52	28,900	126	46,900	312	191.9	142.3	62.3	147.6
Dixie	6,300	45	20,400	69	38,500	264	223.8	53.3	88.7	282.6
Gilchrist	5,900	35	26,900	102	46,800	293	355.9	191.4	74.0	187.3
Hamilton	6,900	34	21,400	73	33,700	242	210.1	114.7	57.5	231.5
Lafayette	5,100	37	24,000	73	42,100	255	370.6	97.3	75.4	249.3
Madison	7,100	33	21,800	68	38,200	249	207.0	106.1	75.2	266.2
Suwannee	7,800	41	24,600	101	45,300	277	215.4	146.3	84.1	174.3
Taylor	8,100	40	22,000	79	43,200	281	171.6	97.5	96.4	255.7
Union	7,400	47	26,000	72	45,600	219	151.4	53.2	75.4	204.2
Region[a]	11399	72	31,640	164	53,763	363	177.6	127.8	69.9	121.3
w/o Al. Co.[a]	8,084	43	21869	97	43940	284	170.5	358.1	100.9	192.8
Florida	15,100	93	45,100	208	76,500	481	198.7	123.7	69.6	131.3

[a]Regional totals represent the weighted statistical mean of county median values.

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Housing: General Housing Characteristics, Florida. Tables 1 & 48. Washington, D.C. 1982.

U.S. Department of Commerce, Bureau of the Census, 1970 Census of Housing: Housing Characteristics for States, Cities and Counties, Florida. Tables 34 & 61. Washington, D.C. 1972.

TABLE 1.8

MEDIAN HOUSEHOLD INCOME, 1969, 1979, AND 1989

Area	Median Household Income			Percentage Change		
	1969	1979	1989	1969-79	1979-89	1969-89
Alachua	8,329	12,354	22,084	48.3	78.8	165.1
Bradford	6,905	11,816	24,625	71.1	108.4	256.6
Columbia	7,354	12,794	21,961	74.0	71.7	198.6
Dixie	5,666	9,631	15,380	70.0	59.7	171.4
Gilchrist	6,213	10,778	20,632	73.5	91.4	232.1
Hamilton	5,733	10,565	18,709	84.3	77.1	226.3
Lafayette	5,638	11,090	20,744	96.7	87.1	267.9
Madison	5,743	10,169	18,153	77.1	78.5	216.1
Suwannee	5,903	12,775	19,755	116.4	54.8	235.0
Taylor	6,814	15,784	21,380	131.6	35.5	213.8
Union	6,317	14,506	22,831	129.6	57.4	261.4
Region[a]	7,376	12,369	21,489	67.7	73.7	191.3
w/o Al. Co.[a]	6,467	12,385	20,780	91.5	67.8	221.3
Florida	6,476	14,675	27,483	126.6	87.3	324.4

[a]Regional totals represent the weighted statistical mean of the county median values.

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population: General Social and Economic Characteristics, Florida. Tables 71 & 180. Washington, D.C. 1982.

U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population: Characteristics of the Population, Florida. Table 44. Washington, D.C. 1972.

As indicated in Table 1.8, the rate of increase in north central Florida median household income slowed during the 1980s. During the 1970s, the rate of increase in the region's median household income was 87.3 percent compared to 71.1 percent during the 1980s. The regional rates of increase were less than the statewide increases of 126.6 percent during the 1970s and 87.3 percent during the 1980s.

While the region's rate of increase in median household income remained constant during the 1970s and the 1980s, the actual dollar increase was larger during the 1980s than the 1970s. As can be derived from Table 1.8, the increase in regional median household income during the 1970s was $4,993; in the 1980s it was $9,120. As with most comparisons with statewide averages, the region lagged the statewide increases of $8,199 during the 1970s and $12,808 during the 1980s.

AFFORDABILITY

Despite a widening gap between north central Florida median income and median rent, additional 1990 census data suggests the region's households kept pace with housing costs during the 1980s. As indicated in Table 1.9, 61.3 percent of the region's renters spent 25.0 percent or more of their annual income on housing costs in 1980. In 1990, the rate was 61.5 percent. North central Florida homeowners experienced a decrease in the percentage of households spending 25.0 percent or more of their annual income on housing costs, dropping from 28.2 percent in 1980 to 26.1 percent in 1990. The region's experience contrasts somewhat with statewide rates, where a slight decline in housing affordability was experienced by homeowners. In 1980, 56.6 percent of the state's renters and 26.6 percent of the state's homeowners spent 25.0 percent or more of their annual household income on housing. By 1990, these figures had increased to 57.5 and 28.3 percent, respectively.[13]

As indicated in Table 1.9, some north central Florida counties experienced a decline in housing affordability during the 1980s. Dixie, Hamilton, and Union counties experienced noticeable increases in the percentage of renters paying 25.0 percent or more of their annual household income for gross rent between 1980 and 1990.[14] Meanwhile, Columbia, Dixie, Lafayette, Madison, and Suwannee counties experienced increases in the percentage of homeowners spending 25.0 percent or more of their annual household income on housing costs during this time period.[15]

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[13]The 1980 census does not provide housing cost information at 30.0 percent of household income, the new standard by which housing affordability is measured; therefore, 25.0 percent is used for comparison purposes.

[14]The 1990 census defines gross rent as 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.

[15]The 1990 census defines monthly owner costs as 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.

TABLE 1.9

PERCENTAGE OF HOUSEHOLDS SPENDING 25.0 PERCENT OR MORE OF ANNUAL HOUSEHOLD INCOME ON HOUSING COSTS BY TENURE, 1980 & 1990

	Year							
	1980.0				1990.0			
	Renters		Homeowners		Renters		Homeowners	
Area	0 to 24%	25%+	0 to 24%	25%+	0 to 24%	25%+	0 to 24%	25%+
Alachua	33.9	66.1	68.6	31.4	35.4	64.6	72.7	27.3
Bradford	48.8	51.2	70.8	29.2	48.0	52.0	75.6	24.4
Columbia	49.9	50.1	76.7	23.3	46.1	53.9	74.9	25.1
Dixie	52.2	47.8	77.7	22.3	45.4	54.6	71.8	28.2
Gilchrist	35.6	64.4	70.9	29.1	47.5	52.5	79.8	20.2
Hamilton	57.6	42.2	75.5	24.5	42.0	58.0	81.6	18.4
Lafayette	48.6	51.4	78.4	21.6	63.9	36.1	69.4	30.6
Madison	46.5	53.5	75.1	24.9	45.3	54.7	70.6	29.4
Suwannee	52.0	48.0	76.5	23.5	41.6	58.4	72.6	27.6
Taylor	51.6	48.4	76.7	23.3	49.7	50.3	80.1	19.9
Union	68.9	31.1	75.0	25.0	63.3	36.7	79.5	20.5
Region	38.7	61.3	71.8	28.2	38.5	61.5	73.9	26.1
w/o Al. Co.	51.3	48.7	75.4	24.6	47.0	53.0	75.4	24.6
Florida	43.4	56.6	73.4	26.6	42.5	57.5	71.7	28.3

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population and Housing, Florida, Summary Tape File 3A. Microfiche tables 132 & 139. Washington, D.C. March 3, 1983.

While the previous tables suggest that housing affordability is improving for the region's homeowners, they also suggest that a significant proportion of the population, particularly renters, are paying more for housing than they can afford. Tables 1.10 and 1.11 examine housing affordability for renters by income group based upon the new state affordability standard of no more than 30.0 percent of annual household income spent on housing costs. As can be seen, and as could be expected, the lowest household income groups have the highest percentage of households paying 30.0 percent or more of their annual income for housing costs. Additionally, the percentage of renters paying 30.0 percent or more of their annual household income for housing costs is significantly higher than homeowners throughout all income categories.

TABLE 1.10

PERCENTAGE OF 1990 RENTER HOUSEHOLDS BY PERCENT OF 1989 HOUSEHOLD INCOME SPENT ON GROSS RENT

	Percentage of Rental Households by Annual Income											
	Less than $10,000		$10,000 to $19,999		$20,000 to $34,999		$35,000 to $49,999		$50,000 and Over		Total	
Area	0 to 29%	30% +	0 to 29%	30% +	0 to 29%	30% +	0 to 29%	30% +	0 to 29%	30%+	0 to 29%	30%+
Alachua	10.0	90.0	40.4	59.6	86.6	13.4	97.2	2.8	100.0	0.0	45.3	54.7
Bradford	15.8	84.2	48.5	51.5	95.6	4.4	100.0	0.0	0.0	0.0	58.4	41.6
Columbia	14.4	85.6	40.5	59.5	95.5	4.5	100.0	0.0	100.0	0.0	50.5	49.5
Dixie	15.3	84.7	68.1	31.9	100.0	0.0	100.0	0.0	100.0	0.0	55.6	44.4
Gilchrist	10.4	89.6	83.0	17.0	100.0	0.0	100.0	0.0	100.0	0.0	60.1	39.9
Hamilton	15.0	85.0	73.6	26.4	100.0	0.0	100.0	0.0	100.0	0.0	50.2	49.8
Lafayette	40.0	60.0	80.0	20.0	100.0	0.0	100.0	0.0	0.0	0.0	78.1	21.9
Madison	27.7	72.3	66.4	33.6	100.0	0.0	100.0	0.0	100.0	0.0	53.7	46.3
Suwannee	23.0	77.0	76.3	23.7	79.7	20.3	100.0	0.0	100.0	0.0	56.1	43.9
Taylor	23.0	77.0	78.3	21.7	100.0	0.0	100.0	0.0	100.0	0.0	62.1	37.9
Union	20.9	79.1	84.9	15.1	100.0	0.0	100.0	0.0	100.0	0.0	72.1	27.9
Region	12.4	87.6	45.4	54.6	89.0	11.0	98.0	2.0	100.0	0.0	48.1	51.9
w/o Al. Co.	19.2	80.8	58.9	41.1	94.9	5.1	100.0	0.0	100.0	0.0	48.1	51.9
Florida	13.1	86.9	29.4	70.6	78.0	22.0	95.3	4.7	98.8	1.2	55.2	44.8

Source: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A. Washington, D.C. 1992.

TABLE 1.11

PERCENTAGE OF 1990 HOMEOWNER HOUSEHOLDS BY SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF 1989 HOUSEHOLD INCOME

	Percentage of Homeowner Households by Annual Income											
	Less than $10,000		$10,000 to $19,999		$20,000 to $34,999		$35,000 to $49,999		$50,000 and Over		Total	
Area	0 to 29%	30% +	0 to 29%	30% +	0 to 29%	30% +	0 to 29%	30%+	0 to 29%	30% +	0 to 29%	30% +
Alachua	40.1	59.9	58.8	41.2	80.9	19.1	93.9	6.1	98.3	1.7	82.3	17.7
Bradford	53.0	47.0	70.7	29.3	87.1	12.9	100.0	0.0	100.0	0.0	83.1	16.9
Columbia	45.4	54.6	71.1	28.9	90.8	9.2	96.6	3.4	99.1	0.9	82.6	17.4
Dixie	46.3	53.7	77.1	22.9	94.6	5.4	100.0	0.0	100.0	0.0	77.6	22.4
Gilchrist	44.7	55.3	85.1	14.9	94.9	5.1	100.0	0.0	100.0	0.0	84.5	15.5
Hamilton	56.6	43.4	92.1	7.8	97.5	2.5	93.3	6.7	98.7	1.3	85.4	14.6
Lafayette	28.9	71.1	75.9	24.1	97.7	2.3	85.4	14.6	100.0	0.0	75.2	24.8
Madison	53.1	46.9	73.3	26.7	95.6	4.4	96.0	4.0	100.0	0.0	80.3	19.7
Suwannee	54.4	45.6	74.2	25.8	93.9	6.1	97.4	2.6	100.0	0.0	82.2	17.8
Taylor	55.4	44.6	76.3	23.7	92.8	7.2	100.0	0.0	96.3	3.7	85.0	15.0
Union	57.7	42.3	55.6	44.4	93.4	6.6	100.0	0.0	98.2	1.8	83.5	16.5
Region	46.6	53.4	67.1	32.9	86.1	13.9	95.4	4.6	98.5	1.5	82.4	17.6
w/o Al. Co.	50.5	49.5	74.5	25.5	92.3	7.7	97.7	2.3	99.0	1.0	82.4	17.6
Florida	37.6	62.4	90.0	10.0	73.4	26.6	88.1	11.9	94.3	5.7	81.9	18.1

Source: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A. Washington, D.C. 1992.

Table 1.10 reveals that the housing affordability issue is particularly acute for renters with household incomes of less than $10,000 per year. Fully 87.6 percent of all north central Florida renters earning less than $10,000 per year paid 30.0 percent or more of their annual household income on gross rent in 1989. Conversely, no north central Florida renter earning $50,000 or more per year paid 30.0 percent or more of his/her annual household income on gross rent. The same trend applies to homeowners. As indicated in Table 1.11, 53.4 percent of all north central Florida homeowners earning less than $10,000 per year paid 30.0 percent or more of their annual household income for housing costs. Conversely, only 1.5 percent of all north central Florida homeowners earning $50,000 or more per year paid 30.0 percent or more for housing costs.

North central Florida households generally pay less than the state average for housing costs when measured as a percentage of annual income. Statewide, 55.2 percent of all renters and 18.1 percent of all homeowners spent 30.0 percent or more of their annual household income on housing in 1990. While this trend generally holds true across most income categories, the regional average is comparable to statewide rates for renters with annual household incomes of less than $10,000 (87.6% for the region vs. 86.9% statewide) and substantially higher for homeowners with annual household incomes between $10,000 and $19,999 (32.9% for the region vs. 10.0% statewide).

Alachua (54.7%), Hamilton (49.8%) Columbia (49.5%), and Madison (46.3%) counties had higher than (statewide) average percentage of renters spending 30.0 percent or more of their annual household income on gross rent. Among homeowners, Lafayette (24.8%), Dixie (22.4%), and Madison (19.7%) counties had higher (statewide) average percentage of households spending 30.0 percent or more of their annual household income on housing costs.

The previous tables reveal that a substantial portion of the region's lower income renters and homeowners experienced difficulties obtaining affordable housing during the 1980s. Table 1.12 concentrates on lower-income households. Table 1.12 reveals that, in 1990, north central Florida households with 1989 annual incomes of less than $20,000 paying 30.0 percent or more of their annual household income for housing represents 62.3 percent of all households with 1989 annual incomes of less than $20,000 per year. Renters with annual incomes of less than $20,000 paying 30.0 percent or more of their annual household income for housing represents 73.3 percent of all renter households with annual incomes of less than $20,000. Fully 42.0 percent of homeowners with 1989 incomes of less than $20,000 paid 30.0 percent or more of their annual incomes for housing during the same time period. All households (renters and homeowners) with annual incomes of less than $20,000 paying 30.0 percent or more of their annual household income for housing represents 62.3 percent of all such households.

Even when Alachua County with its large college student population is excluded from consideration, renters with incomes of less than $20,000 paying 30.0 percent or more of their annual household income for housing represents 63.4 percent of all such renters. Similarly, the region's remaining homeowners with annual incomes of less than $20,000 paying 30.0 percent or more of their household income for housing represents 37.1 percent of all such homeowners. With Alachua County is removed from consideration, all households (renters and homeowners) with annual incomes of less than $20,000 per year paying 30.0 percent or more of their income for housing represents 49.3 percent of the region's 1990 households with annual incomes of less than $20,000.

The regional rates differ from statewide trends. Statewide, renters with annual incomes of less than $20,000 paying 30.0 percent or more of their annual incomes for gross rent represent 77.9 percent of all such renters, which is slightly higher than the regional rate of 73.3 percent. Homeowners statewide earning less than $20,000 per year paying 30.0 percent or more of their annual incomes for housing represent 34.2 percent of all such homeowners, which is noticeably lower than the region's rate of 42.0 percent.

TABLE 1.12

NUMBER AND PERCENT OF 1990 HOUSEHOLDS WITH 1989 ANNUAL INCOMES OF LESS THAN $20,000 SPENDING 30.0 PERCENT OR MORE OF 1989 ANNUAL INCOME FOR HOUSING

	Renters		Homeowners		Total	
Area	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Alachua	15,614	76.9	3,128	48.5	18,742	70.1
Bradford	540	67.9	413	37.6	953	50.3
Columbia	1,773	72.1	878	40.6	2,651	57.4
Dixie	227	64.1	276	39.6	503	48.1
Gilchrist	137	59.8	118	33.1	255	43.6
Hamilton	300	67.9	153	26.2	453	44.1
Lafayette	37	35.2	114	48.1	151	44.2
Madison	487	61.0	350	37.6	837	48.4
Suwannee	652	54.3	461	34.9	1,113	44.1
Taylor	410	57.1	350	33.6	760	43.2
Union	188	47.8	104	43.3	292	26.1
Region	20,365	73.3	6,345	42.0	26,710	62.3
w/o Al. Co.	4,751	63.4	3,217	37.1	7,968	49.3
Florida	5,918,940	77.9	151,441	34.2	743,335	61.9

Source: Derived from U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A. Washington, D.C. 1992. Tables H050 and H059.

When viewed in terms of total north central Florida households, regardless of income level, the percentage of north central Florida households with annual household incomes of less than $20,000 per paying 30.0 percent or more for housing represents 29.5 percent of all households. When Alachua County is excluded, the remaining households with annual household incomes of less than $20,000 paying 30.0 percent or more for housing costs drops to 24.5 percent of all households. The statewide rate is noticeably lower, where 19.3 percent of all such households pay 30.0 percent or more for housing.[16]

[16]Derived from U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A. Washington, D.C. 1992. Tables H050 and H059.

THE COMPREHENSIVE HOUSING AFFORDABILITY STRATEGY DATABASE

Despite U.S. census information which reveals that north central Florida households with incomes less than $20,000 per year spending more than they can afford for housing represents 62.3 percent of all north central Florida households, the U.S. Census Bureau 1990 Comprehensive Housing Affordability Strategy (CHAS) Database suggests that north central Florida has an adequate supply of dwelling units within the financial means of very-low-, low-, and moderate-income households.[17]

The region's surplus of affordable housing is especially significant when compared to statewide needs. Statewide, a housing shortage exists for the lowest income households as there are only enough affordable housing units for a mere 16.2 percent of households with incomes at or below 30.0 percent of the U.S. Department of Housing and Urban Development (HUD)-adjusted 1989 median family income. In north central Florida, the CHAS database suggests the situation is just the reverse, reporting that the region has enough affordable units to meet 117.8 percent of its households within this income group. The region also has a surplus of housing units affordable to households with incomes between 31.0 to 80.0 percent of the HUD-adjusted 1989 median family income. As indicated in Table 1.13, these surpluses exist in every county and every lower-income group except in Alachua County, where a shortage of affordable housing exists for households at or below 30.0 percent of the HUD-adjusted 1989 median family income.

The CHAS Database indicates the region has a surplus of affordable housing for very low-, low-, and moderate-income households. For households with income levels at 81.0 percent and above the 1990 HUD-adjusted median family income, there are only enough affordable units for 54.9 percent of the region's households. This figure suggests that households within this income group can afford to pay more for housing as they are likely residing in housing for which they could afford to pay more, given the region's surplus of housing units affordable to lower income populations.

There are several possible explanations as to why the CHAS Database contrasts so sharply with the 1990 census data. The region may be experiencing an allocation problem where, although an adequate supply of affordable housing exists for lower-income groups, these households are not occupying the units which they can afford. Possible explanations include an inadequate number of bedrooms in units affordable to lower income households, requiring them to live in larger and more expensive housing units, or housing locations which are inconvenient for traveling to work.

[17]The CHAS Database defines "affordable housing" as dwelling units for which a family would pay no more than 30 percent of their income for rent and no more than 2.5 times their annual income to purchase.

TABLE 1.13

HOUSING AFFORDABILITY. NUMBER OF HOUSEHOLDS AND NUMBER OF HOUSING UNITS AFFORDABLE BY PERCENTAGE OF 1989 HUD-ADJUSTED MEDIAN FAMILY INCOME (HAMFI)

	0-30% of HAMFI			31-50% of HAMFI		
Area	No. of Households	No. of Affordable Units	Affordable Units as a Percentage of Households	No. of Households	No. of Affordable Units	Affordable Units as a Percentage of Households
Alachua	12,837	9,401	73.2	8,969	12,471	139.0
Bradford	1,005	1,717	170.8	936	2,243	239.6
Columbia	2,145	3,192	148.8	1,703	4,092	240.3
Dixie	811	1,322	163.0	658	1,277	194.1
Gilchrist	389	763	196.1	444	843	189.9
Hamilton	690	1,322	191.6	464	986	212.5
Lafayette	286	524	183.2	240	389	162.1
Madison	1,008	1,901	188.6	871	1,249	143.3
Suwannee	1,272	2,520	198.1	1,340	2,683	200.2
Taylor	799	1,828	228.8	923	1,674	181.4
Union	312	902	289.1	278	708	254.7
Region	21,554	25,392	117.8	16,826	28,615	170.1
w/o Al. Co.	8,717	15,991	183.4	7,857	16,144	205.5
Florida	2,883,734	466,027	16.2	558,210	654,962	117.3

TABLE 1.13

HOUSING AFFORDABILITY. NUMBER OF HOUSEHOLDS AND NUMBER OF HOUSING UNITS AFFORDABLE BY PERCENTAGE OF 1989 HUD-ADJUSTED MEDIAN FAMILY INCOME (HAMFI)

Area	51-80% of HAMFI			81% of HAMFI & Above		
	No. Of Households	No. Of Affordable Units	Affordable Units as a Percentage of Households	No. Of Households	No. Of Affordable Units	Affordable Units as a Percentage of Households
Alachua	11,649	29,949	257.1	37,840	23,941	643.3
Bradford	1,327	1,889	142.4	3,930	1,680	42.7
Columbia	2,545	4,861	191.0	9,257	4,266	46.1
Dixie	810	998	123.2	1,746	660	37.8
Gilchrist	636	872	137.1	1,828	933	51.0
Hamilton	546	760	139.2	1,790	585	32.7
Madison	1,000	1,333	133.3	2,654	1,227	46.2
Suwannee	1,991	2,554	128.3	5,427	2,683	49.4
Taylor	1,091	1,589	145.6	3,587	1,660	46.3
Union	522	590	113.0	1,545	583	37.7
Region	22,354	45,741	204.6	70,560	38,729	54.9
w/o Al. Co.	10,705	15,792	147.5	32,720	14,788	45.2
Florida	899,423	1,947,690	216.5	3,112,693	2,359,821	75.8

Source: U.S. Department of Commerce, Bureau of the Census, The Comprehensive Housing Affordability Strategy (CHAS) Database. Washington, D.C. September, 1993.

Another explanation may lie in the manner in which the CHAS Database reports its information. The CHAS database reports number of households and affordable units by four income classes; 0-30 percent, 31-50 percent, 51-80 percent, and over 80 percent of the HUD-Adjusted Median Family Income. Such reporting does not guarantee that all households within a specified income class can afford each and every housing unit deemed affordable for the prescribed income class. It is entirely possible that most of the housing units within a specified income class are only affordable to households with incomes in the upper end of the specified income range while, at the same time most of the households within an income class could have an average household income within the lower portion of the specified income range. Under these circumstances, it is easy to see how the majority of lower income households could not afford housing purportedly affordable for their specified income range.

While census data is not without fault, tables 1.1 through 1.12, which are derived directly from the decennial census, are the more reliable indicators of affordable housing needs as the census data makes a direct connection between the household's income and the percentage of household annual income spent on housing.

GOVERNMENT-ASSISTED HOUSING

The Florida Department of Community Affairs 1993 Comprehensive Housing Affordability Strategy Annual Performance Report notes that, in the past 10 years (1983-1993), funding for the federal Department of Housing and Urban Development, the primary source of government funds for government-subsidized housing, has declined by 80 percent. Although $2 billion in federal housing funds were spent in Florida in 1990, Florida ranks 48th in per capita federal expenditures on housing.

In response to declining federal monies, the State of Florida has developed a number of state-funded housing programs through the William E. Sadowski Affordable Housing Act of 1992, including the State Housing Initiatives Program (SHIP), the State Apartment Incentive Loan (SAIL) program, and the Home ownership Assistance Program (HAP), which have found innovative ways to combine public and private resources to create ~~needed~~ housing for very low-, low-, and moderate-income families.

Through the Sadowski Act, local governments can meet the affordable housing goals of their comprehensive plans. The revenue stream for state housing programs developed through the Sadowski Act is generated from two sources, an increase in the documentary stamp tax on lands and other real property of $0.10 per $100, and beginning July 1, 1995, a portion of existing documentary stamp taxes will be transferred from general revenue to housing. For fiscal year 1992-93 this means $37.5 million for affordable housing. The funding increases to $50.3 million in FY 1993-94 and $54.9 in FY 1994-95. After FY 1995-96, an estimated $114.2 million will be generated annually. The new funds will be divided equally between local and state governments.

Table 1.14, below, is a compilation of government housing assistance programs compiled in the 1993 CHAS Annual Performance Report prepared by the Florida Department of Community Affairs. Before discussing the table, it is necessary to understand the table's data limitations.

The CHAS annual report includes county-level data for 40 different state and federal government housing assistance programs and represents most, but not all, of the major government housing programs available in the state. The type of assistance provided by these programs ranges from public housing, which represents very high levels of government assistance on a per unit basis, to home weatherization assistance and loan guarantee programs, which represent a relatively low level of financial assistance on a per unit basis.

Much of the CHAS annual report data represents number of units assisted through October, 1993. Information on the number of total housing units by county and statewide in 1993 is not readily available. Therefore, when reporting percentage of total housing units receiving government assistance in Table 1.14, total housing units represents 1990 total housing units as reported in the 1990 census and the number of units receiving government assistance represents all units through October, 1993, as identified in the 1993 CHAS report. This approach is thought to upwardly skew the percentage of total units receiving government assistance. The percentage is further upwardly skewed as a single dwelling unit may receive assistance from two or more government programs. The CHAS report does not adjust its numbers to take into account units receiving assistance from multiple government programs.

As suggested by Table 1.14, north central Florida has an above-average incidence of government-assisted housing. Slightly over 10.0 percent of the region's housing stock has enjoyed some form of government assistance, compared to 5.7 percent statewide. While every north central Florida county has a higher incidence of government subsidized housing than the state average, rates vary widely from county to county. The rate of subsidy ranges from a low of 9.3 percent in Alachua County to a high of 24.2 percent in Union County.

While the region has a relatively high percentage of government-subsidized units, many of these units are Rural Economic and Community Development Service units or units which have received relatively minor levels of government subsidy.[18] While such assistance is valuable to moderate income households, the major federal housing programs for very low- and low-income persons have historically been public housing units and Section 8 housing programs. The region has a higher than average percentage of total housing units comprised of federal public housing and Section 8 units. The region's incidence of public housing and Section 8 housing is 2.8 percent, which is 8.0 percent higher than the statewide rate of 2.5 percent. However, the region's 1989 poverty rate of 21.3 percent is 67.7 percent greater than the statewide poverty rate of 12.7 percent. These figures suggest that the region should receive an even larger share of Section 8 and public housing units when differences between regional and statewide poverty rates are taken into account.

Most of the region's public housing and Section 8 housing was built prior to the 1980s when federal funding for housing programs was severely cut and regional poverty rates may have differed from those of today. Section 8 units are of particular concern since there is only a limited period of time for which these units are eligible to receive federal subsidies. The time period for which many north central Florida Section 8 units are eligible to receive federal assistance is anticipated to expire within the next ten years.

[18]Formerly known as the Farmers Home Administration.

TABLE 1.14

GOVERNMENT-ASSISTED HOUSING[a]
DWELLING UNITS ASSISTED AND PROVIDED BY GOVERNMENT HOUSING SUBSIDY PROGRAMS

	Area													
Program	AL	BR	CO	DI	GI	HA	LA	MA	SU	TA	UN	Region	w/o Al. Co.	Florida
Number of Units														
TOTAL PUBLIC HOUSING	950	0	80	0	10	0	0	0	124	0	122	1,286	336	44,420
TOTAL SECTION 8	2,01	106	277	0	0	0	0	224	127	100	48	2,897	882	112,206
OTHER FEDERAL	3,34	405	724	108	175	331	57	287	405	259	138	6,231	2889	95,003
TOTAL FEDERAL	6,30	511	1,08	108	185	331	57	511	656	359	308	10,414	4,107	251,629
TOTAL STATE	1,05	364	455	369	372	355	347	456	448	436	411	5,067	4,014	96,531
TOTAL TOTAL	7,35	875	1,53	477	557	686	404	967	1,10	795	719	15,481	8,121	348,160
Percent of Assisted Units														
% Public Housing	12.9	0.0	5.2	0.0	1.8	0.0	0.0	0.0	11.2	0.0	17.0	8.3	4.1	12.8
% Section 8	27.4	12.1	18.0	0.0	0.0	0.0	0.0	23.2	11.5	12.6	6.7	18.7	10.9	32.2
% Other Federal	45.4	46.3	47.1	22.6	31.4	48.2	14.1	29.7	36.7	32.6	19.2	40.3	35.6	27.3
% Total Federal	85.7	58.4	70.4	22.6	33.2	48.2	14.1	52.8	59.4	45.1	42.8	67.3	50.6	72.3
% Total State	14.3	41.6	29.6	77.4	66.8	51.8	85.9	47.2	40.6	54.9	57.2	32.7	49.4	27.7
% Total Total	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.0	100.0	100.0
Percent of Total Units														
% of Hsg Stock, Pub Hsg	1.2	0.0	0.4	0.0	0.2	0.0	0.0	0.0	1.1	0.0	4.1	0.9	0.5	0.7
% of Hsg Stock, Sec 8	2.5	1.3	1.6	0.0	0.0	0.0	0.0	3.6	1.1	1.3	1.6	1.9	1.2	1.8
% of Hsg Stock, Other Fed	4.2	5.0	4.1	2.0	4.3	8.0	2.5	4.6	3.5	3.3	4.6	4.2	4.1	1.6
% of Hsg Stock, Total Fed	8.0	6.3	6.1	2.0	4.5	8.0	2.5	8.1	5.6	4.5	10.4	7.0	5.8	4.1
% of Hsg Stock, State	1.3	4.5	2.6	6.8	9.1	8.6	15.3	7.3	3.8	5.5	13.8	3.4	5.7	1.6
% of Hsg Stock receiving Govt. Aid	9.3	10.8	8.6	8.8	13.7	16.7	17.8	15.4	9.4	10.1	24.2	10.3	5.4	5.7
% of Housing Stock, Less mobile homes & trailers, receiving Govt. Aid	10.7	14.8	12.8	22.8	26.9	26.1	28.8	22.0	15.9	15.1	39.5	13.6	32.6	10.7

[a]Including the following government housing assistance programs:

CDBG Small Cities program; Community Development Corporations; FmHA Rural Housing 502 & 504 Units; FmHA Farm Labor Housing; FmHA Rural Rental 515 Units; Federal Mortgage Insurance; Section 202 Direct Loan Elderly and Section 202 Direct Pre-1974; Section 8, Sec. 207 Exemption; Section 8 Sec. 207 Rental Project; Section 8 Sec. 207 Mobile Homes Court; Section 8 Sec. 207/223(F) Co-Ins Conv; Section 8 Sec. 207/223(F) Coinsurance; Section 8 Sec. 213 Management Projects; Section 8 Sec. 221(D)(3) BMIR Units; Section 8 Sec. 221(D)(3) Market Rate; Section 8 Sec. 221(D)(4) Mkt Rate/Coinsur; Section 8 Sec. 221(D)(4); Section 8 Sec 236(J)(1); Section 8 Sec. 236(J)(L)/202 Elderly; Section 8 Sec. 236(J)(L)/223(E); Section 8 Sec. 242 Hospitals; Section 8 Sec. 231 Elderly Housing; Section 8 Sec. 608 Veterans Housing; Section 8 Title X Land Dev.; Section 8 Sec. 223F Pur/Refin. Housing; Section 8 232 Nursing Home; Section 8 Sec. 232/244 Coinsurance; FloridaFix Retrofits; Low Income Hsg Tax Program; Predevelopment Loan Prgm; Rental Housing Bond Prgm; Section 8 Agencies & Public Hsg, Public Housing Units; Section 8 Agencies and Public Housing Certificates; Section 8 Vouchers; Section 8 Moderate Rehab; Section 8 Non-Insured Projects; Fl Hsg Finance Agcy Sec 8 Prjcts; SFR Mortg. Revenue Program; SAIL Program; and the Weatherization Assistance Prgm.

Source: 1993 CHAS Annual Performance Report, Florida Department of Community Affairs. Tables 2-20. December, 1993.

AFFORDABLE HOUSING AND LOCAL GOVERNMENT COMPREHENSIVE PLANS

Chapter 163.3177(6)(f)1.d., F.S., requires local government comprehensive plans to provide adequate sites for future housing for very low-, low-, and moderate-income families. Chapter 9J-5, Florida Administrative Code (FAC), requires local government comprehensive plans to provide affordable housing to minimize additional local services and to avoid the concentration of affordable housing units only in specific areas of the jurisdiction. In addition, Chapter 9J-5.010(1)(a), FAC, requires the preparation of an affordable housing needs assessment as part of the housing element data requirements. Chapter 9J-5.010(3)(b)3, FAC, requires the goals, objectives, and policies of the housing element to establish adequate sites and distribution of housing for very low-, low-, and moderate-income families and for manufactured housing.

Every local government comprehensive plan within the north central Florida region has been found by the Florida Department of Community Affairs to be in compliance with the requirements of Chapter 163, F.S., and FAC Rule 9J-5. 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. Instead, the local government plans rely upon the private market to provide low-income housing by allowing the construction of multi-family dwelling units and the placement of manufactured housing within their jurisdictions.

In addition, 32 of the region's 44 local governments have either established minimum housing maintenance codes which address minimum standards for heating, electricity, and plumbing or have policies contained within their comprehensive plans calling for the adoption of a minimum housing maintenance code.

THE DEVELOPMENT OF REGIONAL IMPACT (DRI) AFFORDABLE HOUSING RULE

The DRI Affordable Housing Rule adopted by the Florida Department of Community Affairs requires, under certain circumstances, the provision of an adequate number of housing units affordable to all very low-, low-, and moderate-income households of the employees at the DRI project site. The standard rule prescribes a method by which affordable housing supply and demand are to be determined. It also provides for alternative methods for determining the affordable housing demand, supply, and need if agreed to by the applicant and the Council during the DRI pre-application conference. The East Central Florida Regional Planning Council (ECFRPC) has developed an alternative methodology which is widely used throughout the state. The North Central Florida Regional Planning Council regularly recommends the use of the ECFRPC methodology.

PROBLEMS, NEEDS, AND OPPORTUNITIES

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

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.

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. 62.3 percent of the region's 1990 households with 1989 annual incomes of less than $20,000 per year spent 30.0 percent or more of their 1989 annual income on housing.

2. 87.6 percent of the region's 1990 renter households with 1989 annual incomes of less than $10,000 per year spent 30.0 percent or more of their 1989 annual income on gross rent.

3. 54.6 percent of the region's 1990 renter households with 1989 annual incomes between $10,000 and $19,999 per year spent 30.0 percent or more of their 1989 annual income on gross rent.

4. 53.4 percent of the region's 1990 homeowner households with 1989 annual incomes of less than $10,000 per year spent 30.0 percent or more of their 1989 annual income on gross rent.

5. 32.9 percent of the region's 1990 homeowner households with 1989 annual incomes between $10,000 and $19,999 per year spent 30.0 percent or more of their 1989 annual income on gross rent.

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. Assist local governments in developing Local Housing Assistance Plans and in applying for SHIP funding.

Policy 1.1.5. Provide technical assistance to local governments for the revision of Housing Elements contained in local government comprehensive plans.

Policy 1.1.6. Develop and maintain estimates of the number of low-, very-low, and moderate income households by county for all north central Florida counties.

Policy 1.1.7. Provide assistance to local governments in the development of Community Development Block Grant housing applications.

Policy 1.1.8. Encourage the use of the East Central Florida Housing Methodology in lieu of the Adequate Housing Standard Rule 9J-2.048 for the determination of adequate (affordable) housing demand and supply in the review of developments of regional impact.

ECONOMIC DEVELOPMENT

amended August 28, 1997, and February 27, 2003

ECONOMIC DEVELOPMENT

CONDITIONS AND TRENDS

INTRODUCTION

The quality of life for the residents of north central Florida is, first and foremost, dependent upon a healthy regional economy. The north central Florida economic structure can be characterized as a combination of retail trade, health and educational services, and government employment (state prisons and the University of Florida). Since these industries tend to be low-paying and many involve non-taxable land and structures, this mixture has resulted in below-average median household and per capita incomes, above-average poverty rates, and a below-average local government tax base. Therefore, economic development, enhanced job opportunities, and an improved local government tax base are primary concerns of the regional plan.

The Economic Development Conditions and Trends Statement is divided into three sections. The first section describes the region's population growth and population projections. The second section describes the region's economic structure. The third section summarizes the strengths and weaknesses of the region concerning economic development and explores what the region has done and can do to expand its economic structure.

REGIONAL POPULATION

As indicated in Table 2.1, the region's population increased between 1980 and 1999 by 46.2 percent. However, the region's healthy rate of population growth did not keep pace with statewide growth. During the same period, statewide population grew by 57.3 percent.

Alachua County experienced the largest increase in population, increasing from 151,348 in 1980 to 216,249 in 1999. Columbia and Suwannee counties were the next most-populous counties at 56,514 and 34,386, respectively, in 1999. Dixie and Gilchrist counties experienced the largest percentage increases in population during this time period at 73.9 and 132.5 percent, respectively, although their actual populations remain relatively small.

Although the region has enjoyed continuous population growth since 1910, population growth has occurred unevenly. When the region's two most-populous counties, Alachua and Columbia, are excluded, Table 2.1 indicates that the remaining region reached a population peak in 1930 and did not approach its 1930 population until the late 1970s. In fact, Hamilton, Lafayette, and Madison counties had larger populations in 1910 than in 1990.

TABLE 2.1
NORTH CENTRAL FLORIDA POPULATION GROWTH, 1910 - 1999

Area	YEAR														
	POPULATION										PERCENTAGE CHANGE				
	1910[a]	1920[a]	1930	1940	1950	1960	1970	1980	1990	1999[b]	1960 1970	1970 1980	1980 1990	1990 1999	1980 1999
Alachua	26,037	24,242	34,365	38,607	57,026	74,076	104,764	151,348	181,596	216,249	41.4	44.5	20.0	19.1	42.9
Bradford	7,876	6,986	9,405	8,717	11,457	12,446	14,625	20,023	22,515	25,500	17.5	36.9	12.5	13.3	27.4
Columbia	17,689	14,290	7,344	16,589	18,216	20,077	25,250	35,399	42,613	56,514	25.8	40.2	20.4	32.6	59.6
Dixie	4,867	4,532	6,419	7,018	3,928	4,479	5,480	7,751	10,585	13,478	22.4	41.4	36.6	27.3	73.9
Gilchrist	3,131	2,915	4,137	4,250	3,499	2,868	3,551	5,767	9,667	13,406	23.8	62.4	67.6	38.7	132.5
Hamilton	11,825	9,873	9,454	9,778	8,981	7,705	7,787	8,761	10,930	14,376	1.1	12.5	24.8	31.5	64.1
Lafayette	6,710	6,242	4,361	4,405	3,440	2,889	2,892	4,035	5,578	6,961	0.1	39.5	38.2	24.8	72.5
Madison	16,919	16,516	15,614	16,190	14,197	14,154	13,481	14,894	16,569	19,632	(4.8)	10.5	11.3	18.5	31.8
Suwannee	18,603	19,789	17,731	17,073	16,986	14,961	15,559	22,287	26,780	34,386	4.0	43.2	20.2	28.4	54.3
Taylor	7,103	11,219	13,136	11,565	10,416	13,168	13,641	16,532	17,111	19,836	3.6	21.2	3.5	15.9	20.0
Union	6,214	5,517	7,428	7,094	8,906	6,043	8,112	10,166	10,252	13,833	34.2	25.3	0.9	34.9	36.1
Region	126,974	122,121	129,394	141,286	157,052	172,866	215,142	296,963	354,196	434,171	24.5	38.0	19.3	22.6	46.2
w/o Al Co & Col Co	83,248	83,589	87,685	86,090	81,810	78,713	85,128	110,216	129,987	161,408	8.2	29.5	15.2	24.3	46.4
Florida	752,619	968,470	1,468,211	1,897,414	2,771,305	4,951,560	6,791,418	9,739,992	12,937,926	15,322,040	37.2	43.4	32.8	18.4	57.3

[a]Union County was a part of Bradford County for the 1910 and 1920 Census. Dixie and Gilchrist counties were part of Alachua County for the 1910 and 1920 Census. The actual 1920 population count for Bradford County was 12,503. In order to estimate a 1920 population for what would have been Union County, this table applies the proportion of 1930 population for Bradford and Union counties to these two counties. The same technique was applied to 1920 census counts for Alachua, Gilchrist, and Dixie counties to estimate 1910 population counts for these three counties. The actual 1920 population reported for Alachua County was 31,689.

[b]Estimated population.

Sources:
U.S. Department of Commerce, Bureau of the Census, Thirteenth Census of the United States: 1910, Population Reports by States,, Volume II, Table 1, Washington, D.C. 1912.
U.S. Department of Commerce, Bureau of the Census, Fourteenth Census of the United States: 1920, Population Reports by States,, Volume III, Table 9, Washington, D.C. 1922.
U.S. Department of Commerce, Bureau of the Census, Fifteenth Census of the United States: 1930, Population,, Volume I, Part 1, Table 13, Washington, D.C. 1932.
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University of Florida, Bureau of Economic and Business Research, Florida Statistical Abstract, 1967, Table 2.122. Gainesville, Florida. 1967.
University of Florida, Bureau of Economic and Business Research, 1981 Florida Statistical Abstract, Table 1.66. Gainesville, Florida. 1981.
University of Florida, Bureau of Economic and Business Research, 1991 Florida Statistical Abstract, Table 1.67. Gainesville, Florida. 1991.
Bureau of Economic and Business Research, University of Florida, Florida Estimates of Population, 1999.

The region is anticipated to continue to grow through the year 2020, although at a slower pace than statewide. As indicated in Table 2.2, north central Florida's population is anticipated to rise at an average annual rate of 1.6 percent compared to 1.9 percent statewide. In absolute numbers, the region is anticipated to increase from 354,196 persons in 1990 to 521,700 by the year 2020. Approximately one-half of the region's year 2020 population is projected to reside in Alachua County. Columbia and Suwannee counties are projected to be the next two most-populous north central Florida counties. On a percentage basis, Dixie and Gilchrist counties are anticipated to experience the highest rates of growth during this period at 84.1 and 116.2 percent, respectively. Hamilton, Lafayette, and Madison counties are all projected to surpass their 1910 population peaks during the 1990s.

TABLE 2.2

NORTH CENTRAL FLORIDA POPULATION PROJECTIONS, 1990 - 2020

	YEAR							
	POPULATION				PERCENTAGE CHANGE			
Area	1990[a]	2000	2010	2020	1990 2000	2000 2010	2010 2020	1990 2020
Alachua	181,596	210,900	236,200	256,900	16.1	12.0	8.8	41.5
Bradford	22,515	25,600	27,000	28,500	13.7	5.5	5.6	26.6
Columbia	42,613	54,700	63,400	71,800	28.4	15.9	13.2	68.5
Dixie	10,585	14,000	16,600	19,200	32.3	18.6	15.7	81.4
Gilchrist	9,667	13,900	17,400	20,900	43.8	25.2	20.1	116.2
Hamilton	10,930	14,200	15,700	17,200	29.9	10.6	9.6	57.4
Lafayette	5,578	6,900	7,600	8,200	23.7	10.1	7.9	47.0
Madison	16,569	18,800	20,100	21,400	13.5	6.9	6.5	29.2
Suwannee	26,780	32,300	36,900	41,400	20.6	14.2	12.2	54.6
Taylor	17,111	18,900	19,400	19,900	10.5	2.6	2.6	16.3
Union	10,252	13,800	15,100	16,300	34.6	9.4	7.9	59.0
Region	354,196	424,000	475,400	521,700	19.7	12.1	9.7	47.3
Florida	12,937,926	15,527,500	17,958,400	20,349,700	20.0	15.7	13.3	57.3

[a]Actual population.

Source: University of Florida, Bureau of Economic and Business Research, 1995 Florida Statistical Abstract, Table 1.84. Gainesville, Florida. 1995.

As indicated in Table 2.4, the racial composition of the region has remained relatively stable since 1970. As of the year 2000, whites comprise 75.5 percent of the region's population. The percentage of blacks has declined slightly, dropping from 23.6 percent in 1970 to 19.3 percent by 2000. Other races has increased from 0.3 percent in 1970 to 5.2 percent by 2000.

TABLE 2.3
NORTH CENTRAL FLORIDA PERCENTAGE OF POPULATION BY RACE
1970, 1980, 1990, AND 2000

Area	Census Year											
	1970			1980			1990			2000		
	White	Black	Other	White	Black	Other	White	Black	Other	White	Black	Other
Alachua	78.9	20.6	0.5	78.8	19.1	2.2	77.6	19.0	3.4	73.5	19.3	7.2
Bradford	76.5	23.3	0.1	78.6	20.4	1.0	78.8	20.4	0.9	76.3	20.8	2.9
Columbia	74.9	25.0	0.1	80.1	19.3	0.6	80.5	18.1	1.4	79.7	17.0	3.3
Dixie	82.6	16.9	0.5	88.0	11.6	0.4	90.9	8.7	0.4	88.8	9.0	2.2
Gilchrist	91.8	8.1	0.1	93.4	6.3	0.3	91.0	8.5	0.5	90.5	7.0	2.5
Hamilton	60.3	39.6	0.1	61.9	37.8	0.4	59.4	39.0	1.6	58.8	37.7	3.5
Lafayette	88.6	11.4	0.0	92.4	7.1	0.4	83.0	14.1	2.9	79.3	14.4	6.4
Madison	56.1	43.8	0.1	57.1	42.6	0.3	57.6	41.8	0.6	57.5	40.3	2.2
Suwannee	76.3	23.5	0.1	82.0	17.6	0.4	83.6	14.8	1.6	84.5	12.1	3.4
Taylor	77.4	22.5	0.1	77.7	21.3	1.0	80.5	17.8	1.7	77.8	19.0	3.1
Union	71.4	28.4	0.3	40.9	17.2	41.9	75.5	23.2	1.3	73.6	22.8	3.5
Region	76.0	23.6	0.3	76.1	20.2	3.7	77.9	19.7	2.4	75.5	19.3	5.2
Florida	84.2	15.3	0.4	84.0	13.8	2.2	83.1	13.6	3.3	78.0	14.6	7.4

Sources: 1970 Census of Population, Characteristics of the Population, Florida, Table 34. 1972. 1980 Census of Population, Florida, General Population Characteristics, Florida, Table 15. 1982. 1990 Census of Population and Housing, Florida, Summary Tape File 3A, 1992. Census 2000 Redistricting Data Summary File, Matrices PL1, PL2, PL3, and PL4, 2001.

Table 2.4 reveals that north central Florida's percentage of total population age 65 and over is noticeably less than the statewide average. In 1990, 11.3 percent of the region's population was age 65 and over, compared to 20.0 percent statewide. While the region's rate of increase in persons age 65 and over between 1970 and 1990 is about the same as experienced statewide, the region's 21.7 percent increase during the 1980s was noticeably higher than the statewide rate of 15.8 percent for the same period.

Dixie and Suwannee counties have the region's largest elderly population, representing 17.5 and 16.9 percent of their respective county's total population. However, both of these counties are below the statewide average in terms of percentage of population comprised of persons age 65 and over. Dixie, Alachua, and Columbia counties experienced the largest increase in percent of total population comprised of persons age 65 and over. Between 1970 and 1990, Dixie County's percentage changed by 111.3 percent, while Alachua and Columbia counties increased by 46.9 and 47.1 percent, respectively.

TABLE 2.4

NORTH CENTRAL FLORIDA
PERCENT OF POPULATION AGE 65 AND OVER, 1970, 1980, & 1990

Area	Pct. of Population, Age 65+, by Year			Pct. Change in Pct. of Population Age 65+by Year		
	1970	1980	1990	1970-80	1980-90	1970-90
Alachua	6.3	7.1	9.2	13.0	30.0	46.9
Bradford	8.9	10.4	11.8	16.4	13.3	31.9
Columbia	9.1	10.2	13.4	11.8	31.6	47.1
Dixie	8.3	12.1	17.5	45.7	45.0	111.3
Gilchrist	11.2	11.0	13.9	(1.4)	26.5	24.7
Hamilton	12.0	13.2	11.4	9.8	(13.9)	(5.4)
Lafayette	13.5	12.2	10.8	(9.5)	(11.6)	(20.0)
Madison	11.8	14.2	14.1	20.7	(0.7)	19.9
Suwannee	12.1	13.9	16.9	15.2	21.3	39.7
Taylor	9.9	12.7	13.2	28.4	3.9	33.4
Union	7.0	6.0	7.3	(14.6)	22.1	4.3
Region	8.3	9.3	11.3	12.6	21.7	37.0
Florida	14.6	17.3	20.0	18.5	15.8	27.3

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida, Table P13, Washington, D.C., 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population, General Population Characteristics, Florida. Tables 14 & 46.

U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population, Characteristics of the Population, Florida, Table 14.

The region's elderly population is projected to continue to comprise an increasing proportion of the region's total population through the year 2010. As indicated in Table 2.5, north central Florida's percentage of population comprised of persons age 65 and over is anticipated to increase from 11.3 percent in 1990 to 12.4 percent in 2010. The region contrasts with statewide trends, where elderly population as a percentage of total population is projected to decline from 20.0 percent in 1990 to 18.4 percent by 2010.

TABLE 2.5

NORTH CENTRAL FLORIDA POPULATION PROJECTIONS
PERSONS AGE 65 AND OVER, 1990 - 2010

	Year					
	Percent of Population, Age 65 and Over			Percent Change in Pct. of Population, Age 65 and Over		
Area	1990[a]	2000	2010	1990-2000	2000-2010	1990-2010
Alachua	9.2	9.7	10.3	5.4	5.8	11.5
Bradford	11.8	12.7	13.0	7.6	2.4	10.2
Columbia	13.4	14.4	14.6	7.5	1.4	9.0
Dixie	17.5	17.9	17.5	2.3	(2.2)	0.0
Gilchrist	13.9	16.0	16.2	15.1	1.3	16.5
Hamilton	11.4	10.8	11.3	(5.3)	4.6	(0.9)
Lafayette	10.8	12.4	13.1	14.8	5.6	21.3
Madison	14.1	13.8	13.6	(2.1)	(1.4)	(3.5)
Suwannee	16.9	18.1	17.9	7.1	(1.1)	5.9
Taylor	13.2	14.3	14.2	8.3	(0.7)	7.6
Union	7.3	8.1	9.2	11.0	13.6	26.0
Region	11.3	12.0	12.4	6.5	3.3	10.0
Florida	20.0	18.6	18.4	(7.0)	(1.1)	(8.0)

[a]Actual population

Derived from the following sources:

University of Florida, Bureau of Economic and Business Research, 1995 Florida Statistical Abstract, Table 1.41. Gainesville, Florida. 1995.

U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida, Table P13, Washington, D.C. 1992.

Table 2.6 indicates that north central Florida's population growth, as with the state as a whole, has been fueled by in-migration as opposed to natural population increase. Table 2.6 indicates that 62.5 percent of the region's population increase between 1960 and 1990 is attributable to net in-migration. This figure is somewhat below the torrid statewide rate of 85.3 percent. Only Gilchrist and Hamilton counties have in-migration rates comparable to the statewide rate at 86.8 and 86.5 percent respectively.

TABLE 2.6

NORTH CENTRAL FLORIDA
COMPONENTS OF CHANGE IN POPULATION, 1960 - 1990

Area	Percent of Total Change Attributable to Natural Increase and Net Migration by Year							
	1960-1970		1970-1980		1980-1990		1960-1990	
	Natural Increase	Net Migration	Natural Increase	Net Migration	Natural Increase	Net Migration	Natural Increase	Net Migration
Alachua	46.0	54.0	24.6	75.4	49.7	50.3	37.8	62.2
Bradford	56.7	43.3	20.5	79.5	49.3	50.7	35.5	64.5
Columbia	56.5	43.5	25.8	74.2	39.5	60.5	37.2	62.8
Dixie	91.0	9.0	20.1	79.9	18.2	81.8	30.8	69.2
Gilchrist	45.1	54.9	8.6	91.4	10.2	89.8	13.2	86.8
Hamilton	(1067.1)	1167.1	68.6	31.4	29.6	70.4	13.5	86.5
Lafayette	4533.3	(4433.3)	16.1	83.9	11.5	88.5	18.5	81.5
Madison	(231.6)	331.6	61.5	38.5	52.5	47.5	137.0	(37.0)
Suwannee	240.5	(140.5)	16.6	83.4	13.5	86.5	26.8	73.2
Taylor	379.7	(279.7)	36.2	63.8	183.4	(83.4)	99.0	1.0
Union	24.5	75.5	20.5	79.5	560.5	(460.5)	33.5	66.5
Region	56.9	43.1	24.6	75.4	41.7	58.3	37.5	62.5
Florida	27.8	72.2	8.0	92.0	13.2	86.8	14.7	85.3

Derived from the following sources:

U.S. Department of Commerce, Bureau of the Census, Current Population Reports, "Components of Population Change by County: 1960 to 1970", Series P-25, No. 461, June 1971, and the 1960 Census of Population. Washington, D.C.

University of Florida, Bureau of Economic and Business Research, 1981 Florida Statistical Abstract, Table 1.72. Gainesville, Fl., 1982.

U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida. Washington, D.C. 1992.

Table 2.7 portrays the place of residence of north central Florida residents five years prior to the 1970, 1980, and 1990 decennial censuses. The table indicates that, while the percentage of north central Florida residents living in the same county five years prior to the census is similar to the statewide average, the region's percentage of persons who lived in another Florida county five years prior is noticeably higher than the state average. Furthermore, the discrepancy between regional and statewide trends has grown over time. For the 1990 census, 20.3 percent of the region's population resided in another Florida county five years prior, compared to 8.2 percent statewide.

TABLE 2.7
NORTH CENTRAL FLORIDA
PLACE OF RESIDENCE FIVE YEARS PRIOR TO DECENNIAL CENSUS
PERSONS FIVE YEARS OLD AND OLDER (PERCENT)

	YEAR								
	1965			1975			1985		
Area	Same County	Dif. County	Dif. State or Abroad	Same County	Dif. County	Dif. State or Abroad	Same County	Dif. County	Dif. State or Abroad
Alachua	67.8	19.4	16.8	58.1	24.2	17.7	61.4	22.0	16.6
Bradford	75.6	15.7	8.7	72.9	19.7	7.4	72.7	20.2	7.1
Columbia	76.9	13.4	9.7	72.0	17.3	10.7	72.7	17.0	10.3
Dixie	79.0	7.6	12.7	75.0	16.3	8.7	69.4	20.5	10.1
Gilchrist	70.6	23.9	5.6	66.6	26.9	6.5	58.8	28.0	13.2
Hamilton	86.3	6.1	7.7	85.4	9.1	5.5	74.4	18.3	7.2
Lafayette	76.3	16.8	6.9	85.4	11.9	2.6	68.7	24.0	7.3
Madison	84.9	11.5	3.6	80.4	9.5	10.0	80.3	12.7	7.0
Suwannee	84.9	10.7	4.5	75.0	18.4	6.5	72.9	18.4	8.6
Taylor	84.1	8.4	7.5	86.0	6.4	7.6	80.1	12.6	7.3
Union	64.0	24.8	11.2	54.3	37.2	8.4	67.5	25.3	7.2
Region	72.0	16.0	12.0	66.3	20.7	13.0	67.0	20.3	12.8
Florida	70.9	10.5	18.7	69.9	7.8	22.2	71.0	8.2	20.8

Derived from the following sources:

U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population: Characteristics of the Population, Florida, Tables 50 & 119. Washington, D.C., 1972.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population: General Social and Economic Characteristics, Florida, Tables 65 & 174. Washington, D.C., 1982.

U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida. Washington, D.C., 1992.

These tables support a trend observed by many north central Florida local officials. Persons moving into the region appear to be largely composed of retirees who previously resided in more urban counties located in south Florida. In-migration has not had as large an impact on overall population growth and, correspondingly, the region's rate of population growth has not been as high as experienced statewide. These trends are anticipated to continue through the year 2020.

DESCRIPTION OF THE REGIONAL ECONOMY

The following section describes the regional economy as well as the impacts of the region's economic structure upon income, poverty, unemployment, and the local government tax base. It describes the current state of the region, change over time, and the economic forces at work in the region.

EMPLOYMENT[19]

Nearly one-half of all employment in the region, as measured by number of employees per industry by place of residence, consists of Retail Trade, Education, and Health services. As indicated in Table 2.8, these three employment sectors comprise 17.8, 16.0, and 11.8 percent, respectively, of the region's employed workforce. Besides these sectors, the region has a higher than average percentage of employees in public administration. Fully 7.6 percent of the region's 1990 employed residents were employed in the Public Administration sector, compared with 5.0 percent statewide.

Employment by economic sector, at least to some extent, reflects the region's rural character and slower growth rates. As can be seen in Table 2.8, the region has an above-average percentage of total employment within the Agriculture, Forestry, and Fishing sector compared with the statewide rate (4.6 and 2.9%, respectively) and a below-average percentage of total employment in Construction (6.0 to 7.8%) as well as Finance, Insurance, and Real Estate categories (4.5 to 8.1%).

Alachua County dominates the regional economy. As noted in Table 2.8 2.9, Alachua County represented 85,785 jobs, or 56.7 percent of all employment opportunities within the region in 1990. Removing Alachua County from consideration, employment by economic sector in the remaining 10-county area looks quite different. In 1990, 18.5 percent of the remainder of the region's employed residents were employed in Education Services and Public Administration (compared with 27.4 percent for Alachua County), 17.7 percent in Retail Trade (compared with 17.9 percent in

[19] Unless noted to the contrary, the Economic Development Conditions and Trends Statement discusses employed persons by their jurisdiction of residence, not the jurisdiction of the place of employment. Information regarding number of jobs by jurisdiction is regularly published by the U.S. Bureau of the Census in County Business Patterns. However, due to the small number of employers within the region, County Business Patterns withholds information for certain industrial sectors for several north central Florida counties in order to prevent disclosing proprietary information regarding the number of employees of a specific firm. The incidence of withheld information prevents the use of County Business Patterns data. Decennial census employment data, which reflects employed residents by jurisdiction, is used in this conditions and trends statement as a substitute measure for jobs by jurisdiction.

Alachua County), 7.8 percent in Health Services (compared with 14.8 percent for Alachua County), and 15.5 percent in general services, including Finance, Insurance, and Real Estate (20.8 percent for Alachua County). Agriculture, Forestry, and Fisheries employed 7.8 percent of the remaining 10-county area's residents, compared with only 2.3 percent for Alachua County.

TABLE 2.8

PERCENTAGE OF NORTH CENTRAL FLORIDA EMPLOYMENT BY INDUSTRIAL SECTOR, 1990

Area	Ag Forestry & Fishing	Mining	Construc-tion	Manufacturing		Transport Comm & Public Utilities	Wholesale Trade	Retail Trade	Finance Insurance & Real Estate	Business & Repair Services	Personal Services	Entertain & Recreat Services	Health Services	Educational Services	Other Services	Public Admin
				Non-Durable Goods	Durable Goods											
Alachua	2.3	0.1	4.7	2.1	3.6	4.4	2.0	17.9	5.0	3.5	3.1	1.4	14.8	21.8	7.8	5.6
Bradford	4.3	2.0	7.3	4.5	5.1	7.4	2.5	18.6	3.9	3.5	3.6	0.4	7.0	9.2	4.4	16.3
Columbia	4.5	0.4	8.2	5.9	7.7	5.0	2.9	21.4	4.3	4.4	3.6	0.9	11.1	7.1	4.4	8.1
Dixie	6.5	0.3	5.6	4.6	12.3	5.8	5.7	19.1	3.5	2.1	1.9	0.6	4.9	8.1	4.2	14.8
Gilchrist	10.6	0.5	11.6	2.6	6.9	6.6	1.3	18.2	4.5	2.9	2.0	1.0	6.8	11.9	4.3	8.4
Hamilton	8.5	0.9	5.7	20.4	4.4	4.8	2.0	15.1	1.8	2.0	4.5	0.5	5.9	9.9	1.8	11.6
Lafayette	26.0	0.5	6.0	6.1	6.2	3.7	3.1	12.9	2.3	1.9	1.6	0.2	5.0	7.5	4.8	12.3
Madison	9.4	0.1	6.8	14.0	8.0	5.4	3.2	15.5	2.1	2.8	2.6	0.8	8.0	9.7	4.3	7.4
Suwannee	12.0	0.7	8.0	7.1	5.0	7.3	3.6	17.4	4.8	3.7	3.6	1.1	6.3	8.8	4.1	6.4
Taylor	3.8	0.3	9.8	14.9	13.7	4.1	2.9	14.2	3.7	5.4	3.0	0.5	5.5	7.6	5.9	4.7
Union	59.0	0.5	4.4	7.6	6.6	6.7	1.3	12.6	2.5	2.5	2.3	0.1	9.5	7.0	3.2	27.3
Region	4.6	0.3	6.0	4.8	5.3	5.1	2.4	17.8	4.5	3.5	3.1	1.1	11.8	16.0	6.3	7.6
w/o Al Co	7.5	0.7	7.7	8.3	7.5	5.8	2.9	17.7	3.7	3.6	3.2	0.7	7.8	8.4	4.3	10.1
Florida	2.9	0.2	7.8	4.0	6.5	9.4	4.6	19.6	8.1	5.6	4.5	2.3	8.4	6.9	6.2	5.0

Source: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida. Washington, D.C. 1992.

TABLE 2.9

NORTH CENTRAL FLORIDA EMPLOYMENT BY INDUSTRIAL SECTOR, 1990

Area	All Industries	Ag Forestry & Fishing	Mining	Construc-tion	Manufacturing		Transport Comm & Public Utilities	Wholesale Trade	Retail Trade	Finance Insurance & Real Estate	Business & Repair Services	Personal Services	Entertain & Recreat Services	Health Services	Educa-tional Services	Other Services	Public Admin
					Non-Durable Goods	Durable Goods											
Alachua	85,785	2,012	71	3,990	1,785	3,075	3,782	1,724	15,322	4,317	2,996	2,677	1,167	12,685	18,689	6,696	4,803
Bradford	8,251	356	164	600	370	419	613	208	1,538	323	287	295	32	575	762	361	1,348
Columbia	17,569	794	75	1,437	1,036	1,355	876	505	3,765	758	781	630	150	1,957	1,241	781	1,428
Dixie	3,335	217	9	187	154	410	194	190	637	117	70	64	19	164	271	139	493
Gilchrist	3,572	378	17	413	92	246	237	48	651	160	104	70	34	243	425	153	301
Hamilton	3,807	324	35	218	778	167	183	76	576	68	77	171	20	225	378	70	441
Lafayette	2,121	552	10	127	129	131	78	66	273	48	41	34	5	106	159	101	261
Madison	6,124	578	8	415	859	490	332	196	951	127	169	158	46	488	592	262	453
Suwannee	10,429	1,247	71	832	743	521	782	375	1,814	505	384	375	113	657	913	426	671
Taylor	6,850	261	20	668	1,020	936	283	198	976	254	373	204	32	379	521	406	319
Union	3,332	195	17	147	254	219	225	42	419	84	84	75	3	318	233	108	909
Region	151,175	6,914	497	9,034	7,220	7,969	3,863	3,628	26,922	6,761	5,366	4,753	1,621	17,797	24,184	9,503	11,427
w/o Al Co	65,390	4,902	426	5,044	5,435	4,984	3,803	1,904	11,600	2,444	2,370	2,076	455	5,112	5,495	2,807	6,624
Florida	5,810,467	167,418	11,095	450,503	231,576	377,245	377,972	268,740	1,137,121	468,324	324,679	259,038	134,164	488,093	398,696	357,946	291,067

Source: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida. Washington, D.C. 1992.

Alachua County, as expected, has an above-average percentage of its employment base in health and educational services. As indicated in Table 2.8, 14.8 percent of Alachua County's 1990 employed residents were employed in the health care industry, compared with 7.8 percent for the remainder of the region and 8.4 statewide. In terms of Education Services, 21.8 percent of Alachua County's employed residents were employed in Education Services, compared with 8.4 percent for the remainder of the region and 6.9 percent statewide.

Alachua County is near the regional average in terms of percentage of total employment in Public Administration. As a major government employment center, Alachua County was anticipated to have an above-average percentage of employees in this category. Apparently, the large number of employment opportunities provided by state correctional facilities in the other counties of the region keeps the regional percentage of total employment within Public Administration above the statewide average.

Manufacturing is a historically small component of the regional and state economies. As indicated in Table 2.8, 1990 regional employment in Durable and Non-Durable Goods Manufacturing accounted for 10.1 percent of regional employment and 10.5 percent of employment statewide. These figures are substantially lower than the 1990 national rate of 18.0 percent.[20]

CHANGE OVER TIME

North central Florida's employment opportunities grew at a healthy rate between 1970 and 1990. However, the region's rate of new job creation did not keep up with statewide trends. While the number of employed residents in the region grew from 77,173 in 1970 to 151,175 in 1990, an increase of 95.9 percent, the number of employed residents statewide increased by 139.5 percent.

As indicated in Table 2.10, Alachua County experienced the largest increase in the number of new employees between 1970 and 1990. A total of 46,146 new employed county residents, or 62.4 percent of all the new employed residents in the region, occurred in Alachua County. Gilchrist and Lafayette counties experienced the largest percentage increase in employment opportunities. The number of employees residing in Gilchrist County increased by 209.5 percent during this period while Lafayette County increased by 130.8 percent. Madison, Taylor, and Hamilton counties experienced the smallest percentage increases at 28.3, 39.6, and 47.3 percent, respectively.

Table 2.10 notes that Gilchrist County experienced an increase of 2,418 employed persons during this time period. A substantial proportion of Gilchrist County's increases occurred in Retail Trade (551 additional employed persons) and Educational Services (315 employed persons). Tables 2.8 through 2.12 report change in number of residents employed by industrial sector by place of residence, not by place of employment. Many county residents reported in these tables are likely

[20]U.S. Bureau of the Census, Statistical Abstract of the United States: 1992, Table 632 , Washington, D.C., 1992. Non-durable goods manufacturing is thought to include mining employees employed by mining companies with ore beneficiation facilities located at their mine site.

to hold jobs located in counties other than in which they reside. In the case of Gilchrist County, it is suggested that a substantial portion of its increase was attributable to an increase in county residents commuting to jobs located in adjacent Alachua County (e.g., the University of Florida and regional shopping centers).

Between 1970 and 1990, Retail Trade experienced the largest increase in employees residing within the region, adding an additional 14,324 employees. Health Services experienced the second-largest increase, adding 12,013 employees, followed by Educational Services employees at 10,131. The next largest increase in terms of absolute numbers occurred in Public Administration, which increased by 7,067 (see Table 2.10). Mining was the only industrial sector to experience a decline in employment, dropping from 689 in 1970 to 497 in 1990.[21] Business and Repair Services and Entertainment and Recreation Services experienced the largest percentage increases in employment at 266.5 and 244.2 percent, respectively. Other Services (Museums and Galleries, Religious and Political Organizations, Labor Unions and Professional Membership Organizations, Household Help, Accountants, Engineers, etc.) increased by 218.8 percent while Health Services increased by 207.7 percent. Fire, Insurance, and Real Estate grew by 173.6 percent. Other than Mining, which experienced a 27.9 percent decline in total employment, Personal Services (Laundry and Cleaning Services, Beauty Shops, Shoe Repair Shops, Funeral Parlors, etc.) experienced the smallest rate of increase at 2.4 percent. Statewide, the largest percentage increases occurred in the same categories: Business and Repair Services (248.8%); Entertainment and Recreational Services (326.1%); Health Services (273.1%); and Fire, Insurance, and Real Estate (220.8%).

Manufacturing has become a smaller percentage of the region's economy. In 1970 manufacturing employment comprised 13.4 percent of all employed residents of the region. By 1990 the percentage of regional residents employed in manufacturing had declined to 10.1 percent. While manufacturing employment has grown, it has not kept pace with the rate of employment growth in other sectors and represents a continually smaller percentage of total regional employment. Regional Durable Goods Manufacturing employment rose by a below-average 31.3 percent between 1970 and 1990, compared with 103.9 percent statewide. When Alachua County was removed from consideration, the growth rate in the Durable Goods sector for the remaining 10-county area was an even lower 12.2 percent.

The region's 67.2 percent increase in regional Nondurable Goods Manufacturing employment was higher than experienced statewide (47.7%). However, Nondurable Goods Manufacturing represents a small 4.8 percent of 1990 regional employment. Statewide, Nondurable Goods Manufacturing employment represents 4.0 percent of statewide employment. Durable Goods Manufacturing represents a slightly larger percentage of total regional employment, at 5.3 percent. Statewide, Durable Goods Manufacturing represents 6.5 percent of total employment.

[21]Non-durable goods manufacturing is thought to include mining employees employed by mining companies with ore beneficiation facilities located at their mine site.

Below-average regional increases in employment also occurred in Agriculture, Forestry, and Fishing, Household Services, and Other Personal Services. Employment opportunities within the region for Agriculture, Forestry, and Fishing grew by 16.2 percent compared with 50.8 percent statewide. When Alachua County is removed from consideration, the employment growth rate in this category for the remaining 10-county area was an even lower 3.9 percent.

As can be seen by comparing tables 2.8 and 2.12, agricultural employment as a percentage of total regional employment dropped from 7.7 percent in 1970 to 4.6 percent in 1990. In 1970, employment in the Agriculture, Forestry, and Fisheries sector accounted for more than 10.0 percent of all employment in 7 of the 11 north central Florida counties (Bradford, Gilchrist, Hamilton, Lafayette, Madison, Suwannee, and Union). By 1990, only Gilchrist, Lafayette, and Suwannee counties had more than 10.0 percent of their employment in this category. Despite its smaller percentage of total regional employment, the actual number of Agriculture, Forestry, and Fisheries employees increased from 5,950 in 1970 to 6,914 in 1990.

TABLE 2.10

CHANGE IN NORTH CENTRAL FLORIDA EMPLOYMENT BY INDUSTRIAL SECTOR, 1970-90

Area	All Industries	Ag Forestry & Fishing	Mining	Construc-tion	Manufacturing		Trans Comm & Public Utilities	Wholesale Trade	Retail Trade	Finance Insurance & Real Estate	Business & Repair Services	Personal Services	Entertain & Recreat Services	Health Services	Educa-tional Services	Other Services	Public Admin
					Non-Durable Goods	Durable Goods											
Alachua	46,146	779	7	1,296	499	1,389	1,735	796	8,562	2,779	2,177	379	874	9,100	8,091	4,762	2,921
Bradford	3,488	(183)	5	225	81	48	267	110	768	216	210	68	(3)	267	392	232	785
Columbia	8,435	139	(10)	735	720	224	315	284	2,207	458	560	(71)	103	1,081	424	408	858
Dixie	1,571	98	1	61	(10)	(120)	89	147	415	94	63	(3)	10	143	57	100	426
Gilchrist	2,418	164	13	269	31	111	138	20	551	136	76	35	25	165	315	106	263
Hamilton	1,223	(137)	(151)	52	552	15	90	(103)	114	58	68	(25)	6	169	143	45	327
Lafayette	1,202	289	10	(6)	58	10	55	53	167	38	33	11	5	88	78	93	220
Madison	1,351	(514)	2	231	553	(184)	83	107	295	34	95	(102)	20	324	30	138	239
Suwannee	4,844	266	(97)	432	301	208	419	230	896	277	290	44	93	364	421	262	438
Taylor	1,942	95	20	366	(28)	143	93	125	149	138	290	(188)	14	206	135	308	76
Union	1,382	(32)	8	9	145	76	155	18	200	62	40	(35)	3	106	45	68	514
Region	74,002	964	(192)	3,670	2,902	1,920	3,439	1,787	14,324	4,290	3,902	113	1,150	12,013	10,131	6,522	7,067
w/o Al Co	27,856	185	(199)	2,374	2,403	531	1,704	991	5,762	1,511	1,725	(266)	276	2,913	2,040	1,760	4,146
Florida	3,384,199	56,424	1,940	244,238	74,785	192,200	361,047	159,705	675,105	322,325	231,582	74,122	102,678	357,266	218,370	259,794	155,600

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population: General Social and Economic Characteristics, Florida. Tables 47 & 123. Washington, D.C. 1972.

TABLE 2.11

PERCENTAGE CHANGE IN NORTH CENTRAL FLORIDA EMPLOYEES BY INDUSTRIAL SECTOR, 1970-90

Area	All Industries	Ag, Forestry, & Fishing	Mining	Construc-tion	Manufacturing		Trans Comm & Public Utilities	Wholesale Trade	Retail Trade	Finance Insurance & Real Estate	Business & Repair Services	Personal Services	Entertain & Recreat Services	Health Services	Educationa l Services	Other Services	Public Admin
					Non-Durable Goods	Durable Goods											
Alachua	116.4	63.2	10.9	48.1	38.8	82.4	85.0	85.8	126.7	180.7	265.8	16.5	298.3	253.8	76.3	246.2	155.2
Bradford	73.2	(34.0)	3.1	60.0	28.0	12.9	77.2	112.2	99.7	201.9	272.7	30.0	(8.6)	86.7	105.9	179.8	139.4
Columbia	92.3	21.2	(11.8)	104.7	227.8	19.8	56.1	128.5	141.7	152.7	253.4	(10.1)	219.1	123.4	51.9	109.4	150.5
Dixie	89.1	82.4	12.5	48.4	(6.1)	(22.6)	84.8	341.9	186.9	408.7	900.0	(4.5)	111.1	681.0	26.6	256.4	635.8
Gilchrist	208.5	76.6	325.0	186.8	50.8	82.2	139.4	71.4	551.0	566.7	271.4	100.0	277.8	211.5	286.4	225.5	692.1
Hamilton	47.3	(29.7)	(81.2)	31.3	244.2	9.9	96.8	(57.4)	24.7	580.0	755.6	(12.8)	42.9	301.8	60.9	180.0	286.8
Lafayette	130.8	109.9	n/a	(4.5)	81.7	8.3	239.1	407.7	157.5	380.0	412.5	47.8	n/a	488.9	96.3	1,162.5	536.6
Madison	28.3	(47.1)	33.3	125.5	180.7	(27.3)	33.3	120.2	45.0	36.6	128.4	(39.2)	76.9	197.6	5.3	111.3	111.7
Suwannee	86.7	27.1	(57.7)	108.0	68.1	66.5	115.4	158.6	97.6	121.5	308.5	13.3	465.0	124.2	85.6	159.8	188.0
Taylor	39.6	57.2	n/a	121.2	(2.7)	18.0	48.9	171.2	18.0	119.0	349.4	(48.0)	77.8	119.1	35.0	314.3	31.3
Union	70.9	(14.1)	88.9	6.5	133.0	53.1	221.4	75.0	91.3	281.8	90.9	(31.8)	n/a	50.0	23.9	170.0	130.1
Region	95.9	16.2	(27.9)	68.4	67.2	31.7	83.1	97.1	113.7	173.6	266.5	2.4	244.2	207.7	72.1	218.8	162.1
w/o Al Co	74.2	3.9	(31.8)	88.9	79.3	12.2	81.2	108.5	98.7	162.0	267.4	(11.4)	155.1	132.5	59.0	168.1	167.3
Florida	139.5	50.8	21.2	118.4	47.7	103.1	193.4	146.5	146.1	220.8	248.8	40.1	326.1	273.1	121.1	264.7	114.9

n/a = not available

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population: General Social and Economic Characteristics, Florida. Tables 47 & 123. Washington, D.C. 1972.

TABLE 2.12

PERCENTAGE OF NORTH CENTRAL FLORIDA EMPLOYMENT BY INDUSTRIAL SECTOR, 1970

Area	Ag Forestry & Fishing	Mining	Construc-tion	Manufacturing		Trans Comm & Public Utilities	Wholesale Trade	Retail Trade	Finance Insurance & Real Estate	Business & Repair Services	Personal Services	Entertain & Recreat Services	Health Services	Educa-tional Services	Other Services	Public Admin
				Non-Durable Goods	Durable Goods											
Alachua	3.1	0.2	6.8	3.2	4.3	5.1	2.3	17.1	3.9	2.1	5.8	0.7	9.0	26.7	4.9	4.7
Bradford	11.3	3.3	7.9	6.1	7.8	7.3	2.1	16.2	2.2	1.6	4.8	0.7	6.5	7.8	2.7	11.8
Columbia	7.2	0.9	7.7	3.5	12.4	6.1	2.4	17.1	3.3	2.4	7.7	0.5	9.6	8.9	4.1	6.2
Dixie	6.7	0.5	7.1	9.3	30.0	6.0	2.4	12.6	1.3	0.4	3.8	0.5	1.2	12.1	2.2	3.8
Gilchrist	18.5	0.3	12.5	5.3	11.7	8.6	2.4	8.7	2.1	2.4	3.0	0.8	6.8	9.5	4.1	3.3
Hamilton	17.8	7.2	6.4	8.7	5.9	3.6	6.9	17.9	0.4	0.3	7.6	0.5	2.2	9.1	1.0	4.4
Lafayette	28.6	0.0	14.5	7.7	13.2	2.5	1.4	11.5	1.1	0.9	2.5	0.0	2.0	8.8	0.9	4.5
Madison	22.9	0.1	3.9	6.4	14.1	5.2	1.9	13.7	1.9	1.6	5.4	0.5	3.4	11.8	2.6	4.5
Suwannee	17.6	3.0	7.2	7.9	5.6	6.5	2.6	16.4	4.1	1.7	5.9	0.4	5.2	8.8	2.9	4.2
Taylor	3.4	0.0	6.2	21.4	16.2	3.9	1.5	16.9	2.4	1.7	8.0	0.4	3.5	7.9	2.0	5.0
Union	11.6	0.5	7.1	5.6	7.3	3.6	1.2	11.2	1.1	2.3	5.6	0.0	10.9	9.6	2.1	20.3
Region	7.7	0.9	7.0	5.6	7.8	5.4	2.4	16.3	3.2	1.9	6.0	0.6	7.5	18.2	3.9	5.6
w/o Al Co	12.6	1.7	7.1	8.1	11.6	5.6	2.4	15.6	2.5	1.7	6.2	0.5	5.9	9.2	2.8	6.6
Florida	4.6	0.4	8.5	6.5	7.6	7.7	4.5	19.0	6.0	3.8	7.6	1.3	5.4	7.4	4.0	5.6

Source: U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population: General Social and Economic Characteristics, Florida. Tables 47 & 123. Washington, D.C. 1972.

Table 2.13 identifies the number of reporting units within the region. Reporting units are individual employment locations which are subject to the state's unemployment compensation law. For example, each supermarket in a supermarket chain is considered a separate reporting unit. An increase in the number of reporting units indicates an increase in the number of businesses. The number of reporting units is an important measure of economic stability. The more reporting units, the less likely the region will be adversely impacted should one unit lay off employees.

The region experienced a 55.9 percent increase in the number of reporting units between 1980 and 1999, and an 18.4 percent increase between 1990 and 1999. While the rate of growth was significant, the region lagged the statewide growth rate of 95.9 percent between 1980 and 1999, and 28.5 percent between 1990 and 1999. All north central Florida counties experienced an increase in reporting units between 1980 and 1999. For the 1990-1999 period, all north central Florida counties except Taylor experienced an increase in the number of reporting units. Alachua County experienced the largest increase in the number of new reporting units, rising from 3,023 in 1980 to 5,248 in 1999. Lafayette County experienced the largest percentage increase, rising by 87.7 percent between 1980 and 1999. Lafayette County also experienced the largest percentage increase of any north central Florida county during the 1990s, rising by 52.4 percent between 1990 and 1999.

TABLE 2.13

NORTH CENTRAL FLORIDA EMPLOYMENT REPORTING UNITS COVERED BY UNEMPLOYMENT COMPENSATION LAW 1980, 1990, AND 1999

Area	Number of Reporting Units			Percent Change		
	1980	1990	1999	1980-90	1990-99	1980-99
Alachua	3,023	4,302	5,248	42.3	22.0	73.6
Bradford	305	362	396	18.7	9.4	29.8
Columbia	799	957	1,166	19.8	21.8	45.9
Dixie	175	205	218	17.1	6.3	24.6
Gilchrist	124	165	208	33.1	26.1	67.7
Hamilton	184	170	208	(7.6)	22.4	13.0
Lafayette	73	90	137	23.3	52.2	87.7
Madison	285	325	365	14.0	12.3	28.1
Suwannee	451	548	610	21.5	11.3	25.3
Taylor	359	441	415	22.8	(5.9)	15.6
Union	91	143	156	57.1	9.1	71.4
Region	5,869	7,708	9,127	31.3	18.4	55.9
w/o Al Co	2,846	3,406	3,879	19.7	13.9	36.3
Florida	223,768	341,190	438,267	52.5	28.5	95.9

Sources: 1981 Florida Statistical Abstract, Table 6.14 & Agency for Workforce Innovation, and Office of Workforce Information Services, Labor & Market Statistics, ES202 Program.

LABOR FORCE CHARACTERISTICS[22]

As north central Florida's population has increased, so has the size of its labor force. Table 2.14 notes that the region's civilian labor force doubled in size, from 79,302 in 1970 to 161,062 in 1990.[23] Besides an increase in size, the labor force participation rate also rose during this time period, climbing from 55.0 percent in 1970 to 58.1 percent by 1990. The region's 1990 noninstitutionalized labor force participation rate is comparable to the statewide rate of 60.0 percent.

The counties which experienced the greatest increases in the size of their noninstitutionalized civilian labor force are the same counties which experienced the greatest population increases. Alachua County's labor force grew by 49,813 persons (121.3%) between 1970 and 1990. Alachua County also received the majority of the region's labor force increase (60.9%) during this period. Other north central Florida counties which experienced above-average percentage increases in their civilian labor force were Gilchrist (219.2%) and Lafayette (137.3%). Counties with noticeably below-average percentage increases in civilian labor force were the same counties which experienced below-average increases in population, including Madison (33.5%), Taylor (47.6%), and Hamilton (60.4%).

North central Florida 1990 labor force participation rates vary noticeably from county to county. Counties with above-average labor force participation rates include Union (65.5%), Alachua (63.6%), and Lafayette (61.8%).[24] Counties with below-average participation rates include Suwannee (55.5%), Gilchrist (57.2%), and Taylor (57.9%). Dixie County was the only north central Florida county to experience a decline in its labor force participation rate. In 1970, the Dixie County labor force participation rate was 51.0 percent. The Dixie County rate dropped to 46.9 percent in 1990, representing an 8.0 percent decline.

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[22]This section of the regional plan relies on labor force and population data developed by the decennial census to determine labor force participation rates. While more recent (1999) data on labor force size and unemployment rates are available from the Florida Department of Labor and Employment Security, reported in tables 2.20 through 2.22, updated information on population age 16 and over is not readily available. Therefore, this section of the element is limited to the review of labor force participation based on decennial census data from 1990 and earlier censuses.

[23]Civilian labor force is defined as noninstitutionalized civilians age 16 and over who, during the week of April 1st of the census year, either: (1) worked at any time during the reference week; (2) did not work during the reference week but had jobs or businesses from which they were temporarily absent (excluding layoff); (3) were on layoff; or (4) did not work during the reference week but who were looking for work during the last four weeks and were available for work during the reference week.

[24]The noninstitutionalized civilian labor force participation rate refers to the percentage of the noninstitutionalized civilian population age 16 and over which is part of the noninstitutionalized civilian labor force.

Simply put, the number of new jobs has not kept pace with the increase in population. As indicated in Table 2.10, the number of employed residents in the region grew by 74,002, or 95.9 percent, between 1970 and 1990. However, as indicated in Table 2.14, the civilian labor force increased by 81,760, or 103.1 percent, during this time period. When Alachua County is removed from consideration, the civilian labor force grew by 31,947 (83.5 percent); whereas, the number of employees grew by only 27,856 (74.2 percent).

TABLE 2.14

NORTH CENTRAL FLORIDA
CIVILIAN LABOR FORCE AND LABOR FORCE PARTICIPATION RATES
1970 - 1990

	Civilian Labor Force								
	Population			Percentage Change			Participation Rate[a]		
Area	1970	1980	1990	1970 to 1980	1980 to 1990	1970 to 1990	1970	1980	1990
Alachua	41,050	70,583	90,863	71.9	28.7	121.3	55.7	59.7	63.7
Bradford	4,985	7,258	8,669	45.6	19.4	73.9	56.5	55.5	60.1
Columbia	9,432	15,078	19,070	59.9	26.5	102.2	57.1	59.4	60.7
Dixie	1,821	2,668	3,639	46.5	36.4	99.8	51.0	49.0	46.9
Gilchrist	1,199	2,195	3,827	83.1	74.4	219.2	49.2	53.3	57.3
Hamilton	2,596	3,389	4,163	30.5	22.8	60.4	52.7	56.7	59.2
Lafayette	936	1,517	2,221	62.1	46.4	137.3	46.4	52.5	61.8
Madison	4,913	5,804	6,559	18.1	13.0	33.5	53.2	54.4	58.5
Suwannee	5,344	8,814	11,133	64.9	26.3	108.3	51.0	54.9	55.5
Taylor	5,023	7,168	7,413	42.7	3.4	47.6	55.3	59.7	57.9
Union	2,003	2,657	3,505	32.7	31.9	75.0	56.0	59.6	65.7
Region	79,302	127,131	161,062	60.3	26.7	103.1	55.0	58.2	58.1
w/o Al Co	38,252	56,548	70,199	47.8	24.1	83.5	54.1	56.5	53.2
Florida	2,521,245	4,217,665	6,167,236	67.3	37.4	144.6	52.0	55.8	60.0

[a]Per 100 noninstitutionalized civilians, age 16 and over. Civilian labor force and participation rates based upon individuals age 16 and over. Excludes inmates of institutions and military personnel.

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population. General Social and Economic Characteristics, Florida. Tables 67 & 176. Washington, D.C. 1982

U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population. General Social and Economic Characteristics, Florida. Tables 53 & 121. Washington, D.C. 1972.

OCCUPATION

Table 2.16 examines employment by occupation in 1990. The table suggests that the skill level of the region's work force, exclusive of Alachua County, is below-average in terms of technical training. When Alachua County is excluded from consideration, the region has a below-average percentage of persons employed in managerial and professional occupations (18.1 percent for the 10-county area compared with 25.2 percent statewide). In addition, the 10-county area has only 26.4 percent of its employed population in Technical, Sales, and Administrative Support occupations compared with 34.2 percent statewide. Conversely, the 10-county area has an above-average percentage of persons employed in Services (17.3 to 14.8, respectively) and Precision Operators, Fabricators, and Laborers (17.6 percent compared with 11.6 percent statewide).

North central Florida counties with the lowest percentage of persons employed in managerial and professional occupations in 1990 were Lafayette (13.5%), Hamilton (14.8%), and Dixie (16.0%). Counties with the highest 1990 percentage of persons employed in the Precision Operators, Fabricators, and Laborers's category were Hamilton (23.0%), Taylor (22.4%), Madison (20.7%), and Dixie (20.3%).

Between 1970 and 1990, the percentage of north central Florida residents employed in skilled occupations grew (see tables 2.15 and 2.16). In 1970, only 7.9 percent (7.2 percent excluding Alachua County) of the region's employed population were in professional and managerial occupations. By 1990, the percentage had grown to 28.3 percent (18.1 percent excluding Alachua County). Conversely, the percentage of north central Florida residents employed in lower-skilled occupations such as Precision Operators, Fabricators, and Laborers declined from 17.5 percent (22.3 percent excluding Alachua County) in 1970 to 11.6 percent (17.6 percent excluding Alachua County).

Table 2.16 reveals the rural nature of north central Florida employment opportunities and suggests the region has a higher percentage of unskilled laborers than statewide. Alachua County, due to its heavy reliance upon state employees at the University of Florida, its regional hospitals, and other state employees has a higher-than-average percentage of persons in managerial and professional occupations. Approximately 36.1 percent of the county's workforce was employed in managerial and professional occupations in 1990. However, when Alachua County is removed from consideration, the region has a below- average percentage of persons (18.1 percent) employed in this occupational category.

Employment skill level should not be confused with educational attainment. Despite the preponderance of low-skilled jobs in the region, the percentage of the region's 1990 adult population with either some college or four or more years of college was comparable to the statewide averages. As indicated in Table 2.17, 23.0 percent of the region's 1990 adult population had at least some college, compared with 26.0 percent statewide. The region's 1990 proportion of adults with four or more years of college (21.2%) was higher than the statewide average (17.9%). When Alachua County is removed from consideration, however, the remaining 10-county area's percentage of adults with some college declines to 19.9 percent and the percentage with four or more years of college drops to 8.8 percent.

TABLE 2.15

NORTH CENTRAL FLORIDA EMPLOYMENT BY OCCUPATION, 1970

	Number							Percent					
Area	Total	Managerial Professional	Technical Sales Admin Support	Services	Farming Forestry Fishing	Precision Production Craft Repair	Operators Fabricators Laborers	Managerial Professional	Technical Sales Admin Support	Services	Farming Forestry Fishing	Precision Production Craft Repair	Operators Fabricators Laborers
Alachua	39,639	3,374	19,988	6,045	1,002	4,071	5,159	8.5	50.4	15.3	2.5	10.3	13.0
Bradford	4,763	356	1,423	821	450	717	996	7.5	29.9	17.2	9.4	15.1	20.9
Columbia	9,134	756	3,184	1,624	483	1,460	1,627	8.3	34.9	17.8	5.3	16.0	17.8
Dixie	1,764	122	418	209	52	317	646	6.9	23.7	11.8	2.9	18.0	36.6
Gilchrist	1,154	38	306	160	209	225	216	3.3	26.5	13.9	18.1	19.5	18.7
Hamilton	2,584	199	562	352	411	320	740	7.7	21.7	13.6	15.9	12.4	28.6
Lafayette	919	53	210	95	253	168	140	5.8	22.9	10.3	27.5	18.3	15.2
Madison	4,773	275	1,204	639	1,015	455	1,185	58.0	25.2	13.4	21.3	9.5	24.8
Suwannee	5,585	413	1,626	849	916	740	1,041	7.4	29.1	15.2	16.4	13.2	18.6
Taylor	4,908	363	1,540	713	86	817	1,389	7.4	31.4	14.5	1.8	16.6	28.3
Union	1,950	144	449	492	198	275	392	7.4	23.0	25.2	10.2	14.1	20.1
Region	77,173	6,093	30,910	11,999	5,075	9,565	13,531	7.9	40.1	15.5	6.6	12.4	17.5
w/o Al Co	37,534	2,719	10,922	5,954	4,073	5,494	8,372	7.2	29.1	15.9	10.9	14.6	22.3
Florida	2,426,268	228,885	979,798	363,161	77,313	351,331	425,780	9.4	40.4	15.0	3.2	14.5	17.5

Source: U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population: General Social and Economic Characteristics, Florida, Tables 54 & 122, Washington, D.C. 1972.

TABLE 2.16

NORTH CENTRAL FLORIDA EMPLOYMENT BY OCCUPATION, 1990

	Number							Percent						
Area	Total	Managerial Professional	Technical Sales Admin Support	Services	Farming Forestry Fishing	Precision Production Craft Repair	Operators Fabricators Laborers	Managerial Professional	Technical Sales Admin Support	Services	Farming Forestry Fishing	Precision Production Craft Repair	Operators Fabricators Laborers
Alachua	85,785	30,940	28,456	12,017	1,742	6,545	6,085	36.1	33.2	14.0	2.0	7.6	7.1
Bradford	8,251	1,532	2,327	1,669	289	1,156	1,278	18.6	28.2	20.2	3.5	14.0	15.5
Columbia	17,569	3,620	5,207	2,893	661	2,520	2,668	20.6	29.6	16.5	3.8	14.3	15.2
Dixie	3,335	533	799	675	289	361	678	16.0	24.0	20.2	8.7	10.8	20.3
Gilchrist	3,572	640	959	447	365	574	587	17.9	26.8	12.5	10.2	16.1	16.4
Hamilton	3,807	564	780	745	308	536	874	14.8	20.5	19.6	8.1	14.1	23.0
Lafayette	2,121	287	481	314	517	173	349	13.5	22.7	14.8	24.4	8.2	16.5
Madison	6,124	1,106	1,478	994	540	738	1,268	18.1	24.1	16.2	8.8	12.1	20.7
Suwannee	10,429	1,722	2,782	1,606	1,088	1,524	1,707	16.5	26.7	15.4	10.4	14.6	16.4
Taylor	6,850	1,291	1,637	1,015	259	1,117	1,531	18.8	23.9	14.8	3.8	16.3	22.4
Union	3,332	547	794	939	201	281	570	16.4	23.8	28.2	6.0	8.4	17.1
Region	151,175	42,782	45,700	23,314	6,259	15,525	17,595	28.3	30.2	15.4	4.1	10.3	11.6
w/o Al Co	65,390	11,842	17,244	11,297	4,517	8,980	11,510	18.1	26.4	17.3	6.9	13.7	17.6
Florida	5,810,467	1,466,762	1,984,668	860,316	153,286	670,385	675,050	25.2	34.2	14.8	2.6	11.5	11.6

Source: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida. Washington, D.C. 1992.

Between 1970 and 1990 the region experienced a 14.7 percent increase in the percentage of adults with a high school degree, a 62.6 percent increase in the percentage of adults with some college, and a 33.3 percent increase in the percentage of adults with four or more years of college. The region's rate of increase in the percentage of adults with some college was comparable to the statewide increase of 65.6 percent. However, the region's 36.0 percent increase in the percentage of the adult population with four or more years of college lagged the statewide increase of 59.7 percent.

TABLE 2.17

NORTH CENTRAL FLORIDA EDUCATIONAL ATTAINMENT[a]

Area	1990 Percent of Population Age 25 and Over					Percent Change in Population Age 25 and Over, 1970-1990				
	Below 9th	9th-12th No Diploma	High School Graduate	Some College	4 Years or More College	Below 9th	9th-12th No Diploma	High School Graduate	Some College	4 Years or More College
Alachua	6.0	11.3	21.7	26.4	34.6	(305.6)	(40.3)	(13.1)	53.7	33.3
Bradford	14.3	20.7	36.8	20.1	8.1	(174.9)	(16.3)	30.1	68.0	44.8
Columbia	11.9	19.1	33.5	24.5	11.0	(209.7)	(2.9)	17.5	69.1	25.0
Dixie	16.8	25.5	33.0	18.6	6.2	(181.3)	27.5	24.5	79.8	8.3
Gilchrist	15.8	21.2	33.6	21.9	7.4	(213.4)	11.0	30.4	75.1	63.2
Hamilton	18.3	23.3	37.7	13.6	7.0	(182.7)	31.9	39.9	69.8	21.4
Lafayette	20.0	21.8	37.4	15.6	5.2	(163.7)	33.0	37.8	69.9	8.4
Madison	19.0	24.5	29.3	17.5	9.7	(162.3)	18.1	38.1	71.0	28.3
Suwannee	15.6	20.7	37.6	17.9	8.2	(192.8)	(0.6)	39.0	71.6	32.1
Taylor	15.1	22.8	36.2	16.0	9.8	(184.0)	9.5	30.9	68.9	35.2
Union	11.6	20.6	36.0	23.8	7.9	(246.1)	(25.1)	31.5	74.9	58.5
Region	10.6	16.5	28.6	23.0	21.2	(228.4)	(11.8)	14.7	62.6	36.0
w/o Al Co	14.9	21.4	35.0	19.9	8.8	(190.4)	3.7	30.6	71.1	32.1
Florida	9.5	16.1	30.1	26.0	17.9	(251.9)	(34.3)	3.6	65.6	59.7

[a]by highest level of educational attainment achieved.

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida. Washington, D.C., 1992.

U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population: General Social and Economic Characteristics, Florida. Tables 46 & 120. Washington, D.C., 1972.

INCOME AND POVERTY

North central Florida residents have historically experienced, and continue to experience, below-average incomes and above-average poverty rates when compared with statewide averages.[25] Table 2.18 reveals that north central Florida 1989 per capita income was $11,083, 24.6 percent less than the statewide figure of $14,687. No north central Florida county reported a per capita income figure above the statewide average. When Alachua County's $12,252 per capita income, the only north central Florida county with a 1989 per capita income above the regional average, is removed from consideration, the per capita income for the remaining 10-county area drops to $9,853, which is 33.0 percent below the statewide average.

Regional per capita income increased at approximately the same rate as statewide between 1969 and 1989. Regional per capita income increased by 364.6 percent compared with 367.6 percent statewide during this period. North central Florida counties experiencing above-average increases in per capita income include Union (536.4%), Madison (443.1%), Gilchrist (413.8%), Bradford (411.3%), and Hamilton (404.0%). Six counties experienced a below-average rate of increase in per capita income. Columbia County had the smallest increase in per capita income at 343.3 percent.

As indicated in Table 2.18, while north central Florida poverty rates have declined, the region's percentage of population living in poverty remains high. In 1969, fully 25.9 percent of the region's population for whom poverty status was determined lived below the poverty level.[26] By 1989, the percentage had dropped to 21.3 percent. The decline represents a 12.7 percent drop in the percentage of the region's population comprised of persons living below the poverty level. The regional decline was less than experienced statewide. The percentage of Florida's population comprised of persons living below the poverty line declined by 22.6 percent for this period, from 16.4 percent in 1969 to 12.7 percent in 1989. Despite the percentage decline in total population living in poverty, the actual number of north central Florida residents living below the poverty level increased by 29.3 percent from 52,047 in 1969 to 75,278 by 1989. The percentage increase in the number of north central Florida residents living in poverty was lower than the 32.3 percent increase experienced statewide during this period.

[25]Poverty is as defined by the Bureau of the Census. 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 3 of 3, pages B-27 through B-29, Washington, D.C., 1992.

[26]Excluding inmates of institutions, persons in military quarters and in college dormitories, and unrelated individuals under 15 years of age.

Alachua County was the only north central Florida county to experience an increase in the percentage of total population living below the poverty level. Alachua County's percentage increased from 22.1 in 1969 to 23.5 by 1989, an increase of 6.3 percent. Suwannee and Madison counties experienced the largest declines in terms of percentage of population living in poverty, declining by 42.1 and 34.1 percent, respectively, for this period.
Five north central Florida counties experienced an increase in the number of persons living in poverty between 1969 and 1989. North central Florida counties experiencing the largest increases, in terms of percentage of total county population between 1969 and 1989, were Alachua (47.1%), Dixie (44.2%), and Gilchrist (44.1%). Six counties experienced decreases in the number of persons living in poverty. North central Florida counties experiencing the largest decreases, in terms of percentage of total county population, were Hamilton (-8.8%) and Taylor (-6.7%) counties.

Table 2.19 examines north central Florida median household income between 1969 and 1989. Unlike per capita income, the rate of increase in north central Florida median household income has not kept pace with statewide trends. In 1969, the region's median household income of $7,376 was higher than the statewide median income of $6,476. By 1989, the region's median household income was $21,489, 21.8 percent below the statewide median income of $27,483. During the 1970s, the rate of increase in the region's median household income was 67.7 percent compared with 73.7 percent during the 1980s. The regional rates of increase were less than the statewide increases of 126.6 percent during the 1970s and 87.3 percent during the 1980s.

While the region's rate of increase in median household income slowed during the 1980s, the actual dollar increase was larger during the 1980s than the 1970s. As derived from Table 2.19, the increase in regional median household income during the 1970s was $4,993, whereas the 1980s increase was $9,120. The region lagged statewide increases of $8,199 during the 1970s and $12,808 in the 1980s.

TABLE 2.18

NORTH CENTRAL FLORIDA INCOME AND POVERTY, 1969, 1979 AND 1989 [a]

Area	1969			1979			1989			Percent Change, 1969-1989		
	Per Capita Income	Population Below Poverty Level	Percent Below Poverty Level	Per Capita Income	Population Below Poverty Level	Percent Below Poverty Level	Per Capita Income	Population Below Poverty Level	Percent Below Poverty Level	Per Capita Income	Population Below Poverty Level	Percent Below Poverty Level
Alachua	2,717	21,179	22.1%	6,094	33,365	23.5%	12,252	40,073	23.5	350.9	47.1	6.3
Bradford	2,012	3,157	23.8%	4,813	3,570	19.8%	10,287	3,023	15.8	411.3	(4.4)	(33.6)
Columbia	2,329	6,056	24.3%	5,702	6,844	19.4%	10,324	8,588	20.6	343.3	29.5	(15.2)
Dixie	1,904	1,531	28.0%	4,690	1,851	25.2%	8,527	2,743	27.4	347.8	44.2	(2.8)
Gilchrist	1,886	853	24.2%	4,804	1,082	19.3%	9,690	1,527	17.5	413.8	44.1	(27.7)
Hamilton	1,756	2,059	38.7%	4,350	2,310	26.6%	8,851	2,725	27.8	404.0	(8.8)	(28.2)
Lafayette	1,978	880	30.5%	4,934	862	21.4%	8,966	1,140	23.8	353.3	22.8	(22.0)
Madison	1,791	5,187	39.3%	4,205	4,485	30.2%	9,727	3,920	25.9	443.1	(32.8)	(34.1)
Suwannee	2,281	5,224	34.0%	4,908	5,237	23.9%	9,768	5,158	19.7	328.2	(1.3)	(42.1)
Taylor	2,334	3,774	27.8%	5,718	3,650	22.2%	10,331	3,536	20.8	342.6	(6.7)	(25.2)
Union	1,516	1,241	23.0%	3,703	1,056	17.9%	9,648	1,219	15.8	536.4	(1.8)	(31.3)
Region	2,385	52,047	25.9%	5,545	64,312	23.0%	11,083	75,278	21.3	364.6	29.3	(17.7)
W/o Al Co.	2,070	30,868	29.3%	4,975	30,947	22.4%	9,853	35,205	19.5	375.9	8.1	(33.7)
Florida	3,143	1,085,250	16.4%	7,260	1,287,056	12.5%	14,698	1,604,186	12.7	367.6	32.3	(22.6)

[a]Population below poverty level excludes inmates of institutions, persons in military quarters and in college dormitories, and unrelated individuals under 15 years.

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population. General Social and Economic Characteristics, Florida. Tables 68, 69, 124, & 125, Washington, D.C. 1982.

U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population. General Social and Economic Characteristics, Florida. Tables 57, 58, & 124. Washington, D.C. 1972.

TABLE 2.19

NORTH CENTRAL FLORIDA MEDIAN HOUSEHOLD INCOME, 1969, 1979, AND 1989

	Median Household Income			Percent Change		
Area	**1969**	**1979**	**1989**	**1969-79**	**1979-89**	**1969-89**
Alachua	8,329	12,354	22,084	48.3	78.8	165.1
Bradford	6,905	11,816	24,625	71.1	108.4	256.6
Columbia	7,354	12,794	21,961	74.0	71.7	198.6
Dixie	5,666	9,631	15,380	70.0	59.7	171.4
Gilchrist	6,213	10,778	20,632	73.5	91.4	232.1
Hamilton	5,733	10,565	18,709	84.3	77.1	226.3
Lafayette	5,638	11,090	20,744	96.7	87.1	267.9
Madison	5,743	10,169	18,153	77.1	78.5	216.1
Suwannee	5,903	12,775	19,775	116.4	54.8	235.0
Taylor	6,814	15,784	21,380	131.6	35.5	238.5
Union	6,317	14,506	22,831	129.6	57.4	261.4
Region[a]	7,376	12,369	21,489	67.7	73.7	191.3
W/O Al Co[a]	6,467	12,385	20,780	91.5	67.8	221.3
Florida	6,476	14,675	27,483	126.6	87.3	324.4

[a]Regional totals represent the weighted statistical mean of county median values.

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Florida, Summary Tape File 3A. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population. General Social and Economic Characteristics, Florida. Tables 71 & 180. Washington, D.C. 1982.

University of Florida, Bureau of Economic and Business Research, 1983 Florida Statistical Abstract, Table 2.05. Gainesville, Fl, 1983.

U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population. Characteristics of the Population, Florida. Table 44. Washington, D.C. 1972.

UNEMPLOYMENT

Between 1980 and 1999, north central Florida experienced unprecedented reductions in unemployment. Not only did the regional unemployment rate decline from 5.5 percent in 1980 to 4.3 percent in 1999, the total number of unemployed individuals declined. Furthermore, the number of unemployed individuals declined during a period of a growing labor force. As indicated in Table 2.22, the region's 1980 unemployed totaled 6,929. By 1999, the number of unemployed had dropped by 18.0 percent to 5,680. During the same period, the region's labor force increased by 36.5 percent.

The most significant declines in unemployment rates occurred in Lafayette and Alachua counties, where unemployment rates declined by 64.0 and 56.3 percent, respectively. Only two counties, Hamilton and Taylor, experienced increased unemployment rates between 1980 and 1999. The Hamilton County unemployment rate increased by 26.5 percent (from 5.2 percent in 1980 to 6.5 percent in 1999), while the Taylor County unemployment rate increased by 13.6 percent (from 6.8 percent in 1980 to 7.7 percent in 1999). The higher unemployment rates in these two counties are attributable to layoffs at Buckeye Cellulose in Taylor County, and Phosphate Corporation of Saskatchewan (PCS) in Hamilton County, both of which are the largest employers within their respective counties.

The most significant reductions in the number of unemployed persons occurred in Alachua and Union counties. Alachua County's total unemployed persons dropped by 39.0 percent, from 3,688 in 1980 to 2,248 in 1999. Union County's total unemployed persons declined by 37.5 percent, from 144 in 1980 to 90 in 1999.

The statewide unemployment rate dropped from 5.9 percent in 1980 to 3.9 percent in 1999. However, unlike the region, the number of unemployed persons increased by 13.4 percent, from 250,147 in 1980 to 284,000 in 1999.

TABLE 2.20

NORTH CENTRAL FLORIDA UNEMPLOYMENT RATES, 1980, 1990, AND 1999 (PERCENT)

	Unemployment Rate			Percent Change		
Area	**1980**	**1990**	**1999**	**1980-90**	**1990-99**	**1980-99**
Alachua	4.9	3.4	2.1	(31.1)	(36.5)	(56.3)
Bradford	4.9	4.6	3.3	(6.6)	(27.6)	(32.4)
Columbia	6.1	8.3	4.3	35.8	(47.7)	(29.0)
Dixie	6.6	7.2	5.1	10.2	(28.8)	(21.5)
Gilchrist	4.2	6.3	3.9	49.9	(38.6)	(8.0)
Hamilton	5.2	8.4	6.5	61.9	(21.9)	26.5
Lafayette	6.1	5.7	2.2	(6.4)	(61.5)	(64.0)
Madison	4.8	7.4	3.7	55.1	(49.7)	(22.0)
Suwannee	5.4	8.0	4.0	48.0	(49.6)	(25.4)
Taylor	6.8	10.1	7.7	49.0	(23.8)	13.6
Union	3.5	4.1	2.7	16.0	(34.8)	(24.4)
Region	5.1	5.1	3.1	0.0	(39.9)	(39.9)
W/o Al Co	5.5	7.4	4.3	36.1	(41.4)	(20.3)
Florida	5.9	5.9	3.9	1.3	(35.1)	(34.3)

Sources: 1983, 1993, & 2000 Florida Statistical Abstract, Tables 6.10 & 6.11.

TABLE 2.21

NORTH CENTRAL FLORIDA LABOR FORCE, 1980, 1990, AND 1999

	Labor Force			Percent Change		
Area	**1980**	**1990**	**1999**	**1980-90**	**1990-99**	**1980-99**
Alachua	75,578	98,921	105,303	30.9	6.5	39.3
Bradford	8,006	10,272	9,613	28.3	(6.4)	20.1
Columbia	14,251	19,824	24,443	39.1	23.3	71.5
Dixie	2,926	3,886	3,729	32.8	(4.0)	27.4
Gilchrist	2,815	3,536	4,446	25.6	25.7	57.9
Hamilton	5,203	3,787	3,365	(27.2)	(11.1)	(35.3)
Lafayette	1,041	2,702	3,030	159.6	12.1	191.1
Madison	6,160	7,728	7,168	25.5	(7.2)	16.4
Suwannee	8,448	11,427	12,942	35.3	13.3	53.2
Taylor	6,487	9,346	6,801	44.1	(27.2)	4.8
Union	4,101	4,101	3,391	0.0	(17.3)	(17.3)
Region	135,016	175,530	184,231	30.0	5.0	36.5
W/o Al Co	59,438	76,609	78,928	28.9	3.0	32.8
Florida	4,267,054	6,365,245	7,366,000	49.2	15.7	72.6

Sources: 1983, 1993, & 2000 Florida Statistical Abstract, Tables 6.10 & 6.11.

TABLE 2.22

NORTH CENTRAL FLORIDA UNEMPLOYMENT
PERSONS UNEMPLOYED IN 1980, 1990, AND 1999

	Unemployed Persons			Percent Change		
Area	**1980**	**1990**	**1999**	**1980-90**	**1990-99**	**1980-99**
Alachua	3,688	3,325	2,248	(9.8)	(32.4)	(39.0)
Bradford	394	472	320	19.8	(32.2)	(18.8)
Columbia	871	1,645	472	88.9	(35.6)	21.7
Dixie	192	281	1,645	46.4	(31.7)	0.0
Gilchrist	119	224	281	88.2	(22.8)	45.4
Hamilton	269	317	224	17.8	(30.6)	(18.2)
Lafayette	63	153	317	142.9	(56.9)	4.8
Madison	293	570	153	94.5	(53.3)	(9.2)
Suwannee	455	911	570	100.2	(42.9)	14.3
Taylor	441	947	911	114.7	(44.6)	19.0
Union	144	167	90	16.0	(46.1)	(37.5)
Region	6,929	9,012	5,680	30.1	(37.0)	(18.0)
W/o Al Co	3,241	5,687	3,432	75.5	(39.7)	5.9
Florida	250,147	378,392	284,000	51.1	(24.9)	13.4

Sources: 1983, 1993, & 2000 Florida Statistical Abstract, Tables 6.10 & 6.11.

Table 2.23 presents 1970, 1980, and 1990 unemployment rates by race and sex. As is the case statewide, north central Florida had markedly higher 1990 unemployment rates for black males and females than their white counterparts during this period. The discrepancy between black and white unemployment rates increased between 1970 and 1990. The 1970 regional unemployment rate for white males and females was 2.4 and 3.7 percent, respectively; whereas, the 1970 unemployment rate for black males and females was 2.4 and 5.9 percent. By 1980 the regional unemployment rate for black females soared to 10.2 percent, while the unemployment rate for black males was 5.3 percent. The 1980 unemployment rate for black males was 23.3 percent higher than the white male unemployment rate of 4.3 percent. By 1990, a large discrepancy in unemployment rates existed between white and black males, with blacks experiencing rates of unemployment twice as great as experienced by whites. The 1990 regional unemployment rate for white males and females was 5.1 and 5.3 percent, respectively, compared with 11.3 percent for black males and 12.5 percent for black females. North central Florida counties with higher than average 1990 unemployment rates among

black males include Dixie (21.0%), Columbia (15.7%), and Suwannee (14.0%). Counties with above-average 1990 unemployment rates for black females include Gilchrist (35.2%), Taylor (19.7%), and Lafayette (18.4%).

TABLE 2.23

NORTH CENTRAL FLORIDA UNEMPLOYMENT RATES BY RACE AND SEX, 1970, 1980, AND 1990 (PERCENT)

	1970				1980				1990			
Area	Whites & Other Males	Whites & Other Females	Black Males	Black Females	White Males	White Females	Black Males	Black Females	White Males	White Females	Black Males	Black Females
Alachua	2.9	4.0	2.2	5.3	3.9	4.7	4.7	10.5	5.3	4.2	9.6	11.5
Bradford	2.4	6.5	4.2	10.2	5.0	8.5	8.5	12.2	4.4	4.7	10.3	3.6
Columbia	2.3	3.3	3.6	6.7	3.7	4.8	4.8	10.9	6.4	7.6	15.7	13.1
Dixie	2.6	4.3	0.0	8.8	7.4	8.3	8.3	7.4	4.7	11.3	21.0	17.0
Gilchrist	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.4	7.0	6.7	35.2
Hamilton	0.0	1.5	0.0	0.9	3.9	4.2	4.2	9.3	7.3	4.7	13.2	17.7
Lafayette	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.1	7.3	5.3	18.4
Madison	1.9	1.8	2.1	6.9	3.6	4.7	4.7	8.1	2.5	4.7	12.8	14.1
Suwannee	1.8	1.8	5.1	0.6	4.1	5.6	5.6	9.0	4.2	6.2	14.0	15.0
Taylor	1.4	2.9	1.2	7.2	4.0	7.4	7.4	12.3	4.8	8.7	10.1	19.7
Union	0.0	2.5	0.0	18.7	4.9	7.6	7.6	7.4	3.6	4.8	9.9	2.9
Region[a]	2.4	3.7	2.4	5.9	4.1	5.3	5.3	10.2	5.1	5.3	11.3	12.5
W/O Al Co[a]	1.8	3.2	2.6	6.4	4.3	6.1	9.9	15.1	4.9	6.8	13.3	14.2
Florida	3.0	4.3	4.4	6.2	4.1	5.1	5.1	8.1	4.8	5.0	11.7	11.5

n/a = not available

[a]Excluding Gilchrist and Lafayette counties for the years 1970 and 1980.

Sources: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 3A, Florida. Washington, D.C. 1992.

U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population: General Social and Economic Characteristics, Florida. Tables 77 & 184. Washington, D.C. 1982.

U.S. Department of Commerce, Bureau of the Census, 1970 Census of Population: General Social and Economic Characteristics, Florida. Tables 53, 121, & 126. Washington, D.C. 1972.

LOCAL GOVERNMENT TAX BASE

The taxable value of every north central county is considerably below the statewide average. In fact, the region's taxable value is so low that the combined taxable value of all 11 north central Florida counties is less than that of the average Florida county. Table 2.24 reveals the region's 1999 taxable value was $8,002,607,000, which was 90.1 percent of the average Florida county taxable value of $8,878,274,582. The rate of increase in north central Florida taxable value lagged statewide trends between 1980 and 1990. However, the region began to catch up with the statewide growth rate during the 1990s, rising by 67.9 percent compared to a statewide growth rate of 50.2 percent.

TABLE 2.24

NORTH CENTRAL FLORIDA TAXABLE VALUE, 1980-1999
(THOUSANDS OF DOLLARS)

Area	1980	1990	1999	1980-90	1990-99	1980-99
Alachua	1,227,080	2,789,990	4,790,892	127.4	71.7	290.4
Bradford	113,888	214,351	340,636	88.2	58.9	199.1
Columbia	251,907	499,036	900,656	98.1	80.5	257.5
Dixie	71,815	140,155	187,853	95.2	34.0	161.6
Gilchrist	63,238	116,727	195,275	84.6	67.3	208.8
Hamilton	81,333	158,635	255,631	95.0	61.1	214.3
Lafayette	46,647	63,589	96,026	36.3	51.0	105.9
Madison	100,103	155,543	246,673	55.4	58.6	146.4
Suwannee	152,802	262,671	473,231	71.9	80.2	209.7
Taylor	159,878	312,593	410,773	95.5	31.4	156.9
Union	28,069	52,067	104,961	85.5	101.6	273.9
Region	2,296,760	4,765,357	8,002,607	107.5	67.9	248.4
W/O Al Co	1,069,680	1,975,367	3,211,715	84.7	62.6	200.3
Florida	139,262,653	396,038,215	594,844,397	184.4	50.2	327.1

Source: 1981-2000 Florida Statistical Abstract, Table 23.91.

The disparity in taxable values between north central Florida and the average Florida county is even more pronounced when factoring in variations in county population or geographic size. Table 2.25 takes into account variations in county size by reporting county taxable value on a per square mile basis. The table shows that no north central Florida county has a per square mile taxable value greater than the statewide average. In fact, Alachua County, with the highest per square mile taxable

value in the region, is 70 percent of the statewide average. Excluding Alachua County, no north central Florida county has a per square mile taxable value greater than one-fifth the statewide average.

TABLE 2.25

NORTH CENTRAL FLORIDA TAXABLE VALUE PER SQUARE MILE OF LAND AREA (THOUSANDS OF DOLLARS)

	Taxable Value			Percent Change		
Area	**1980**	**1990**	**1999**	**1980-90**	**1990-99**	**1980-99**
Alachua	1,404	3,191	5,480	127.4	71.7	290.4
Bradford	388	731	1,162	88.2	58.9	199.1
Columbia	316	626	1,130	98.1	80.5	257.5
Dixie	102	199	267	95.2	34.0	161.6
Gilchrist	181	335	560	84.6	67.3	208.8
Hamilton	158	308	497	95.0	61.1	214.3
Lafayette	86	117	177	36.3	51.0	105.9
Madison	145	225	357	55.4	58.6	146.4
Suwannee	222	382	688	71.9	80.2	209.7
Taylor	153	300	394	95.5	31.4	156.9
Union	117	217	437	85.5	101.6	273.9
Region	341	707	1,188	107.5	67.9	248.4
w/o Al Co	182	337	548	84.7	62.6	200.3
Florida	2,582	7,343	7,812	184.4	50.2	327.1

Source: 1982, 1991, 1994, 2000 Florida Statistical Abstract, Tables 2.2 & 23.91.

North central Florida's per capita taxable value also lags the state average. As indicated in Table 2.26, the region's taxable value per capita, excluding Alachua County, has been less than one-half the statewide average since 1980. As with taxable value per square mile, north central Florida taxable value per capita has increased faster than the statewide average between 1990 and 1999. As indicated in Table 2.26, the region's taxable value per capita increased by 37.1 percent during the 1990s, compared to 26.8 percent statewide.

TABLE 2.26

NORTH CENTRAL FLORIDA TAXABLE VALUE PER CAPITA (DOLLARS)

Area	Taxable Value per Capita			Percent Change		
	1980	1990	1999	1980-90	1990-99	1980-99
Alachua	8,106	15,363	22,160	89.5	44.2	173.4
Bradford	5,688	9,527	13,358	67.5	40.2	134.9
Columbia	7,116	11,715	15,941	64.6	36.1	124.0
Dixie	9,265	13,222	13,915	42.7	5.2	50.2
Gilchrist	10,966	12,034	14,573	9.7	21.1	32.9
Hamilton	9,284	14,554	17,752	56.8	22.0	91.2
Lafayette	11,561	11,355	13,718	(1.8)	20.8	18.7
Madison	6,721	9,370	12,585	39.4	34.3	87.3
Suwannee	6,856	9,801	13,757	43.0	40.4	100.6
Taylor	9,671	18,280	20,746	89.0	13.5	114.5
Union	2,761	5,055	7,606	83.1	50.5	175.5
Region	7,733	13,450	18,435	73.9	37.1	138.4
w/o Al Co	7,346	11,438	14,739	55.7	28.9	100.6
Florida	14,298	30,611	38,823	114.1	26.8	171.5

Source: 1982, 1991, 1994, & 2000 Florida Statistical Abstract, Tables 2.2 & 23.91.

The principal reason for the region's low taxable value is the relatively low market value of rural lands when compared with urban land values of the more developed areas of the state. State property tax exemptions exacerbate the regional disparity. Table 2.27 reveals that the percentage of assessed value that is taxable is low for north central Florida counties.

In 1999, only 47.4 percent of north central Florida assessed value was taxable, compared to 72.1 percent statewide. Furthermore, the gap between taxable and assessed values for north central Florida counties has remained relatively constant between 1980 and 1999, rising from 45.7 percent in 1980 to 47.4 percent in 1999.

TABLE 2.27

NORTH CENTRAL FLORIDA TAXABLE VALUE
PERCENT OF ASSESSED VALUE WHICH IS TAXABLE, 1980-1999

	Percent			Percent Change		
Area	**1980**	**1990**	**1999**	**1980-90**	**1990-99**	**1980-99**
Alachua	52.8	51.6	51.4	(2.3)	(0.4)	(2.7)
Bradford	44.0	38.0	46.8	(13.7)	23.2	6.3
Columbia	46.2	44.7	48.9	(3.3)	9.3	5.7
Dixie	42.6	31.8	39.9	(25.2)	25.5	(6.2)
Gilchrist	32.1	34.1	37.4	6.2	9.6	16.4
Hamilton	37.8	45.2	51.7	19.6	14.4	36.8
Lafayette	49.5	28.1	34.7	(43.3)	23.6	(29.9)
Madison	31.6	36.9	40.2	16.6	8.9	27.0
Suwannee	34.7	42.1	44.6	21.0	6.1	28.4
Taylor	45.6	43.8	46.6	(3.9)	6.3	2.2
Union	24.7	25.7	15.4	4.0	(40.0)	(37.6)
Region	45.7	45.8	47.4	0.1	3.5	3.6
w/o Al Co	39.6	39.5	42.4	(0.4)	7.4	7.0
Florida	70.1	71.5	72.1	2.1	0.8	2.9

Source: 1982, 1991, 1994, & 2000 Florida Statistical Abstract, Table 23.91.

INDUSTRY SPOTLIGHT

The following section of the Economic Development Conditions and Trends Statement focuses on four historically-important north central Florida industries: agriculture, fishing and shellfish harvesting, silviculture, and mining. The section also spotlights two promising areas for future economic development: tourism and export manufacturing.

AGRICULTURE

North central Florida farms produce below-average incomes when compared to farms statewide. Table 2.28 reveals that north central Florida farms produce less than half the statewide income on a per acre basis, an average of $96.70 per acre in 1997, compared to the statewide per acre income of $207.50. However, the region is gaining on statewide trends. North central Florida experienced an 18.5 percent increase in farm income per acre between 1987 and 1997; whereas, a 5.8 percent decline was experienced statewide for the same period. Another measure of farm income is presented in Table 2.29, which measures total farm income on a place-of-work basis. As indicated by the table, north central Florida total farm income increased between 1987 and 1997; whereas, statewide, total farm income decreased.

While north central Florida farm income has increased, the amount of land in farms has decreased. Between 1982 and 1997, north central Florida farm acreage, as presented in Table 2.30, decreased by 28.1 percent, which is a greater rate of decline than the 18.4 percent decrease experienced statewide. However, between 1987 and 1997, the rate of farm acreage loss in the region was similar to statewide trends.

TABLE 2.28

NORTH CENTRAL FLORIDA FARM INCOME PER ACRE, 1982 - 1997

Area	Year (Dollars)				Percent Change		
	1982	1987	1992	1997	1982-92	1987-97	1982-97
Alachua	$65	$101	$102	$96	56.5	(5.0)	46.5
Bradford	58.1	153.2	98.0	109.3	68.5	(28.6)	88.1
Columbia	50.1	53.1	73.0	49.3	45.6	(7.2)	(1.7)
Dixie	6.6	28.6	26.7	47.4	305.3	65.6	619.2
Gilchrist	43.5	182.3	122.9	20.3	182.3	(88.8)	(53.3)
Hamilton	63.1	15.1	157.8	223.0	150.0	1,357.8	253.2
Lafayette	149.2	197.5	183.2	201.1	22.8	1.8	34.8
Madison	44.4	21.0	44.2	97.7	(0.6)	364.3	119.9
Suwannee	64.3	67.9	131.1	292.4	103.7	331.0	354.5
Taylor	13.1	14.8	13.5	32.5	2.6	119.1	146.9
Union	82.0	79.7	43.8	44.2	(46.6)	(44.5)	(46.1)
Region	50.1	81.5	97.3	96.6	94.4	18.5	92.9
w/o Al Co	47.3	77.5	96.2	96.1	103.4	24.0	103.3
Florida	106.3	220.2	258.1	207.5	142.7	(5.8)	95.1

Sources: 1985, 1989, 1994, & 2000 Florida Statistical Abstract, Table 5.30, and Department of Commerce, Bureau of the Census, and 1992 & 1997 Census of Agriculture, Washington D.C. September, 1994, and March, 1999, Table 1.

TABLE 2.29

NORTH CENTRAL FLORIDA TOTAL FARM INCOME ON A PLACE-OF-WORK BASIS, 1982-1997 (THOUSANDS OF DOLLARS)

	Year				Percent Change		
Area	**1982**	**1987**	**1992**	**1997**	**1982-92**	**1987-97**	**1982-97**
Alachua	14,312	19,346	19,535	18,941	36.5	(2.1)	32.3
Bradford	2,367	6,310	3,549	4,765	49.9	(24.5)	101.3
Columbia	5,845	5,238	7,080	4,787	21.1	(8.6)	(18.1)
Dixie	1,687	1,616	837	1,589	(49.8)	(1.7)	(5.8)
Gilchrist	4,186	15,947	8,723	14,800	108.4	(7.2)	253.6
Hamilton	5,040	1,112	10,952	5,354	117.3	381.5	6.2
Lafayette	10,354	18,733	17,558	18,792	69.6	0.3	81.5
Madison	7,799	2,782	5,842	12,859	(25.1)	362.2	64.9
Suwannee	12,907	12,378	21,228	46,325	64.5	274.3	258.9
Taylor	1,333	1,146	1,044	1,843	(21.7)	60.8	38.3
Union	5,181	5,362	2,116	2,765	(59.2)	(48.4)	(46.6)
Region	71,011	89,970	98,464	98,474	38.7	9.5	38.7
w/o Al Co	56,699	70,624	78,929	78,939	39.2	11.8	39.2
Florida	1,362,692	2,465,188	2,778,500	2,169,340	103.9	(12.0)	69.2

Source: 1983, 85, 92,94, 2000 Florida Statistical Abstract, Table 5.30.

TABLE 2.30

NORTH CENTRAL FLORIDA LAND IN FARMS, 1982 - 1997
(ACRES)

	Year				Percent Change		
Area	**1982**	**1987**	**1992**	**1997**	**1982-92**	**1987-97**	**1982-97**
Alachua	219,337	192,255	191,140	198,193	(12.9)	3.1	(9.6)
Bradford	40,709	41,178	36,230	43,579	(11.0)	5.8	7.1
Columbia	116,586	98,620	96,968	97,100	(16.8)	(1.5)	(16.7)
Dixie	255,854	56,416	31,693	33,508	(87.6)	(40.6)	(86.9)
Gilchrist	96,163	87,500	70,987	78,090	(26.2)	(10.8)	(18.8)
Hamilton	79,837	73,603	69,405	66,379	(13.1)	(9.8)	(16.9)
Lafayette	69,387	94,847	95,833	93,434	38.1	(1.5)	34.7
Madison	175,519	132,173	132,208	131,577	(24.7)	(0.5)	(25.0)
Suwannee	200,607	182,409	161,936	158,406	(19.3)	(13.2)	(21.0)
Taylor	101,396	77,364	77,364	56,784	(23.7)	(26.6)	(44.0)
Union	63,173	67,317	48,280	62,503	(23.6)	(7.2)	(1.1)
Region	1,418,568	103,682	1,012,044	1,019,533	(28.7)	(7.6)	(28.1)
w/o Al Co	1,199,231	911,427	820,904	821,360	(29.0)	(9.9)	(31.5)
Florida	12,814,216	11,194,090	10,766,077	10,454,217	(16.0)	(6.6)	(18.4)

Source: U.S. Department of Commerce, Bureau of the Census, 1992 & 1997 Census of Agriculture, Table 1,16, Washington, D.C., September, 1994 & March 1999.

FORESTRY

While north central Florida claims no more than 4.5 percent of Florida farm income, the region's silviculture industry represents a much larger share of statewide production. As indicated in Table 2.31, north central Florida silviculture production represented 30.3 percent of 1997 Florida production. North central Florida counties with the largest wood product output in 1997 were Columbia, Taylor, and Dixie.

North central Florida forest products, as well as forest products statewide, are primarily softwood products. A moderate climate, high annual rainfall, and flat terrain make the region well-suited to the production of pine trees on a 15- to 20-year cycle. As indicated in Table 2.32, 88.1 percent of north central Florida's 1997 wood production consisted of softwood products. This figure is comparable to the statewide average of 90.4 percent for the same time period. Only Dixie and Madison counties, where hardwood products comprised 33.0 and 24.8 percent of 1997 wood production, respectively, showed significant variation.

TABLE 2.31

NORTH CENTRAL FLORIDA FOREST PRODUCT HARVEST, 1997
(THOUSANDS OF CUBIC FEET)

	All Products			Pulpwood		Saw/Timber Logs		Other Products	
Area	**Total**	**Softwood**	**Hardwood**	**Softwood**	**Hardwood**	**Softwood**	**Hardwood**	**Softwood**	**Hardwood**
Alachua	17,173	16,349	824	9,155	770	6,075	0	1,119	54
Bradford	11,698	10,613	1,085	5,456	1,085	4,928	0	229	0
Columbia	18,788	17,817	971	10,436	846	7,228	125	153	0
Dixie	15,535	10,404	5,131	4,750	4,142	4,568	541	1,086	448
Gilchrist	6,293	5,870	423	2,843	308	2,856	83	171	32
Hamilton	12,436	11,079	1,357	6,587	909	3,760	0	732	448
Lafayette	7,375	7,066	309	1,748	268	5,074	41	244	0
Madison	13,099	9,854	3,245	3,332	1,305	6,028	494	494	1,857
Suwannee	8,806	8,226	580	4,127	497	3,909	83	190	0
Taylor	34,970	30,616	4,354	20,432	2,116	9,296	381	888	1,857
Union	10,373	10,067	306	4,898	306	5,048	0	121	0
Region	156,546	137,961	18,585	73,764	12,552	58,770	1,748	5,427	4,696
w/o Al Co	139,373	121,612	17,761	64,609	11,782	52,695	1,748	4,308	4,642
Florida	517,355	467,597	49,758	251,618	35,883	185,058	6,634	30,921	7,241
Region as Pct of State Total	29.5	29.5	37.4	29.3	35.0	31.8	26.3	17.6	64.9

Source: USDA, Southern Research Station, Florida's Timber Industry - An Assessment of Timber Product Output and Use, 1997. Table 16.

TABLE 2.32
NORTH CENTRAL FLORIDA FOREST PRODUCT HARVEST, 1997
PERCENTAGE OF TOTAL HARVEST

	All Products			Pulpwood		Saw/Timber Logs		Other Products	
Area	**Total**	**Softwood**	**Hardwood**	**Softwood**	**Hardwood**	**Softwood**	**Hardwood**	**Softwood**	**Hardwood**
Alachua	100.0	95.2	4.8	53.3	4.5	35.4	0.0	6.5	0.3
Bradford	100.0	90.7	9.3	46.6	9.3	42.1	0.0	2.0	0.0
Columbia	100.0	94.8	5.2	55.5	4.5	38.5	0.7	0.8	0.0
Dixie	100.0	67.0	33.0	30.6	26.7	29.4	3.5	7.0	2.9
Gilchrist	100.0	93.3	6.7	45.2	4.9	45.4	1.3	2.7	0.5
Hamilton	100.0	89.1	10.9	53.0	7.3	30.2	0.0	5.9	3.6
Lafayette	100.0	95.8	4.2	23.7	3.6	68.8	0.6	3.3	0.0
Madison	100.0	75.2	24.8	25.4	10.0	46.0	3.8	3.8	14.2
Suwannee	100.0	93.4	6.6	46.9	5.6	44.4	0.9	2.2	0.0
Taylor	100.0	87.5	12.5	58.4	6.1	26.6	1.1	2.5	5.3
Union	100.0	97.1	2.9	47.2	2.9	48.7	0.0	1.2	0.0
Region	100.0	88.1	11.9	47.1	8.0	37.5	1.1	3.5	3.0
w/o Al Co	100.0	87.3	12.7	46.4	8.5	37.8	1.3	3.1	3.3
Florida	100.0	90.4	9.6	48.6	6.9	35.8	1.3	6.0	1.4

Source: USDA, Southern Research Station, Florida's Timber Industry - An Assessment of Timber Product Output and Use, 1997. Table 16.

TABLE 2.33

NORTH CENTRAL FLORIDA FOREST PRODUCTS HARVEST BY PRODUCT AND BY SPECIES GROUP PERCENT CHANGE OVER TIME, 1987-1997

	All Products			Pulpwood		Saw/Timber Logs		Other
Area	**Total**	**Softwood**	**Hardwood**	**Softwood**	**Hardwood**	**Softwood**	**Hardwood**	**Softwood**
Alachua	(58.1)	12.5	(96.9)	(96.6)	(96.4)	(96.4)	(100.0)	(94.3)
Bradford	(13.1)	(20.2)	586.7	(34.9)	595.5	2.4	(100.0)	106.3
Columbia	(5.6)	(9.7)	461.3	4.5	394.7	(14.4)	6,150.0	(88.2)
Dixie	14.2	(7.7)	120.1	(31.6)	95.0	8.1	161.4	934.3
Gilchrist	(30.7)	(33.7)	85.5	(36.0)	77.0	(32.8)	97.6	9.6
Hamilton	39.9	27.5	578.5	51.3	1,096.1	(13.3)	(100.0)	n/a
Lafayette	(12.4)	(15.4)	354.4	(64.9)	1,961.5	52.6	(25.5)	408.3
Madison	32.4	20.7	87.9	(26.1)	(12.9)	73.6	115.7	165.6
Suwannee	(31.5)	(35.7)	653.2	(48.4)	855.8	(17.4)	232.0	251.9
Taylor	1.8	(6.2)	152.8	(21.3)	50.8	43.0	19.4	387.9
Union	34.7	32.9	142.9	62.5	146.8	15.1	(100.0)	(29.7)
Region	(12.6)	(5.4)	(44.1)	(78.8)	(53.9)	(72.7)	(69.1)	(75.3)
w/o Al Co	0.9	(7.4)	160.8	(19.8)	103.5	8.7	73.6	86.7
Florida	7.8	3.1	88.4	(5.8)	67.4	10.9	42.5	57.0

Source: 1991 Florida Statistical Abstract, Table 10.07, and USDA, Southern Research Station, Florida's Timber Industry - An Assessment of Timber Product Output and Use, 1997. Table 16.

As indicated in Table 2.33, north central Florida experienced a 12.6 percent decrease in wood production between 1987 and 1997. The region's decrease contrasts with a statewide increase of 7.8 percent for the same period. Most of the decrease is attributable to declines in Alachua, Gilchrist, and Suwannee counties. North central Florida softwood production decreased by 5.4 percent during this period, while hardwood production declined by 44.1 percent. The region's decline in hardwood production contrasted with a statewide increase of 88.4 percent for this period. The significance of the data reported in Table 2.33 is unclear. To a large extent, wood production follows a cycle determined by prior harvests and replantings. Nevertheless, tables 2.31 through 2.33 at the very least suggest that silviculture remains a viable industry in north central Florida.

FISHING AND SHELLFISH HARVESTING

Fishing and shellfish harvesting are important industries for the region's coastal counties; however, the passage of the 1994 constitutional amendment eliminating net fishing within Florida coastal waters has significantly reduced fish landings in the region. Table 2.34 reveals an 81.5 percent decline in the poundage of north central Florida coastal fish landings between 1992 and 1997. In fact, 1997 fish landings were below 1971 levels. In contrast to the decline in fishing, shellfish harvesting increased by 23.9 percent between 1992 and 1997, as shellfish harvesting began to replace fishing as a source of income for north central Florida commercial fishermen.

Potential problems exist for the shellfish harvesting industry. After similarly peaking in 1985 at 3,345,585 pounds, shellfish harvesting declined by 43.2 percent between 1971 and 1992. The Florida Department of Environmental Protection regularly closes the shellfish harvesting areas off the mouth of the Suwannee River after rain events due to high levels of fecal coliform. The effect of the shellfish bed closings is apparent in Table 2.34, which shows the region's shellfish harvest peaked in 1984-85, and has been on the decline ever since. The high fecal coliform count suggested a need for secondary wastewater treatment within the unincorporated town of Suwannee, located at the mouth of the Suwannee River in Dixie County.[27] In response to these concerns, a new wastewater treatment plant was recently constructed to service the Suwannee community.

Shellfish harvesting is anticipated to significantly increase. In addition to improved coastal water quality as a result of the wastewater treatment plant, the north central Florida shellfish farmers recently formed a non-profit corporation which has established a land-based shellfish nursery capable of producing over 20 million clam seeds annually. The first seed claims produced by the nursery were planted in coastal waters in 1999. It is anticipated that the first of these clams will be ready for harvest in 2001.

[27] See Need #2, page IV-47, and Policy 4.1.9. for associated need and policy statements.

TABLE 2.34

DIXIE AND TAYLOR COUNTY FISH AND SHELLFISH LANDINGS BY TYPE OF SPECIES, 1971-1992 (POUNDS)

Year	Landings		
	Total	Fish	Shellfish
1971	2,912,000	1,116,000	1,796,000
1974	3,100,000	1,156,000	1,944,000
1978	3,835,815	916,095	2,919,720
1981	3,686,364	1,075,733	2,610,631
1982	2,534,168	737,665	1,796,503
1984	4,550,662	1,205,077	3,345,585
1985	4,815,019	1,012,490	3,802,529
1988	5,250,007	2,998,457	2,251,550
1989	6,351,779	4,028,486	2,323,293
1990	4,814,637	3,394,327	1,420,310
1991	2,216,443	1,704,813	511,630
1992	4,419,362	3,398,498	1,020,864
1994*	3,823,753	2,408,169	1,415,584
1995	2,369,407	1,095,147	1,274,260
1996	2,201,840	624,298	1,577,542
1997	1,893,275	628,828	1,264,447
Percent Change, 1971-97	(35.0)	(43.7)	(29.6)
Percent Change, 1992-97	(57.2)	(81.5)	23.9

*Year fish net ban went into effect.

Sources: University of Florida, Bureau of Economic and Business Research, 1972 Florida Statistical Abstract, Table 11.030, and 1980-99 Florida Statistical Abstract, Table 10.4.

MINING

Mining activities occurring in the region include phosphate, lime rock, sand, gravel, clay, and peat. Open pit limestone quarries can be found in Alachua, Dixie, Lafayette, and Suwannee counties. Mining is particularly important to the economies of Bradford and Hamilton counties. The Phosphate Corporation of Saskatchewan (PCS) in Hamilton County and Dupont DeNemours in Bradford County are the largest mining operations in the region.

The most extensive and economically important mining activity in the region is land pebble phosphate mining conducted by Phosphate Corporation of Saskatchewan (PCS). Their current mining area comprises approximately 100,000 acres. Approximately 24.0 percent of all jobs as well as 36.0 percent of total salary and wage income in Hamilton, Suwannee, and Columbia counties are attributable directly or indirectly to PCS mining operations in Hamilton County.[28] PCS is the largest private employer in the region. The mining and chemical processing operation employs approximately 2,150 workers at full employment. However, hundreds of workers were laid off from Hamilton County phosphate mines during the 1990s. While some of these workers have been recalled, most of the layoffs appear to be permanent. PCS' current mines are scheduled to close in 2011, at which time PCS will either open a new mine or cease its north central Florida mining operations.

TOURISM

Throughout the 1980s, north central Florida provided increased services to automobile-bound tourists while the number of these tourists stopping to visit north central Florida attractions declined. During the 1990s, the region was more successful in attracting tourists. Table 2.36 reveals that total attendance at the region's state parks declined from 563,986 in fiscal year 1985-86 to 475,902 in FY 1991-92, but gradually increased to 640,421 in 1999. Unlike state park attendance, restaurant seating capacity and hotel/motel rooms steadily increased from 1980 to 1999. As indicated in Table 2.35, restaurant seating capacity increased by 47.3 percent between 1980 and 1990, and by 46.7 percent between 1990 and 1999. The number of hotel/motel rooms increased by 30.3 percent between 1980 and 1990. Between 1990 and 1999, the number of north central Florida hotel rooms increased by 15.4 percent.

According to the Florida Department of Commerce, Bureau of Tourism, one job is created for every 52 visitors entering the state. In 1991, more than 650,000 individuals in Florida were employed in a tourism-related job. Although tourism is Florida's number one employer, north central Florida has not captured its share of that market. The number of individuals employed in tourism in the region is not known with certainty; however, it is estimated the number is small.

[28]PCS estimates that due to an employment "multiplier" each job at the mine adds 3.66 additional full-time equivalent indirect and induced jobs in Florida; 1.99 of these additional jobs are located within Columbia, Hamilton and Suwannee counties.

A recent study by the North Central Florida Regional Planning Council concluded that the region has great potential for attracting a larger number of tourists.[29] Each additional percentage increase in Florida's tourism business captured by north central Florida is estimated to create approximately 550 new jobs in the region.

[29]North Central Florida Regional Planning Council, Tourism Development Strategic Plan, 1992-1995, Gainesville, FL, November, 1992.

TABLE 2.35

NORTH CENTRAL FLORIDA TOURIST FACILITIES
HOTELS, MOTELS, & FOOD SERVICE ESTABLISHMENTS, 1980-1999

Year	Licensed Hotel & Motel Rooms	Number of Seats
		Food Service Establishments
1980	5,365	34,779
1981	5,335	35,164
1982	5,365	35,608
1983	5,449	35,296
1984	5,806	36,069
1985	5,554	36,834
1986	6,069	51,543
1987	6,507	52,462
1988	6,721	52,366
1989	6,584	52,569
1990	6,988	51,214
1991	7,178	53,380
1992	7,273	50,364
1993	7,315	51,563
1994	7,478	51,965
1995	7,426	53,277
1996	7,400	53,677
1997	7,739	54,376
1998	7,697	55,963
1999	8,067	57,999
Region III Percent Change,		
1980-90	30.3	47.3
1990-99	15.4	46.7
1980-99	50.4	66.8
Florida Percent Change,		
1980-90	25.6	83.5
1990-99	10.4	14.5
1980-99	38.6	110.1

Source: 1981-2000 Florida Statistical Abstract, Table 19.60.

TABLE 2.36

NORTH CENTRAL FLORIDA STATE PARKS AND AREAS ATTENDANCE
FISCAL YEARS 1985-86 AND 1990-91 THROUGH 1999-2000

State Facility	Fiscal Year											Percent Change 1985-86/ 1990-/91	Percent Change 1990-91/ 1999-00	Percent Change 1985-86/ 1999-00
	1985-86	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00			
Devil's Millhopper	74,050	66,873	58,953	45,669	47,456	45,604	45,834	45,032	45,416	44,934	42,373	(9.7)	(36.6)	(42.8)
Dudley Farm	-	-	-	-	-	-	-	-	-	2,277	2,782	-	-	-
Econfina River	-	-	-	-	-	-	-	-	5,626	8,108	11,093	-	-	-
Forest Capital	24,780	30,062	27,913	28,385	28,532	26,748	24,949	26,704	23,951	22,953	25,702	21.3	(14.5)	3.7
Ichetucknee Springs	182,512	130,384	134,402	159,453	167,135	155,860	189,025	170,890	195,054	184,607	219,447	(28.6)	68.3	20.2
Rawlings Homesite	30,194	27,168	21,705	22,509	20,753	21,883	23,009	23,875	22,853	21,300	20,609	(10)	(24.1)	(31.7)
O'leno State Park	61,009	54,581	46,548	45,990	56,608	60,030	61,635	65,852	59,784	58,683	60,766	(10.5)	11.3	(0.4)
Paynes Prairie	70,658	83,379	83,323	101,962	91,399	99,234	105,961	132,225	162,327	126,564	125,674	18	50.7	77.9
Peacock Springs	-	-	-	-	-	8,948	8,464	7,683	5,736	10,995	10,117	-	-	-
River Rise	-	-	-	-	-	-	-	-	-	2,900	1,938	-	-	-
San Felasco Hammock	8,264	23,677	20,175	20,651	11,829	13,588	24,278	23,744	25,596	27,709	27,272	186.5	15.6	231.2
Stephen Foster	59,063	51,765	51,382	56,606	62,912	57,753	67,711	64,712	60,142	67,021	61,203	(12.4)	18.2	3.6
Suwannee River	53,456	32,003	31,501	39,751	44,002	45,877	48,909	48,320	56,517	55,389	30,858	(40.1)	(3.6)	(42.3)
Troy Springs	-	-	-	-	-	-	-	1,554	3,386	748	487	-	-	-
Region	563,986	499,892	475,902	520,976	530,626	535,525	599,775	610,591	666,388	634,188	640,421	(11.4)	28.1	13.6

Source: 1987- 2000 Florida Statistical Abstract, Table 19.52.

STRENGTHS AND WEAKNESSES OF THE REGION'S ECONOMIC STRUCTURE

This portion of the conditions and trends statement explores the strengths and weaknesses of the region for economic development, describes existing regional economic development programs, and suggests avenues for future economic development efforts.

STRENGTHS

The region has a number of assets that can be used to the area's advantage in economic development:

1. Great location.

   North central Florida is intersected by Interstate Highways 10 and 75 which provide access to many auto travelers and freight haulers from Florida and other states. These major highways connect the area to the rest of the country. Interstate Highway 75 travels through the Midwest to the Canadian border. Interstate Highway 10 connects the region to southern California. The region's north Florida location reduces the time required to reach out-of-state markets when compared to central and south Florida.

2. Proximity to other states and counties.

   Madison and Hamilton counties border the State of Georgia. A number of individuals in the northern portion of the region often seek employment in Georgia and contribute to that state's available labor force. Similarly, proximity to the state's border allows the region to take advantage of Georgia markets, suppliers, manufacturers, and labor.

3. A good ground transportation network.

   The region is easily reached through a well-developed road and rail network. Besides I-75 and I-10, other major roads include U.S. 19, U.S. 301, U.S. 90, U.S. 27, U.S. 41, and U.S. 441. Freight rail service is available from CSX throughout the region. There are many north central Florida industrial locations with road and rail access available to new and expanding businesses. The ground transportation network is an asset which can be used to enhance the region's image as a viable industrial location.

4. A constant, moderate, clean-air climate.

   The region has mild winters and warm, humid summers. Every north central Florida county is classified as an air attainment county by the U.S. Environmental Protection Agency. The area's rainy season is typically from June to August. The fall, winter, and spring provide excellent weather for outdoor recreation. Unlike other parts of Florida, the region enjoys a change of seasons. The comfortable climate is an asset that attracts newcomers to the area.

5. The University of Florida.

   The University of Florida (UF) provides a wealth of research and development opportunities for local businesses. The University aided the development of Progress Center, a research and technology park created to link university research with industry. Progress Center helps entrepreneurs transfer new technologies from the laboratory to the marketplace. In addition, UF's many colleges and specialties allow local businesses to tap the assistance of University experts and access data to stay abreast of recent discoveries.

6. A large concentration of medical centers and hospitals.

   North central Florida, Alachua County in particular, is home to several large hospitals and medical centers. Steady advances in health care and a rapidly aging population are creating greater demand for skilled health service workers. Over the next five years, hundreds of millions of dollars will be spent on expansion projects at Shands Hospital, the University of Florida College of Medicine, Alachua General Hospital, the North Florida Regional Medical Center, and other smaller hospitals throughout the region. The expansion programs will generate new job opportunities in health-related professions and health support services.

7. Low housing costs combined with a high quality of life.

   The cost of living is much lower in north central Florida than in many other parts of the state. The region has a relaxed atmosphere. A commitment exists to maintaining the region's natural resources. The region is largely forested. Residents tend to value and respect nature. There are few locations, with the exception of certain parts of Gainesville, that have high traffic levels and congestion. Many cultural and artistic centers and programs are located in Gainesville. The area appeals to fitness-oriented people. The hurried and congested aspects of urban living are missing, making the region a great place to get an education, work, raise a family, and retire. These attractive aspects can be used to attract new businesses to the area, particularly to Alachua County where these attributes are concentrated.

8. Low cost of land.

   Another factor enhancing the development potential of the region is the low cost of land. Low land costs, coupled with the availability of transportation and low labor costs, enhances the competitive position of the region and raises its standing in the relocation and expansion decisions of industrial firms.

9. A large concentration of unspoiled, natural attractions.

   The region has many outdoor recreational resources for young and old. North central Florida is home to the famous Suwannee River. It and several other rivers are excellent for fishing, canoeing, and boating activities. The rivers have a large concentration of cave-diving spots and crystal-clear springs for swimming and freshwater recreation. The region also has many parks and recreational areas for bicycling, hiking, and camping. The north central Florida coast offers untapped resources for off-shore fishing and boating activities. These attractions can be better used to diversify the economy through tourism development.

10. Ample water supply.

    North central Florida is underlain by the Floridan Aquifer, one of the largest freshwater aquifers in the world. The aquifer provides local residents and industry with a low cost supply of high quality water. Most of the existing industrial parks and urban areas have centralized municipal water systems. Of the 33 incorporated municipalities in the region, 26 have a municipal water supply system, while 20 also provide municipal sewer service.

11. Workforce development initiatives.

    A consortium including Santa Fe Community College, the Alachua County School Board, and the Bradford County School Board has been formed as a public/private partnership to bridge the gap in the school-to-work transition. This linkage among education, business, and civic government entities assists in increasing the percentage of high school graduates gaining employment in highly skilled, high-wage occupations.

WEAKNESSES

The region's ability to grow is hampered by various chronic conditions which are difficult to overcome. They impose limitations on regional development and aggravate the area's inability to capture a greater share of industrial and commercial activities. Below are the major weaknesses affecting the area's economic growth.

1. Lack of infrastructure, services, and utilities.

   Despite improvements to local government infrastructure, many north central Florida communities, with the notable exception of the City of Gainesville, still lack the infrastructure necessary for economic development. Owing to the rural nature of the region and its correspondingly small population, many north central Florida communities are lacking some of the facilities and infrastructure normally associated with and necessary for industrial activities. While the region has sixteen industrial parks, only nine have central water and sewer and six of these are located in Alachua County.

Directly associated with the lack of an infrastructure is the lack of local financial resources with which to finance the cost of infrastructure improvements. As indicated by the region's low taxable value, many north central Florida local governments do not have the financial capacity to purchase sites suitable for industrial development or to extend the necessary utilities to those sites. Nor can most finance improvements such as central water and sewer systems, recreation facilities, or cultural centers. The provision of adequate water supply and sewage treatment is essential to advance economic development, while recreational and community facilities make a community more attractive to private investors.

Generally, emergency response services are less than optimal to handle large-scale industrial fires and hazardous waste spills. Cellular telephone coverage is spotty in the region's more rural areas.

2. High cost of energy.

   The region's sensitivity to the availability and the cost of energy will continue to be a potential constraint to economic development. An increase in the cost of energy can have a significant impact since nearly all of the region's energy requirements are met with imported oil and gas. High energy costs will cause energy intensive industrial firms to avoid north central Florida.

3. Lack of a skilled labor force.

   Although the region has many individuals available for employment, the labor force in the rural areas of the region is predominantly unskilled. The unskilled labor force restricts the development of industries that require a readily available pool of skilled workers.

4. Lack of available housing.

   New industry moving into the region and bringing in employees would have a difficult time locating housing in the region's smaller communities.

5. Limited air transportation services.

   The Gainesville Regional Airport provides passenger and commercial air service to the region. Unfortunately, only two major air carriers service the area: U.S. Air and Delta. A relatively low demand results in a limited number of daily flights to only a few Florida cities and two out-of-state hub airports. As the region grows in population, demand for expanded service will rise, reducing the cost of air travel from Gainesville and increasing the number of daily flights. Although there are no international airports in north central Florida, the region has reasonable access to such facilities in Jacksonville, Orlando, and Tampa.

6. Lack of cultural, recreational, and educational facilities outside of Gainesville.

   The rural parts of the region do not have cultural, recreational, and educational facilities similar to those enjoyed by Gainesville residents. Amenities are important to business owners and company executives looking to locate companies. The lack of facilities reduces the region's chances of attracting new industries and major employers.

7. Lack of experience with industrialization.

   Since the region has historically been a rural, agricultural economy, north central Florida local governments have limited experience with urbanization and economic development. The exception is Gainesville, the largest municipality in the region, which has begun to deal with traffic and urban sprawl due to growth. Should the area begin to grow at a more rapid pace, local communities are not adequately equipped to handle the pressures and costs that come with increased growth.

8. Lack of staff support at local government level.

   Due to a low tax base, north central Florida local governments continue to require technical assistance in pursuing economic development. Local government planning and economic development departments continue to be small, and in some cases, nonexistent. Most north central Florida local governments use the technical services available through the North Central Florida Regional Planning Council to apply for economic development assistance.

9. Scarce small business financing resources.

   It is widely recognized that small- and medium-sized businesses employing less than 100 people create 80 percent of all new jobs in the nation. However, small- and medium-sized businesses are often unable to find affordable long-term financing. Given the lack of available capital from private markets, the economic development potential of small- and medium-sized businesses in the region is adversely affected.

   With any reduction in financial assistance from federal agencies such as the Small Business Administration, the Rural Economic and Community Development Service (RECD), and the Economic Development Administration, many small businesses will be unable to obtain financing through private financial institutions.[30] Thus, economic opportunities that would have been created will be lost.

[30]Formerly known as the Farmers Home Administration.

NORTH CENTRAL FLORIDA ECONOMIC DEVELOPMENT EFFORTS

The region's economic development efforts have sought to capitalize on existing resources while improving areas of weakness. The Council and the region's local governments have been involved in infrastructure and community development, vocational training, business financing, and tourism development.

INFRASTRUCTURE AND COMMUNITY DEVELOPMENT

The Council has been a designated economic development district (EDD) since 1978. Designation as an EDD allows north central Florida local governments to receive financial assistance from the federal Economic Development Administration. In order to receive and maintain EDD designation, the Council maintains and annually reports on its Comprehensive Economic Development Strategy (CEDS)

The initial CEDS (then known as the Overall Economic Development Program) was submitted to the Economic Development Administration in October, 1977. An update and a major revision to this document was completed in 1993. The CEDS contains economic development goals and objectives for which applications for EDA financial assistance must further. The goals and objectives of the CEDS are incorporated to the greatest extent feasible into the goals and policies of the regional plan to assure compatibility between the two documents.

The rural nature of the region continues to present many constraints to industrial development. Some smaller north central Florida communities lack adequate public utilities and the basic framework for economic development. As of January, 2000, 26 of 33 north central Florida municipalities had at least a portion of their jurisdictions served by central water supply systems. Only 20 communities (plus one unincorporated community) had centralized wastewater treatment systems. Many of these systems are old and too small to accommodate much additional growth. A number of the region's smaller communities need new or additional centralized water and wastewater treatment capacity in order to accommodate significant new urban development.

As a result of the technical assistance provided by the Council to local governments, chambers of commerce, and development authorities since then, the region's communities have attempted to develop the infrastructure necessary for economic development. In some cases, industries have moved into the region or expanded their current facilities with the resultant creation of new jobs and increased personal income. Feasibility studies have been undertaken for the development of industrial parks in several north central Florida counties, most of which have installed water and sewer facilities to serve prospective tenants.

Through its local government technical assistance program, the Council has assisted many north central Florida local governments prepare grant and loan applications to expand or create local wastewater treatment plants, sewage collection systems, and centralized water supply systems. Local governments have pursued funding from the Economic Development Administration, the Environmental Protection Agency, the Rural Economic and Community Development Service, the Department of Housing and Urban Development as well as other sources. North central Florida local governments have also sought to develop recreation areas to improve the overall quality of life within their jurisdictions.

Over 75.0 percent of north central Florida local governments sought assistance to revitalize their neighborhoods and housing stock through the federal Community Development Block Grant Program (CDBG). Since 1974, most of the region's communities have received grants for neighborhood and housing improvements. Using CDBG funds, local governments have repaired and enhanced deteriorated housing stock; paved streets, and improved storm sewer systems, sewage collection systems and water delivery systems.

Several communities have implemented downtown revitalization programs. Alachua, Jasper, and Starke revitalized their downtowns using CDBG funds. High Springs, Lake City, Live Oak, and Madison have initiated downtown revitalization using local funds. Gainesville also has a downtown redevelopment program. Through this program, downtown Gainesville has diversified and increased its share of office, residential, retail, and entertainment uses, creating a vibrant downtown business and cultural center.

INDUSTRIAL RECRUITMENT EFFORTS

The Council has been involved in economic development efforts since 1978. For the most part, these efforts have not yielded the fruits hoped for by local governments. The most concerted multi-jurisdictional industrial recruitment effort began in 1987. The program was carried out by individuals from chambers of commerce, development authorities, the JTPA Private Industry Council, and local governments who represented the eleven counties.

A broad and expensive national advertising campaign was undertaken. Mailings were sent to companies that responded to the ads. Brochures, video tapes, and mementos were distributed to respondents. Local business leaders collaborated with county economic development officials to help attract new businesses.

The program continued for several years but results of the program were disappointing. Although a few new companies became established in the region during this time frame, the number of firms that located in the area as a consequence of this program is not known with any degree of certainty. The program was disbanded in 1990 due to a lack of success and, ultimately, a lack of funding.

Most recently, in 1991, Alachua County created an organization called the Council for Economic Outreach (CEO) to recruit new industries to the county. This organization is funded through a public-private partnership between major employers and local governments. The goal of the CEO is to recruit new businesses to the county that can take advantage of three major county strengths: The University of Florida, an abundance of medical centers, and the transportation network. The major industries targeted by the CEO are medical and pharmaceutical manufacturers and suppliers, engineering firms, and agricultural organizations. Thus far, the effort has had limited success; however, as with any new program, a certain amount of time is required before the investment can be expected to reap dividends.

In addition to Alachua County's efforts, chambers of commerce and industrial development authorities in other north central Florida counties continue to carry out industry recruitment efforts. However, most have very limited resources for industrial recruitment. These local governments depend upon regional efforts supported by the Council to assist them in promoting economic development.

VOCATIONAL TRAINING PROGRAMS

In October, 1982, Congress passed and the President signed the Job Training Partnership Act (JTPA). The JTPA provided federal funds passed through the state to local Service Delivery Areas (SDAs) to be used for running job training programs. One of the main features of the JTPA was the requirement for a partnership between public and private sectors to achieve the goals of the program.

As a result of a 1996 legislative initiative to combine JTPA with other state and federal initiatives to reduce the welfare roles, the state created Work Force Development Boards which are charged with overseeing and coordinating activities and programs aimed at reducing the state's welfare rolls. One result of their efforts was a restructuring of the JTPA program. Prior to 1996, the JTPA Service Delivery Area (SDA) was coterminous with the boundaries of, and administered by, the Council.

In 1996, the Board broke the region into three SDAs which coincided with the service areas of the region's three community colleges (Lake City Community College, North Florida Community College, and Santa Fe Community College). As a result, three work force development boards were created, one for each new service area. When the three boards were created, it was no longer possible for the Council to continue to provide staff services to the three separate boards. The three community colleges currently provide staff for the Boards. The North Central Florida Private Industry Council and the Job Training Consortium were subsequently disbanded. Their functions were absorbed by the work force development boards which are now responsible for administering the JTPA program.

BUSINESS FINANCING

In the aftermath of the savings and loan crisis of the 1980s, lending institutions tightened their lending practices, making it more difficult for borrowers to fund business projects. However, many area lenders have begun taking advantage of the U.S. Small Business Administration (SBA) loan programs. The North Central Florida Regional Planning Council and the North Central Florida Areawide Development Company (ADCO) are educating commercial loan officers in the region on the benefits and eligibility requirements of the SBA programs. It is the goal of the Council to achieve greater participation from area lenders to fund business projects which bring new jobs and tax revenues to the local economies.

POSSIBILITIES FOR ECONOMIC DEVELOPMENT

In addition to the Council's technical assistance programs which help local governments prepare grant applications, four avenues exist through which the Council can promote economic development of the region. These include tourism development; diversification of the region's existing agriculture, silviculture, and fishing industries; assisting the expansion of existing north central Florida businesses; and assisting the formation of new businesses.

DIVERSIFICATION OF FOREST, AQUACULTURE, AND AGRICULTURE INDUSTRIES

Possibilities exist for diversification in the forestry, aquaculture, and agriculture industries. Other regions have developed alternative uses for forest lands which may be successfully exported to north central Florida. For example, a timber-dependent community in a rural area of California obtained a grant from the U.S. Forest Service to explore the feasibility of creating commercially viable volumes of herbs and special forest products. Timber-dependent areas within north central Florida must also investigate new ways of developing sustainable alternatives for economic growth.

Cooperatives can be developed to train fishermen to cultivate, hatch, and harvest crabs, shrimp, catfish, roe, oysters, and a number of other species and products. The JTPA program has been used in north central Florida to train fishermen to harvest oysters. This program is operating successfully and is a model for future efforts.

Farms can harvest new crops which take advantage of seasonal change. Such crops can be grown earlier in north central Florida and be brought to market at a time when they command a premium price. The Institute of Food and Agricultural Sciences (IFAS) at the University of Florida actively studies new crops that will grow under local conditions and climates. As developments are made, the University's extension agents work with local farmers to diversify their crops. Examples include strawberries, blueberries, and black mushrooms. Additional opportunities can be developed through IFAS to help broaden the variety of local crops.

Farms can harvest tourists. Many farm and ranch owners across the country open their properties to visitors looking to experience farm life. Visitors pay farm and ranch owners for the chance to do farm chores, feed animals, ride horseback, fish the local streams, eat by a campfire, sleep in a lodge, and experience a lifestyle often only read about or seen on television.

THE NORTH CENTRAL FLORIDA ECONOMIC DEVELOPMENT PARTNERSHIP AND THE BIG BEND TRI-COUNTY TASK FORCE

The Council assisted in creating a new interlocal agreement agency, the North Central Florida Economic Development Partnership, which joins the resources of 11 counties to address regional economic development problems and opportunities. The formation of the regional partnership in 1996 set in motion the opportunity for local agencies to take full advantage of the realignment of functions of the Florida Department of Commerce into the Office of Tourism, Trade, and Economic Development within the Executive Office of the Governor, and to take advantage of the newly-created Enterprise Florida, Inc.

Recognizing that the region has a number of functioning local economic development programs in addition to several regional efforts, the Partnership provides a forum to coordinate, complement, and enhance those economic development programs. The regional partnership requires financial or in-kind commitments from the private and public sectors. Efforts to-date have been directed to promoting a regional identity, creating a regional data base for business properties available throughout the region, and providing expertise and overseeing the tourism and aquaculture activities for the *Original Florida's Hidden Coast* counties (Dixie, Levy, and Taylor counties).

Subsequent to the successful attainment of a grant from the Ford Foundation, the Big Bend Tri-County Task Force was formed with the assistance of the Council in late 1995. The task force was comprised of residents, business owners, and local government officials from Dixie, Levy, and Taylor counties. The Council utilized the grant to employ a coordinator to work with the task force as it addressed the economic revitalization of the tri-county area in the aftermath of the constitutional amendment banning net fishing. Given the successes and progress of the program in its first two years, the Ford Foundation agreed to continue providing financial assistance to the Council over a second two-year period commencing October 1, 1997.

The Ford Foundation grant allowed the Council to continue working with the task force in 1998. As a result of recommendations put forward by the Big Bend Tri-County Task Force, in 1998 the Council assisted shellfish farmers in forming a non-profit corporation named the "Hidden Coast Shellfish Producers Association, Inc." With technical assistance from the Institute of Food and Agricultural Sciences, Harbor Branch International, and the Council, along with grant funds from the State of Florida and a donation of land by the Dixie County Commission, the Association was successful in building a land-based shellfish nursery capable of producing over 20 million clam seeds annually for area clam farmers.

TOURISM

Rural tourism is a major area of opportunity for economic development in north central Florida. A 1992 study by the North Central Florida Regional Planning Council explored how tourism can be used to boost the regional economy. The study found many small rural communities throughout the United States use tourism as an economic development tool. The abundance of unspoiled natural resources in the region offers the potential for a strong ecotourism industry that can have a positive impact on the regional economy.

Tourism's economic impact can be significant. Visitor data published by the Florida Department of Commerce, Bureau of Tourism, and the U.S. Travel Data Center in Washington suggests that each percentage point increase of Florida's tourism market captured by north central Florida could bring an additional $33 million per year to the region. An increase in tourism activity will raise the number of new business establishments and add hundreds of jobs.

THE ORIGINAL FLORIDA TOURISM PROMOTION TASK FORCE

The Council serves as staff to the Original Florida Task Force which was formed in 1991. The task force is comprised of representatives of the region's 11 counties who are appointed by county commissions to oversee and direct a regionwide tourism promotion effort. The members have varied background, but they share one thing in common; the desire to carve out their share of the number of tourists who visit Florida each year, and to do so without harming the natural resources which are the mainstay of the region's attractions.

In 1994, the Task Force hired a public relations firm to assist in promoting The Original Florida area. By 1996, 62 travel writers had visited the area who, in turn, have written and had published in various news media (travel magazines, travel sections in major newspapers throughout the country, etc.) a total of 16 articles, reaching an audience of approximately 30 million readers. By 1998, the numbers increased to 96 visiting writers, 389 articles, and 63 million readers.

In 1998, lodging establishments and businesses in the region began participating in a campaign promoting January as "Canadian Month." Participating organizations throughout *The Original Florida* region offer discounts on lodging to Canadian citizens during the month of January. The Task Force believes the program can be enhanced by creating and promoting private/public partnerships. As such, the task force entered into a partnership agreement with Florida Living Magazine. The arrangement promotes T*he Original Florida* region as a tourism destination, both nationally and internationally.

Finally, the Task Force was successful in its efforts to have the Florida Commission on Tourism create an eighth tourism district for the state of Florida. All 11 of the region's counties (along with five other counties) are now in one region called the North Central Florida Region. The region's counties were previously split between two tourism districts.

INTERSTATE 75 CORRIDOR COUNCIL

The Council serves as staff to the Interstate-75 Corridor Council. The I-75 Corridor Council was formed in 1997 to develop a program of improvements for Interstate Highway-75 from the Georgia state line to Wildwood. The corridor council is comprised of local elected officials whose charge is to assist with the planning for physical improvements to the corridor, to create a program of interchange maintenance, to consider uniform outdoor advertising standards, and to promote alternative advertising methods to promote north central Florida tourism.

EXPANSION OF EXISTING BUSINESSES

Studies have shown that small businesses provide most of the new jobs created in America. The local chambers of commerce have ongoing programs to help local businesses develop to their potential. Existing businesses can expand by taking advantage of several federal and state supported loan programs.

NEW SMALL BUSINESS FORMATION

The recent losses incurred by the banking community and the subsequent increase in bank regulations imposed by federal agencies have created tighter lending practices among financial institutions. Entrepreneurs find it increasingly difficult to obtain new business financing and venture capital. Through the help of the SBA and the Economic Development Administration (EDA), business loans can be made available to small business owners through programs which provide attractive incentives to gain participation by local banks.

The North Central Florida Regional Planning Council has recently begun to package SBA 7(a) loan applications for private entrepreneurs in the region. The Council also operates the North Central Florida Areawide Development Company, Inc. which is licensed by the SBA to administer the 504 loan program in the eleven counties of north central Florida. Both programs are expected to affect the area's economy by helping small businesses obtain capital.

The Council is hoping to establish an intermediary relending program with a low-interest loan from the Rural Economic Community Development Service. The program will allow the Council to balance its current loan programs to meet different objectives than those of the SBA and increase the number of participants eligible for low-interest loans.

PROBLEMS, NEEDS, AND OPPORTUNITIES

The Council identifies the following economic development problems, needs, and opportunities:

1. An opportunity and need exists to retain and expand existing businesses in the region.

2. A need exists to expand the region's agriculture, aquaculture, and forestry industries.

3. A need and opportunity exist to assist in the formation of new small businesses.

4. A need exists to increase the income level of the region's households.

5. A need exists to increase economic development in Dixie and Taylor counties to minimize the adverse economic impacts of the Florida coastal waters fish net ban.

6. An opportunity exists to expand the regional tourism industry.

7. A need exists to maintain economic stability throughout the region.

8. A need exists to ensure adequate public facilities to serve businesses and industrial development throughout the region.

REGIONAL GOALS AND POLICIES

REGIONAL GOAL 2.1. Attract new high-paying, value-added industries and expand existing businesses in the region.

Regional Indicator

In 1999, the average number of monthly employment reporting units located within the region was 9,127.

Policy 2.1.1. Support and maintain the North Central Florida Areawide Development Company, Inc., an SBA 504 Certified Development Company which serves the region.

Policy 2.1.2. Maintain the region's Economic Development District Designation as recognized by the U.S. Economic Development Agency.

Policy 2.1.3. Provide assistance to the business community in the retention and expansion of their businesses by packaging SBA 7a loans.

Policy 2.1.4. Assist and coordinate with the University of Florida, the Institute of Food and Agricultural Sciences, and other organizations to encourage the application of new technologies in mature industries so as to prolong and enhance their contributions to the regional economy.

REGIONAL GOAL 2.2. Raise the median family income of north central Florida households.

Regional Indicators

1. The 1990 median household income for north central Florida residents was $21,489.

2. The 1990 per capita income of north central Florida residents was $11,083.

Policy 2.2.1. Attract high-paying industries that are compatible with the environment by providing technical assistance and information.

Policy 2.2.2. Assist small businesses in capital formation and locating within the region.

Policy 2.2.3. Provide longer and more complex training programs for workers in the region in order to attract high-tech industry that looks for well-trained and cross-trained employees. Apply new technologies in mature industries by drawing on workers as they are trained by these programs. Provide programs matching the demand for and supply of well-trained and cross-trained workers for both new and mature industries.

REGIONAL GOAL 2.3. Expand north central Florida food, agriculture, aquaculture, forestry and related industries in order to be a competitive force in state, national, an international marketplaces.

Regional Indicators

1. In 1990, 6,914 north central Florida residents were employed in Agriculture, Forestry, and Fishing.

2. In 1990, 4.6 percent of all north central Florida employed residents were employed in Agriculture, Forestry, and Fishing.

Policy 2.3.1. Protect and expand agricultural and forestry resources and activities by implementing initiatives such as best management practices.

Policy 2.3.2. Continue working with the University of Florida to improve the regional economy.

Policy 2.3.3. Establish public/private partnerships to provide technical, financial, and information services to the agricultural sector.

Policy 2.3.4. Coordinate actions directed to mitigating the adverse impacts created by the fish net ban.

REGIONAL GOAL 2.4. Expand the regional tourism industry.

Regional Indicators

1. In 1993, there were 7,315 licensed hotel and motel rooms in the region.

2. In 1993, the licensed seating capacity of all north central Florida restaurants was 51,208.

3. In Fiscal Year 1993-94, total annual attendance at state parks, preserves, and other state-owned areas located in north central Florida was 530,626.

Policy 2.4.1. Assist local governments and organizations with tourism planning and related promotions.

Policy 2.4.2. Coordinate multi-agency efforts to expand tourism development in the region.

Policy 2.4.3. Conserve the region's natural resources of regional significance as economic as well as natural resource assets.

Policy 2.4.4. Assist the Interstate-75 Tourism Task Force in addressing physical improvements to Interstate Highway 75, creating a program of interchange maintenance, considering uniform outdoor advertising standards, and encouraging alternative advertising methods to promote tourism in north central Florida.

REGIONAL GOAL 2.5. Maintain a regional unemployment rate of no greater than 4.0 percent.

Regional Indicators

1. The 1999 regional unemployment rate was 3.1 percent.

2. The 1999 unemployment Rate in Dixie County was 5.1 percent.

3. The 1999 Taylor County unemployment rate was 7.7 percent.

4. The 1999 Hamilton County unemployment rate was 6.5 percent.

5. In 1999, the regional labor force consisted of 184,231 persons.

6. In 1999, 5,680 north central Florida residents were classified as unemployed by the Florida Department of Labor and Employment Security.

Policy 2.5.1. Develop a plan to assist Hamilton and surrounding counties in minimizing adverse impacts resulting from the cessation of phosphate mining.

Policy 2.5.2. Continue working with the North Central Florida Economic Development Partnership to address regional economic development problems and opportunities including economic development issues affecting Dixie, Levy, and Taylor counties.

Policy 2.5.3. Support and coordinate with the Rural Economic Development Initiative of the Florida Department of Commerce, the Institute of Food and Agricultural Sciences, the Florida Farm Bureau, and other organizations in addressing economic issues facing the region's agricultural, forestry, and fisheries industries.

REGIONAL GOAL 2.6. Ensure adequate public utilities and facilities to serve business and industrial development throughout the region.

Regional Indicator

In 2000, 26 of the region's 33 incorporated municipalities had centralized water and 20 (plus one unincorporated community) had centralized sewer.

Policy 2.6.1. Provide technical assistance to local governments in applying for state and federal grants to construct or expand public facilities necessary to attracting and accommodating businesses and industries.

Policy 2.6.2. Provide technical assistance to local governments in updating and maintaining local comprehensive plans which address the adequacy of local public utilities in accommodating future growth and development.

EMERGENCY PREPAREDNESS

amended August 28, 1997, and February 27, 2003

EMERGENCY PREPAREDNESS

CONDITIONS AND TRENDS

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.[31] 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."[32] At 5:42 a.m. a

[31]"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.

[32]TaCo Times, Perry, Florida, March 17, 1993.

weather forecaster in Tampa went on a statewide emergency radio network to issue a flood warning.[33]

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."[34]

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.[35]

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 statewide emergency radio network (NAWAS). Both counties were outside the range of the National Oceanic and Atmospheric Administration (NOAA) weather radio station network and neither county had emergency sirens.

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

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

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

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.

North central Florida NOAA weather radio signals coverage has been significantly expanded since the Storm of the Century. As of January, 2000, NOAA weather radio covered approximately 70 percent of the region, including all of the region's coastal areas due to the establishment of a new NOAA weather station. Nevertheless, a need continues to exist for an additional NOAA weather station to serve parts of Columbia, Hamilton, Madison, and Suwannee counties.

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 NAWAS 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. One weather buoy was installed in the Gulf of Mexico approximately 100 miles southwest of Horseshoe Beach in 1994. The weather buoy contains weather instruments and a radio transmitter. It was the first instrument to identify hurricane force winds in 1995's Hurricane Allison.[36]

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.

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[36]Mike Rucker, Public Information Officer, Florida Department of Community Affairs, Division of Emergency Management, June, 1995.

Dixie and Taylor counties have four small coastal communities: the unincorporated coastal communities of Jena-Steinhatchee, Dekle Beach-Keaton Beach, Suwannee, and the incorporated Town of Horseshoe Beach. 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 January 1, 2000, four north central Florida coastal communities (Horseshoe Beach, Dekle beach, Keaton Beach, & Steinhatchee) had emergency warning sirens. The unincorporated communities of Suwannee and Jena do not have sirens, although Dixie County is seeking funds for the installation of sirens in these two coastal communities.

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 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 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 and Taylor counties, the seawater is trapped in Appalachee 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.[37]

The potential loss of life and property damage due to hurricanes in Dixie and Taylor counties is minimized due to their small populations and large coastal land holdings in public ownership. Dixie County's estimated 1999 population was 13,478, while Taylor County's was 19,836. Population density is low. Both Taylor and Dixie counties had an estimated 1999 population density of 19 persons per square mile, tied at 63rd among Florida's 67 counties.[38] Additionally, approximately two-thirds of the Dixie and Taylor counties coastline is in public ownership.

CLEARANCE TIMES AND SHELTER CAPACITIES

The 1996 Cedar Key Basin Florida Hurricane Evacuation Study, Draft Technical Data Report defines clearance time as the time period covering the issuance of an evacuation order until the last person has arrived at a safe location. Clearance time is comprised of both a behavioral response time component and a travel time component. The clearance time is calculated by adding travel time to the assumed behavioral response time.

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

[38]Bureau of Economic and Business Research, 1999 Census Handbook, Florida, University Press of Florida, Gainesville, FL., 1994, Table 1.77.

The study concluded that behavioral response time is mainly determined by public perception of the threat from the hurricane. Influential factors include when the hurricane is expected to strike land, strength of the storm, and how soon the escape routes may be cut off. Table 3.1 identifies three clearance times based upon differing behavioral response times. The study notes that under normal circumstances, the most likely behavioral response is the median behavioral response, where the evacuating population start to leave in 6.25 hours after the issuance of an evacuation order. If the evacuation order is issued in the middle of the night, then the slow behavioral response of 9.25 hours is applicable. If the hurricane makes a sudden and unexpected turn inland, then the quick response time of 4.25 hours is applicable.

TABLE 3.1

HURRICANE EVACUATION CLEARANCE TIMES, IN HOURS

Response Type by Tourist Occupancy Levels	Dixie County		Taylor County	
	Tropical Storm - Category 1 Hurricane	Category 3-5 Hurricane	Tropical Storm - Category 1 Hurricane	Category 3-5 Hurricane
Low Tourism Occupancy				
Rapid Response	4.00	4.00	4.25	4.25
Medium Response	6.00	6.00	6.25	6.25
Long Response	9.00	9.00	9.25	9.25
High Tourist Occupancy				
Rapid Response	4.00	4.25	4.25	4.25
Medium Response	6.00	6.00	6.25	6.25
Long Response	9.00	9.00	9.25	9.25

Source: Department of the Army, Jacksonville District Corps of Engineers, Cedar Key Basin Florida Hurricane Evacuation Study, Draft Technical Data Report, Table 6-8a, Jacksonville, FL., 1996.

The draft study estimates that a total of 26,500 people will evacuate during a strong storm in 1995. Of these, 4,150 are expected to evacuate to local public shelters. The study noted that Dixie County has 2,100 persons expected to evacuate to public shelters while Taylor County is expected to evacuate 2,050 persons to public shelters. The study identified a surplus of local public shelter space of 6,510. Taylor County has a surplus of 4,931 while Dixie County has a surplus capacity of 1,569. The study does not project future hurricane shelter space supply and demand.[39]

[39]Department of the Army, Jacksonville District Corps of Engineers, Cedar Key Basin Florida Hurricane Evacuation Study, Draft Technical Data Report, tables 6-4 and 6-5, Jacksonville, FL., 1996.

However, the identified shelters were not based on American Red Cross (ARC) shelter guidelines. In 1993, the State of Florida began using ARC guidelines to determine the fitness of public shelters and their capacities. ARC identifies two different types of shelters, Host and Risk, and correspondingly, two different county shelter capacities. Host shelters consist of buildings used in counties which are not experiencing a flood or weather emergency to house residents from counties experiencing a flood or weather emergency. Under ARC guidelines, Host shelters are subject to less stringent standards than Risk shelters. Risk shelters are buildings used within a county experiencing a weather-related emergency such as a hurricane. Risk shelters must be able to withstand winds of 150 miles per hour, be located outside a flood hazard/storm surge area, and comply with the other provisions of ARC document 4496, Guidelines for Shelter Survey.

As of January 1, 2000, Division of Emergency Management (DEM) records indicate that the region has 150 public shelters, principally public schools and churches.[40] Host capacity has been determined for 46 of the region's 153 public shelters. Only 19 have been surveyed for compliance with ARC 4496 guidelines for use as a Risk shelter. DEM's goal is to complete surveys of all identified public shelters by the end of 2003.

While all public shelters in Taylor County have been surveyed for compliance with ARC guidelines, Dixie County shelters have not. In fact, the only other north central Florida counties which have had public shelters evaluated for compliance with ARC guidelines are Gilchrist and Madison counties, where four of these counties' six public shelters have been surveyed. Table 3.2 below identifies host and risk shelter capacities for north central Florida counties.

[40]A division of the Florida Department of Community Affairs.

TABLE 3.2

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

County	No. of Shelters	Host Capacity	No. Shelters Surveyed for ARC 4496 Compliance	Risk Capacity ARC 4496 Compliant	Risk Capacity ARC 4496 Non-compliant	PSN* Storm Capacity
Alachua	79	4,139	0	0	8,777	0
Bradford	6	0	0	0	0	0
Columbia	24	0	0	0	0	0
Dixie	3	384	0	0	0	0
Gilchrist	6	2,258	4	1,380	428	52
Hamilton	5	0	0	0	0	0
Lafayette	6	1,394	0	0	842	0
Madison	8	3,810	8	3,810	0	0
Suwannee	6	4,199	0	0	0	0
Taylor	7	2,590	7	1,910	0	0
Union	3	0	0	0	0	0
Region	153	18,774	19	7,100	10,047	52

*Persons with Special Needs.

Source: Florida Department of Community Affairs, Division of Emergency Management, January 3, 2000.

LONG-RANGE PLANNING FOR HURRICANE EMERGENCIES

Insuring the public safety from hurricane hazards also requires long-range planning. Directing growth away from areas subject to hurricane surge inundation can save lives and reduce property damage. North central Florida local governments have successfully reduced allowable dwelling unit densities within coastal areas. In Taylor County, the Future Land Use Plan Map identifies two small coastal communities, Steinhatchee and Dekle Beach - Adams Beach. The Taylor County Comprehensive Plan limits dwelling unit densities to one unit per five acres and one unit per ten acres for the remaining privately-held lands on the Taylor County coast.[41] Dixie County has three coastal communities, the unincorporated communities of Jena and Suwannee as well as the Town

[41]Taylor County Board of County Commissioners, Taylor County Comprehensive Plan, Perry, Fl., November, 1991.

of Horseshoe Beach. The maximum allowable dwelling unit density in Horseshoe Beach is four units per acre. In Jena and Suwannee, the maximum allowable density is eight units per acre. The areal extent of these three communities is small, representing approximately three square miles of land area. The Dixie County Comprehensive Plan limits dwelling unit densities on the remaining privately-held coastal area lands to one unit per ten acres and one unit per 40 acres.[42] Furthermore, the region's two coastal counties are in the process of expanding the geographic extent of their coastal High Hazard Areas as designated in their local government comprehensive plans.

RIVERINE AND FRESHWATER FLOODING

The Suwannee River System has a broad, expansive floodplain which is regularly inundated in response to spring rains.[43] The Suwannee River Water Management District, in conjunction with the Federal Emergency Management Agency (FEMA), 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).

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[42]Dixie County Board of County Commissioners, Dixie County Comprehensive Plan, Cross City, Fl., November, 1991.

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

In addition to the Suwannee River System, FEMA has prepared maps which identify flood hazard areas for all unincorporated areas of the region as well as most of the region's incorporated municipalities.[44] As of January 1, 2000, 34 of the region's 35 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 NFIP, have comprehensive plans which identify floodable areas and contain policies which address flood management.

TORNADOES

Between 1959 and 1994, 120 tornadoes have touched down in north central Florida resulting in six deaths and 65 injuries.[45] 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 (NWS) 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 NWS 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

[44]The north central Florida communities yet to be mapped are Bell, Fort White, Hawthorne, Jasper, Jennings, Newberry, Raiford, and Trenton.

[45]National Weather Service, Miami Forecast Office, 1995.

jurisdiction. According to Al Sandrick, a meteorologist stationed at the Jacksonville NWS station, "We would never have imagined achieving that type of accuracy with the old radar system."

REGIONALLY SIGNIFICANT EMERGENCY PREPAREDNESS FACILITIES

The facilities listed in Table 3.3 are recognized as regionally significant facilities.[46]

TABLE 3.3

REGIONALLY SIGNIFICANT EMERGENCY PREPAREDNESS FACILITIES

Alachua 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
PCS, Inc., Chemical Emergency Response Team

HAZARDOUS MATERIALS RELEASES

Under contract with the Florida Department of Community Affairs, the North Central Florida Regional Planning Council serves as staff to the North Central Florida Local Emergency Planning Committee (LEPC). The LEPC was established in 1988 in response to the federal Emergency Planning and Community Right-to-Know Act (EPCRA) which requires the preparation of local emergency response plans for hazardous materials releases which, for the State of Florida, have been developed utilizing the eleven regional planning council districts.[47] The North Central Florida LEPC is composed of representatives of 17 different occupational categories. Membership is also distributed geographically to assure that each of the region's eleven counties has at least one resident

[46]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, F.A.C., 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 5.8, and Regionally Significant Facilities and Resources, identified in Section VI.

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

serving as a member of the LEPC. 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 LEPC emergency response plan identifies locations of possible hazardous materials releases based upon known locations of hazardous materials. The plan also delineates vulnerable zones.[48]

In addition to the emergency response plan, the LEPC 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.

While the LEPC and county hazardous materials emergency response plans have a good understanding of what stationary facilities have in terms of hazardous materials, little is known about hazardous materials moving down roads and railroads in the region. In 2002, the LEPC will begin a commodity flow study of the region's roads, pipelines, and railroads. 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.

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 two regional response teams. One of the response teams is run by the City of Gainesville Fire Department while the other is operated by PCS in Hamilton County.

The LEPC has adopted a needs assessment for additional regional response teams to assure a timely response to hazardous materials spills in the western portion of the region. For example, the LEPC has determined that the worst-case hazardous materials accident in Taylor County is the release of chlorine in the City of Perry as the result of a railroad accident. Currently, such a spill is likely to result in a telephone call to either the Tallahassee Fire Department, the PCS emergency response team, or the Gainesville Fire Department. Tallahassee is the closest response team to Taylor County. Nevertheless, the LEPC has determined that the response time of even the closest emergency response unit, the Tallahassee Fire Department, is too great to adequately protect the public from the release of chlorine gas from a rail car. The LEPC needs assessment notes that response times are 60 minutes or less to hazardous materials accidents in every community within the region except for Perry, Cross City, and Greenville where response times are over one hour. The needs assessment also notes that adequate response times in metropolitan areas is generally considered to be 30 minutes. Given the high costs associated with maintaining hazardous materials

[48]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.

response times and the rural nature of the region, the assessment establishes a goal of providing a 60 minute response to hazardous materials accidents.[49]

As noted earlier, the Council staff assists the LEPC in staging hazardous materials emergency response exercises to test the effectiveness of the plans and to provide valuable training to emergency response teams. The LEPC plan was tested during December, 2001, hazardous materials exercise. Local responders gained valuable experience from the exercise. Also, free hazardous materials emergency response training classes are sponsored by the LEPC for first responders including firefighters, law enforcement, emergency medical, and public works personnel. Over 3,700 people have been trained since 1995. Most of the training is at the awareness-level, in which first responders are trained to recognize, identify, and make the proper notifications for possible hazardous materials incidents.[50]

The LEPC is actively working to reduce the risks associated with hazardous materials. To assist the regulated community, the LEPC has notified over 2,800 facilities of their potential reporting requirements. The LEPC also provides technical assistance to help these facilities comply with the reporting requirements of EPCRA.

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.[51] The Committee identified five key recommendations: improve communications at and 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

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[49]For more information regarding the need for an additional regional emergency response team in Perry, see North Central Florida Local Emergency Planning Committee, Needs Assessment for Additional Hazardous Materials Emergency Response Teams, Training, and Equipment in North Central Florida, North Central Florida Regional Planning Council, Gainesville, Fl, November 17, 1995.

[50]First responders are individuals 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.

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

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 (CEMP). 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 Department of Community Affairs, Division of Emergency Management (DEM), 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.[52]

LOCAL GOVERNMENT COMPREHENSIVE EMERGENCY MANAGEMENT PLANS

Rule 9G-6, Florida Administrative Code. (F.A.C.), required local governments to prepare revised CEMPs which meet the requirements of rule 9G-7, F.A.C. The county CEMP 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. County CEMPs are no longer required to develop or maintain nuclear attack civil protection plans. Each county CEMP 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 CEMPs are submitted to the Florida Department of Community Affairs (DCA) for compliance review.

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.

[52]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 DEM 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 6, 2000, 41 of the region's 44 local governments had adopted the agreement.[53]

PROBLEMS, NEEDS, AND OPPORTUNITIES

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

1. A need exists for an additional NOAA weather station radio to serve Columbia, Hamilton, Madison, and Suwannee counties.

2. A need exists for additional weather monitoring buoys or other meteorological instruments at 100, 50, and 10 mile locations in the Gulf of Mexico spaced approximately 50 miles apart from Pinellas to Franklin counties.

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, Cross City, 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

[53]Florida Department of Community Affairs, Division of Emergency Management, Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery Status Report, Tallahassee, Fl., January 6, 2000.

signatories to the Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery.

7. A need exists to complete emergency shelter surveys in all north central Florida counties based on American Red Cross Shelter guidelines.

REGIONAL GOALS AND POLICIES

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

Regional Indicators

1. As of January 1, 2001, one coastal weather buoy exists in the Gulf of Mexico located approximately 100 miles southwest of Horseshoe Beach.

2. As of January 1, 2000, NOAA weather ratio transmissions covered approximately 70 percent of the region.

3. As of January 1, 2000, four north central Florida coastal communities (Horseshoe Beach, Dekle Beach, Keaton Beach, & Steinhatchee) had emergency warning sirens.

4. As of January 1, 1996, Dixie County had a Long Response clearance time of 9.00 hours.

5. As of January 1, 1996, Taylor County had a Long Response clearance time of 9.25 hours.

6. As of January 1, 2000, 19 of the region's 153 public shelters had been surveyed for compliance with ARC 4496 guidelines.

7. As of January 1, 2000, the region's ARC 4496-Compliant Risk Public Shelter Capacity was 7,100.

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 NOAA 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 ARC Publication 4496 guidelines in order to determine the public shelter Risk Capacity for the region.

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

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

Regional Indicators

1. As of January 1, 2000, 34 of the region's 35 local governments with mapped flood hazard areas within their jurisdiction participated in the National Flood Insurance Program.

2. As of January 1,2000, National Flood Insurance Rate Maps are unavailable for eight north central Florida municipalities.

Policy 3.2.1. Maintain local government eligibility for the FEMA Flood Insurance program.

Policy 3.2.2. Assist the remaining five 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 FEMA to prepare National Flood Insurance Rate Maps for the remaining eight 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, Cross City, and Greenville.

Regional Indicator

As of January 1, 2000, no regional hazardous materials response team is located within a sixty minute response time of Perry, Cross City, or Greenville.

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.

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

Regional Indicator

As of January 1, 2000, no commodity flow studies have been undertaken to determine the types and amounts of hazardous materials moving via railroads and highways in the region.

Policy 3.4.1. Conduct a commodity flow study to determine the types and amounts of hazardous materials moving via railroads and highways 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 LEPC.

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 6, 2000, 41 north central Florida local governments had 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.

NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

amended August 28, 1997, and February 27, 2003

NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

CONDITIONS AND TRENDS

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 6,813 square miles, all of which is classified by the Council as a natural resource of regional significance.[54]

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.[55] 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). Listed species are also recognized as natural resources of regional significance.[56]

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.

Although mapped as discrete geographic units,[57] 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

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[54]Includes the Floridan Aquifer, a natural resource of regional significance which underlies the entire region.

[55]North central Florida regionally significant facilities and resources, as defined in Rule 27E.005, F.A.C., 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 5.8, and Regionally Significant Facilities and Resources, identified in Section VI.

[56]Listed species are those plant and animal species classified as Endangered, Threatened, or Species of Special Concern in Florida's Endangered Species, Threatened Species, and Species of Special Concern; Official Lists, published by the Florida Game and Fresh Water Fish Commission.

[57]The habitat of listed species is not mapped.

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 area, especially where such resources are in private ownership.

Natural resources of regional significance are grouped into five categories: Coastal and Marine Resources, Ground Water 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.[58]

Natural resources of regional significance are listed in Table 4.1. The regional plan identifies 204 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 Peacock Springs State Recreation Area, 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 Ground Water Resources map identifies over one million acres as potential high aquifer recharge areas. Some resources defy counting. For example, over 256 parcels 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". Listed species are located in numerous locations throughout the region. Additionally, the number and location of occurrences of listed species can change over time as new locations of listed species are discovered.

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 (GIS) from the Suwannee River Water Management District's GIS. Coverages (maps) which are directly imported from one GIS system to another represent the most accurate coverages contained in the SRPP. However, most coverages depicted in the SRPP maps were hand-digitized by Council staff from paper maps. The Council's hand-digitized coverages vary widely in terms of detail and accuracy. While reasonably accurate for purposes of presentation in the SRPP, they should not be used as a substitute for the source maps from which they were derived.

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

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	48,190.00
Coastal and Marine Resources	Big Bend Seagrass Beds	Big Bend Seagrass Beds	420,037.00
Coastal and Marine Resources	Florida Middle Ground	Florida Middle Ground	132,000.00
Ground Water Resources	Areas of High Recharge Potential to the Floridan Aquifer	Areas of High Recharge Potential to the Floridan Aquifer	1,140,695.00
Ground Water Resources	Floridan Aquifer	Floridan Aquifer	4,415,998.00
Ground Water Resources	Ichetucknee Trace	Ichetucknee Trace	10,767.00
Ground Water Resources	Sinks	Alachua Sink	1.00
Ground Water Resources	Sinks	Aucilla River Sinks	2,000.00
Ground Water Resources	Sinks	Brooks Sink	1.00
Ground Water Resources	Sinks	Clay Sink	1.00
Ground Water Resources	Sinks	Devil's Millhopper	1.00
Ground Water Resources	Sinks	O'leno Sink	1.00
Ground Water Resources	Sinks	Rose Sink	1.00
Ground Water Resources	Sinks	Saylor Sink	1.00
Ground Water Resources	Stream-to-Sink Watershed	Sinking Branch	1,596.00
Ground Water Resources	Stream-to-Sink Watershed	Cannon Creek/Columbia Rose Creek/ Clay Hole Creek	34,303.00
Ground Water Resources	Stream-to-Sink Watershed	Indian Mound Swamp/ South Falling Creek/ Turkey Prairie	30,759.00
Ground Water Resources	Stream-to-Sink Watershed	Little River	35,639.00
Ground Water Resources	Stream-to-Sink Watershed	Norton Creek	4,337.00
Ground Water Resources	Stream-to-Sink Watershed	Alachua Slough/Blues Creek/Burnett Lake/Mill Creek Sink/Nammock Branch/North Alachua/Pareners Branch/Turkey Creek	41,953.00
Natural Systems	Listed Species*	n/a	n/a
Plan. & Resource Mgmt. Areas	Private Lands	n/a	32,095.00
Plan. & Resource Mgmt. Areas	Public Lands	Aucilla River Sinks	1,097.00
Plan. & Resource Mgmt. Areas	Public Lands	Austin Cary Memorial Forest	2,064.00
Plan. & Resource Mgmt. Areas	Public Lands	Big Bend Coastal Tracts	81,158.00
Plan. & Resource Mgmt. Areas	Public Lands	Big Gum Swamp National Wilderness Area	3,374.00
Plan. & Resource Mgmt. Areas	Public Lands	Big Shoals Tract	2,577.00
Plan. & Resource Mgmt. Areas	Public Lands	County Conservation Areas	1,051.00

TABLE 4.1
NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

Map Layer	Classification	Name	Acreage
Plan. & Resource Mgmt. Areas	Public Lands	Devil's Millhopper State Geologic Site	60.01
Plan. & Resource Mgmt. Areas	Public Lands	Gum Root Swamp	30.00
Plan. & Resource Mgmt. Areas	Public Lands	Ichetucknee Springs State Park	2,222.00
Plan. & Resource Mgmt. Areas	Public Lands	Lake Altho Swamp	1,381.00
Plan. & Resource Mgmt. Areas	Public Lands	Lochloosa Forest	27,334.00
Plan. & Resource Mgmt. Areas	Public Lands	Lower Suwannee River National Wildlife Refuge	27,831.00
Plan. & Resource Mgmt. Areas	Public Lands	Okefenokee National Wildlife Refuge	236.00
Plan. & Resource Mgmt. Areas	Public Lands	O'leno State Park	1,729.00
Plan. & Resource Mgmt. Areas	Public Lands	Osceola National Forest	96,003.00
Plan. & Resource Mgmt. Areas	Public Lands	Paynes Prairie State Preserve	20,409.00
Plan. & Resource Mgmt. Areas	Public Lands	Peacock Springs State Recreation Area	274.00
Plan. & Resource Mgmt. Areas	Public Lands	River Rise State Preserve	4,095.00
Plan. & Resource Mgmt. Areas	Public Lands	St. Marks National Wildlife Refuge	519.00
Plan. & Resource Mgmt. Areas	Public Lands	San Felasco Hammock State Preserve	6,942.00
Plan. & Resource Mgmt. Areas	Public Lands	Santa Fe Swamp	5,587.00
Plan. & Resource Mgmt. Areas	Public Lands	Steven Foster State Folk Cultural Center	210.00
Plan. & Resource Mgmt. Areas	Public Lands	Suwannee River State Park	1,950.00
Plan. & Resource Mgmt. Areas	Public Lands	Water Management District Easements	30,790.00
Plan. & Resource Mgmt. Areas	Public Lands	Water Management District Lands	111,573.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Alapaha River	218.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Alligator Lake	500.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Aucilla River	509.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Econfina River	212.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Fenholloway River	212.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Hampton Lake	816.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Lake Altho	548.00

TABLE 4.1
NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

Map Layer	Classification	Name	Acreage
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Lake Crosby	534.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Lake Rowell	357.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Lake Sampson	2,013.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Lake Santa Fe	4,211.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Little Santa Fe Lake	1,096.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	New River	182.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Olustee Creek	121.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Santa Fe River	836.40
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Steinhatchee River	170.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Suwannee River	3,764.00
Plan. & Resource Mgmt. Areas	Surface Water Improvement Management Waterbodies	Withlacoochee River	376.00
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 Altho 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 State Preserve	11,197.00
Surface Water Systems	Fresh Water Wetlands	San Pedro Bay	305,375.00
Surface Water Systems	Fresh Water Wetlands	Santa Fe Swamp	5,567.00
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

TABLE 4.1
NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

Map Layer	Classification	Name	Acreage
Surface Water Systems	Fresh Water Wetlands	Tide Swamp	15,236.00
Surface Water Systems	Fresh Water Wetlands	Wacassassa Flats	61,653.00
Surface Water Systems	Lakes	Alligator Lake	500.00
Surface Water Systems	Lakes	Lake Butler	436.00
Surface Water Systems	Lakes	Lake Geneva	57.76
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	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	133,924.00
Surface Water Systems	River Corridors	Withlacoochee River	12,880.00
Surface Water Systems	Springs	ALA112971	1.00
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

TABLE 4.1
NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

Map Layer	Classification	Name	Acreage
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	GIL84971	1.00
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

TABLE 4.1
NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

Map Layer	Classification	Name	Acreage
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	Ichetucknee Spring	1.00
Surface Water Systems	Springs	July Spring	1.00
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	LAF929973	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 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	Mearson Spring	1.00
Surface Water Systems	Springs	Mill Pond	1.00
Surface Water Systems	Springs	Mission	1.00

TABLE 4.1
NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

Map Layer	Classification	Name	Acreage
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
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

TABLE 4.1
NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

Map Layer	Classification	Name	Acreage
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	White Spring	1.00
Surface Water Systems	Springs	Wilson	1.00
Surface Water Systems	Springs	Withlacoochee Blue Spring	1.00

Source: North Central Regional Planning Council, 2001.

*Includes listed species habitat as described in Appendix E.

n/a = Not Applicable. An identification 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 number.

COASTAL AND MARINE RESOURCES

The region's coastline bordering the Gulf of Mexico extends approximately 80 miles from the Aucilla River, separating Taylor and Jefferson Counties, south to the Suwannee River which forms the boundary between Dixie and Levy counties. The environmental quality of the Gulf coast in Dixie 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 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.[59] 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.

BIG BEND SALT MARSH

Nearly the entire length of the Dixie 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.

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.

BIG BEND SEAGRASS BEDS

Three marine leagues seaward of land's end lies the limits of the jurisdiction of the state.[60] 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.[61] The seagrasses are comprised predominantly of Thalassia testudinum, Halodule wrightii, Syringodium filiforme, and Halophilla eugolmannii.

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[59]Coastal fresh water wetlands are addressed under Surface Water Systems, beginning on page IV-28.

[60]Chapter 258.395, Florida Statutes.

[61]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.

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.

Adverse environmental impacts could result from oil and natural gas well drilling off the coast of Dixie and Taylor counties. A 100-mile wide federal coastal buffer exists seaward of the coastline in which oil and natural gas well drilling is prohibited. Oil spills, although rare, could seriously threaten the health of the seagrass beds, salt marsh, and Gulf fishery, especially if the federal government removed the coastal buffer.

Drilling activities have the potential for very high impacts on the seagrass beds.[62] 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. A major spill could devastate large areas of shallow (less than 20 feet in depth) seagrass communities and salt marsh, which, in turn, could severely damage fish and shellfish populations important to both commercial and recreational fishermen.[63]

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

[63] Ibid., vol. 2, p. IV.B.6.-18.

A study of the sensitivity of Florida's coastal environment to spilled oil corroborates these concerns. The study ranked the region's coastline as among the most environmentally sensitive in the state.[64] Fish and benthic invertebrate species found along the north central Florida coast which are vulnerable to oil spills 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.

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.[65] 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.

GROUND WATER RESOURCES

Ground water 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.

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

[65] 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.

THE 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.[66]

The Floridan Aquifer can be divided into three classes. In Class I, the Floridan Aquifer is unconfined and is the sole source for ground water 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 Ground Water Resources map, to Class I near the coastline. Generally, ground water within the Floridan Aquifer moves from Class III to Class I areas (northeast to southwest).

WATER QUANTITY OF THE FLORIDAN AQUIFER

Table 4.2 indicates that north central Florida has a much higher reliance on ground water than the rest of the state. In 1995, 63.6 percent of all water withdrawn for human use came from ground water sources, compared with 23.9 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 86.8 percent of the remaining ten-county area's water withdrawals.

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

TABLE 4.2

PERCENTAGE OF NORTH CENTRAL FLORIDA WATER WITHDRAWAL BY WITHDRAWAL TYPE, 1995

Area	Total Withdrawal	Withdrawal Source		Withdrawal Type					
		Ground Water	Surface Water	Residential Domestic	Institutional Commercial	Industrial	Utility	Other	Remainder[a]
Alachua	100.0	98.4	1.6	27.6	13.5	1.4	6.7	0.7	50.1
Bradford	100.0	0.1	0.8	9.2	5.2	0.8	2.4	0.1	82.2
Columbia	100.0	3.7	1.4	7.8	6.4	0.9	2.4	0.2	82.2
Dixie	100.0	100.0	0.0	12.3	2.6	1.2	2.6	0.0	81.2
Gilchrist	100.0	98.9	1.1	1.1	0.9	0.1	0.3	0.0	97.6
Hamilton	100.0	100.0	0.0	1.0	0.5	0.1	0.3	0.0	98.1
Lafayette	100.0	95.4	4.6	1.3	0.5	0.3	0.3	0.0	97.6
Madison	100.0	94.6	5.4	6.9	3.0	4.6	2.3	0.2	83.0
Suwannee	100.0	20.4	79.6	0.6	0.3	0.0	0.1	0.0	99.0
Taylor	100.0	96.3	3.7	1.9	0.7	0.5	0.5	0.0	96.4
Union	100.0	95.2	4.8	7.4	3.3	1.5	1.9	0.0	85.9
Region	100.0	63.6	36.4	5.9	2.9	0.6	1.5	0.1	89.0
Florida	100.0	23.9	76.1	6.9	2.1	0.6	1.6	0.2	88.6

[a]Includes, but is not limited to, agricultural withdrawals.

Source: 2000 Florida Statistical Abstract, tables 8.41 & 8.42.

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.[67]

Agricultural use accounts for approximately 23.0 percent of the region's total 1990 water use, which is slightly higher than the statewide percentage of 21.0. Agricultural water uses are not routinely reported as agricultural water use metering is not required in north central Florida. Agricultural uses are derived by the water management districts from irrigated crop acreage estimates, seasonal climatic conditions, and other available data.[68]

[67]Suwannee River Water Management District, 1996.

[68]Suwannee River Water Management District, 1996.

Potable water demands will increase in direct proportion to the region's population increase. Other water uses are difficult to project. Farms in the region are declining overall in size and number, but are projected to maintain approximately the same rate of water usage as different crops and animal husbandry operations are brought into the region. Commercial and industrial water consumption, currently comprised of a relatively few large users in the region, could change significantly with just one high-consumption firm locating in the region.

Sufficient potable supplies are expected to be available to meet the region's present and projected requirements provided there is proper planning and careful management of the water supply. North central Florida must retain adequate water reserves for future water requirements, including the requirements of a growing population as well as north central Florida's natural systems and native species. Water from the Floridan Aquifer is required for the region's springs and rivers to flow, for wetlands to remain wet, and for lakes to remain lakes. The region's vegetation and wildlife are dependent upon the water found within rivers, springs, and wetlands for their survival. However, little is known about the relationships between groundwater and surfacewater, and the surface water needs of native species. Additional information is needed regarding these relationships and needs.

Tables 4.3 and 4.4 below, report change in north central Florida estimated water withdrawal by withdrawal type. The tables report a 9.0 percent decline in total estimated north central Florida water withdrawal between 1990 and 1995 (the latest available data). Despite significant population growth during this period, estimated total withdrawals statewide increased by only 1.6 percent during this period. Regional withdrawals for residential use decreased by 10.0 percent while institutional and commercial withdrawals increased by 37.7 percent during this period. Statewide, estimated residential withdrawals were flat, increasing by 0.9 percent, while institutional and commercial withdrawals increased by 36.8 percent.

It is difficult to reconcile the decline in estimated water withdrawal with the region's estimated 9.3 percent population increase during this period.[69] The consumption numbers may reflect inherent limitations in the way water withdrawal estimates are reported. Industrial and utility consumption can vary widely, depending on market forces. Agricultural withdrawals can vary widely from year to year, depending on rainfall and annual variations in types of crops.

[69] 1996 Florida Statistical Abstract, Bureau of Economic and Business Research, University of Florida, Gainesville, Florida, 1997, Table 1.67.

Furthermore, the July 15, 1999, draft Water Management Plan for the Suwannee River Water Management District projects a 20 percent increase in total water consumption within the district by the year 2020.[70] The draft plan notes that significant regional hydrogeological impacts as a result of water withdrawals are not expected due largely to the relatively low absolute increase in overall water use. The draft plan concludes that the Floridan aquifer system retains adequate supplies for the existing and future water needs within the District.

TABLE 4.3

CHANGE IN ESTIMATED WATER CONSUMPTION, 1990-1995
(Millions of Gallons Per Day)

Area	Total Withdrawal	Withdrawal Source		Withdrawal Type					
		Ground Water	Surface Water	Residential Domestic	Institutional Commercial	Industrial	Utility	Other	Remainder
Alachua	(4.2)	(4.6)	0.4	(1.4)	2.5	(1.0)	0.9	0.1	(5.3)
Bradford	(1.6)	(9.0)	0.0	(0.9)	(0.4)	0.2	(0.2)	(0.1)	6.1
Columbia	4.8	(10.6)	0.0	0.1	0.4	(0.8)	0.2	0.0	4.8
Dixie	(2.5)	(2.5)	0.0	(0.1)	0.0	0.0	0.1	0.0	(2.4)
Gilchrist	(1.7)	(1.8)	0.1	(0.1)	0.0	0.0	0.0	0.0	(1.7)
Hamilton	(4.4)	(4.4)	0.0	(0.2)	0.0	0.0	0.1	0.0	(4.3)
Lafayette	(2.2)	(2.0)	(0.2)	0.0	0.0	(0.1)	0.0	0.0	(2.2)
Madison	1.8	1.6	0.2	0.2	0.0	(0.2)	0.1	0.0	1.7
Suwannee	0.7	(3.2)	3.9	0.0	0.1	(0.1)	0.1	0.0	0.7
Taylor	2.4	1.7	0.7	0.3	0.2	(0.1)	0.2	0.0	1.9
Union	(2.4)	(1.8)	(0.6)	0.0	(0.2)	0.0	0.0	0.0	(2.1)
Region	(31.8)	(36.4)	4.6	(2.1)	2.6	(2.4)	1.4	0.1	(31.4)
Florida	282.7	(373.8)	656.5	11.5	103.7	(79.4)	112.0	(7.7)	142.6

Source: 1994 & 1998 Florida Statistical Abstract, Tables 8.41 & 8.42.

[70] Water Management Plan 2000 , Review Draft, Suwannee River Water Management District, July 15, 1999, Live Oak, Florida, page 35. Note: The District includes all north central Florida counties with the exception of southeastern Alachua County. The District also includes Jefferson and Levy counties.

TABLE 4.4

PERCENT CHANGE IN ESTIMATED WATER CONSUMPTION, 1990-1995

Area	Total Withdrawal	Withdrawal Source		Withdrawal Type					
		Ground Water	Surface Water	Residential Domestic	Institutional Commercial	Industrial	Utility	Other	Remainder
Alachua	(7.9)	(8.7)	108.3	(9.7)	60.7	(58.9)	40.4	63.6	(18.0)
Bradford[1]	(17.3)	(99.9)	0.0	(57.1)	(52.4)	(76.0)	(52.6)	(91.7)	15,225.0
Columbia	41.9	(94.7)	0.0	8.6	67.7	(83.9)	72.7	0.0	57.2
Dixie	(41.9)	(41.9)	0.0	(19.2)	50.0	0.0	125.0	0.0	(46.8)
Gilchrist	(15.4)	(16.3)	0.0	(41.2)	100.0	0.0	50.0	0.0	(15.3)
Hamilton	(8.7)	(8.7)	0.0	(25.8)	13.6	(33.3)	71.4	0.0	(8.7)
Lafayette	(22.7)	(21.9)	(37.0)	42.9	33.3	(71.4)	100.0	0.0	(23.2)
Madison	24.4	22.1	0.0	39.1	7.7	(28.3)	90.9	0.0	27.7
Suwannee	0.5	(9.9)	3.6	(4.8)	28.6	(53.3)	90.0	0.0	0.5
Taylor	4.8	3.5	54.7	41.1	68.2	(30.6)	136.4	0.0	3.9
Union	(46.5)	(41.2)	0.0	(4.8)	(70.0)	(42.9)	0.0	0.0	(47.5)
Region	(9.0)	(15.1)	4.1	(10.0)	37.7	(57.5)	39.6	31.4	(9.8)
Florida	1.6	(7.9)	5.0	0.9	36.8	(43.5)	64.8	(19.9)	0.9

[1]Although the Bradford County Remainder category percentage increase is unusually large, it is nevertheless mathematically correct.

Source: 1994 & 1998 Florida Statistical Abstract, Tables 8.41 & 8.42.

Although the quantity of the Floridan Aquifer is unknown, the discharge rates of the region's first magnitude springs. may serve as a useful proxy measure of aquifer quantity. Since the springs primarily derive their flows from the Floridan aquifer, a decline in spring discharge rates suggest a decline in groundwater quantity. Spring flows can be difficult to interpret as they fluctuate over time. Therefore, it is recommended that a broader measure be used, the number of north central Florida first, second, and third magnitude springs. The spring classification system is based on volume of water discharged. Changes in spring classification are determined by the water management districts and by FDEP based on their interpretation of changes in spring flow over time. As of January, 2000, north central Florida contained 19 first-magnitude springs, 101 second-magnitude springs, and 70 third-magnitude springs.[71]

[71]Springs of the Suwannee River Basin in Florida and Springs of the Aucilla, Coastal, and Waccasassa Basins in Florida, Suwannee River Water Management District, Live Oak, Florida. February, 2000.

WATER QUALITY OF THE FLORIDAN AQUIFER

Generally, the water quality of that portion of the Floridan Aquifer which underlies north central Florida is excellent. As noted in the Suwannee River Water Management District Water Management Plan, ground water 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. 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 ground water. Consequently, water from the Floridan Aquifer is relatively high in specific conductivity, alkalinity, magnesium, and calcium.[72]

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 surfacewater 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 concentrations in the region's first-magnitude springs.

TABLE 4.5

WATER QUALITY OF FIRST-MAGNITUDE SPRINGS OF NORTH CENTRAL FLORIDA

Spring Name	County	Nitrate Nitrogen (Milligrams per Liter)	Date of Measure
ALA 112971	Alachua	0.80	5/26/98
Alapaha Rise	Hamilton	0.24	9/25/97
Blue	Lafayette	1.87	7/16/97
Blue Hole	Columbia	0.04	6/17/98
Blue Spring	Madison	1.72	6/15/98
COL61981	Columbia	0.45	6/1/98
Columbia	Columbia	0.76	5/26/98
Devil's Ear	Gilchrist	1.47	11/4/97
Falmouth Spring	Suwannee	0.78	6/17/98

[72] Draft Water Management Plan, Live Oak, Fl., August 8, 1994, pg. 35.

TABLE 4.5

WATER QUALITY OF FIRST-MAGNITUDE SPRINGS OF NORTH CENTRAL FLORIDA

Spring Name	County	Nitrate Nitrogen (Milligrams per Liter)	Date of Measure
GIL1012973	Gilchrist	1.38	10/12/97
Holton Spring	Hamilton	0.40	9/25/97
Hornsby Spring	Alachua	1.07	4/27/98
Ichetucknee Group	Columbia	n/a	n/a
July	Columbia	1.55	11/4/97
Lime Run Sink	Suwannee	0.70	5/14/98
Nutall Rise	Taylor	0.08	7/6/99
Santa Fe Rise	Columbia	0.78	5/26/98
Steinhatchee Rise	Taylor	0.03	7/6/99
Troy Spring	Lafayette	2.68	7/7/99

n/a = not available.

Source: Springs of the Suwannee River Basin in Florida and Springs of the Aucilla, Coastal, and Waccasassa Basins in Florida, Suwannee River Water Management District, Live Oak, Florida. February, 2000.

THE IMPACT OF DEVELOPMENT 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 (F.A.C.), rule requiring stormwater treatment. In 1983, the St. Johns River Water Management District adopted Chapter 40C-4, F.A.C., 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, F.A.C., respectively), which replaced Chapter 17-25, F.A.C., 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.

AREAS OF HIGH RECHARGE POTENTIAL TO THE FLORIDAN AQUIFER

The Floridan Aquifer is replenished by rainfall in areas of high recharge. Certain areas of the region, due to the characteristics of the underlying soils, geology, and depth to the Floridan Aquifer, recharge more ground water to the Floridan Aquifer faster than other areas. Areas of potential high recharge found within the region, as identified by the St. Johns River and Suwannee River water management districts, are recognized by the regional plan as natural resources of regional significance.[73]

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, and Madison counties. The regional plan identifies and maps 1,140,695 acres, 25.8 percent of the entire region, as areas of high recharge potential to the Floridan Aquifer a natural resource of regional significance.

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 six stream-to-sink watersheds as natural resources of regional significance. These are Norton Creek in Madison County, 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, and Alachua Slough/Blues Creek/Burnett Lake/Mill Creek/Nammock Branch/North Alachua/Pareners Branch/Turkey Creek in northern Alachua and southern Columbia Counties.

[73]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 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.

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.

Recent 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.

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.[74] 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 (CARL) 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.

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

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.

DEVIL'S MILLHOPPER STATE GEOLOGIC SITE

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.

NATURAL SYSTEMS

Natural systems identified by the regional plan as natural resources of regional significance consist of listed species found in north central Florida. It is the intent of this plan to protect ~~both~~ listed species. It is also the intent of this plan to protect the habitat of listed species as described in a book series entitled Rare and Endangered Biota of Florida.[75]

Listed species which occur within north central Florida, as identified by the Florida Natural Areas Inventory (FNAI) Element Occurrence Database, are as follows:

[75]Florida Committee on Rare and Endangered Plants and Animals, Rare and Endangered Biota of Florida, Volumes 1-5, University Presses of Florida, Gainesville, FL, 1994. See Appendix E.

TABLE 4.6
STATE AND FEDERALLY LISTED SPECIES KNOWN TO OCCUR IN THE NORTH CENTRAL FLORIDA REGION IDENTIFIED IN THE FNAI ELEMENT OCCURRENCE DATABASE

Common Name(s)	Scientific Name	Common Name(s)	Scientific Name
-	Polygonum meisnerianum var. beyrichianum	Loggerhead Turtle	Caretta caretta
Alligator Snapping Turtle	Macrolemys temmincki	Marian's Marsh Wren	Cistothorus palustris marianae
American Alligator	Alligator mississipiensis	Mountain Laurel	Kalmia latifolia
Autumn Coralroot	Corallorhiza odontorhiza	Narrowleaf Naiad	Najas filifolia
Bald Eagle, Southern Bald Eagle	Haliaeetus leucocephalus	Nettle-Leaved Sage	Salvia urticifolia
Bartram's Ixia	Sphenostigma coelistina	Non-crested Coco, Wild Coco	Pteroglossaspis ecristata
Black Skimmer	Rynchops niger	Least Tern	Sterna antillarum
Brittle Maiden Hair Fern	Adiantum tenerum	Peregrine Falcon	Falco peregrinus
Brown Pelican, Eastern Brown Pelican	Pelecanus occidentalis	Pinewood Dainties, Florida Leaf Flower	Phyllanthus liebmanianus
Burrowing Owl, Florida Burrowing Owl	Speotyto cunicularia	Piping Plover	Charadrius melodus
Catesby's lily, Southern Red Lily	Lillium catesbaei	Pondspice	Litsea aestivalis
Creeping Fern	Thelypteris reptans	Poppy Mallow, Woods Poppy Mallow	Callirhoe papaver
Dwarf Spleenwort	Asplenium pumilum	Rain lily	Zephyranthes simpsonii
Eastern Indigo Snake	Drymarchon corais couperi	Red-cockaded woodpecker	Picoides borealis
Florida Corkwood, Corkwood	Leitneria floridana	Reddish Egret	Egretta rufescens
Florida Black Bear**	Ursus americanus floridanus	St. Johns Susan	Rubdeckia nitida
Florida Milkweed, Florida Spiny Pod	Matelea floridana	Scott's Seaside Sparrow	Ammodramus maritimus peninsulae

TABLE 4.6
STATE AND FEDERALLY LISTED SPECIES KNOWN TO OCCUR IN THE NORTH CENTRAL FLORIDA REGION IDENTIFIED IN THE FNAI ELEMENT OCCURRENCE DATABASE

Common Name(s)	Scientific Name	Common Name(s)	Scientific Name
Florida Mouse	Podomys floridanus	Sims Sink Crayfish, Red-Eyed Cave Crayfish, Santa Fe Cave Crayfish	Procambarus erythrops
Florida Pine Snake	Pituophis melanoleucus mugitus	Sherman's fox squirrel	Sciurus niger shermani
Florida Sandhill Crane	Grus canadensis pratensis	Short-tailed Snake	Stilosoma extenuatum
Florida Scrub-jay	Aphelocoma coerulescens	Single-sorus Spleenwort, San Felasco Spleenwort	Asplemium monanthes
Florida Spiny-Pod	Matelea floridana	Sinkhole Fern	Blechnum occidntale
Florida Willow	Salix floridana	Snowy Egret	Egretta thula
Flyr's Brickle-Bush	Brickellia cordifolia	Southern Lip Fern	Cheilanthes microphylla
Godfrey's Privet	Forestiera godfreyi	Southern Milkweed	Asclepias viridula
Gopher Frog	Rana capito	Southeastern American Kestrel	Falco sparverius paulus
Gopher tortoise	Gopherus polyphemus	Squirrel Chimney Cave Shrimp	Palaemonetes cummingi
Gray Bat	Myotis grisescens	Suwannee Bass	Micropterus notius
Green Adder's-mouth	Malaxis unifolia	Suwannee Cooter, River Cooter	Psuedemys concinna suwanniensis
Green Turtle	Chelonia mydas	Sweet Shrub	Calycanthus floridus
Gulf Sturgeon	Acipenser oxyrhincus desotoi	Tricolored Heron	Egretta tricolor
Hartwrightia	Hartwrightia floridana	Water Sundew, Spoon-leaved Sundew	Drosera intermedia
Kemp's Ridley Turtle, Atlantic Ridley Turtle	Lepidochelys kempii	West Indian Manatee	Trichechus manatus
Limpkin	Aramus guarauna	White Ibis	Eudocimus albus
Little Blue Heron	Egretta caerulea	Wood Stork	Mycteria americana
Leatherback Turtle	Democheliys coriacea		

**Except in Columbia County

Source: Florida Natural Areas Inventory, December 1997.

Locations of these species have been mapped in this plan (see page C-3). In addition to listed species identified in the FNAI database, the following listed species are known by the Florida Game and Fresh Water Fish Commission to exist in the region. The location of these species has not been mapped by this regional plan.

TABLE 4.7

ADDITIONAL LISTED NORTH CENTRAL FLORIDA LISTED SPECIES IDENTIFIED BY THE FLORIDA GAME AND FRESH WATER FISH COMMISSION

Common Name	Scientific Name
American Oystercatcher	Haematopus palliatus
Wakulla Seaside Sparrow	Ammodramus maritimus junciolus

Source: Florida Game and Fresh Water Fish Commission, April 1997.

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, and Surface Water Improvement Management waterbodies.

SURFACE WATER IMPROVEMENT MANAGEMENT WATERBODIES

The Surface Water Improvement Management (SWIM) Act was passed into law by the Florida Legislature, effective July 1, 1987. The purpose of the act is to restore and/or protect the quality of surface waters in the state and to provide an on-going planning and coordination mechanism to maintain surface water quality. The Legislature delegated the responsibility for evaluating, prioritizing, and developing management plans to the state's water management districts in cooperation with other state agencies and local governments.

The Suwannee River Water Management District has identified 18 north central Florida waterbodies as priority waters to be addressed through SWIM. No north central Florida waterbodies are included in the St. Johns River Water Management District SWIM priority list. The Suwannee River Water Management District has developed management plans for all 18 north central Florida waterbodies. The initial SWIM plans focus on identification of surface water quality problems, monitoring surface water quality trends, and promoting interagency coordination for addressing identified issues. All SWIM waterbodies are recognized as natural resources of regional significance and are listed in Table 4.1.

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 32,095 acres in the region.

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 390,596 acres of regionally significant public lands (and conservation easements), representing 8.8 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 Tract, 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.

AUSTIN CARY MEMORIAL FOREST

Comprising 2,064 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.

BIG BEND COASTAL TRACTS

The Big Bend Coastal Tracts consist of approximately 81,158 acres on the coast in Dixie and Taylor counties. 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-36, respectively.

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.

COUNTY CONSERVATION AREAS

County conservation areas designated as natural resources of regional significance consist of three parcels comprising 1,051 acres. The parcels are located in Alachua, Gilchrist, and Suwannee counties. The Gilchrist County property comprises 269.7 acres on the Suwannee River and includes Hart Springs. The Alachua County property consists of the 93.4- acre Poe Springs Park, which is located adjacent to the Santa Fe River and includes Poe Springs. The Suwannee County property consists of 687.5 acres adjacent to the Suwannee River immediately west of Suwannee Springs. The county leases the property to a private-sector campground operator.

ICHETUCKNEE SPRINGS STATE PARK

Ichetucknee Springs State Park consists of 2,222 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.

LOWER SUWANNEE NATIONAL WILDLIFE REFUGE

The Lower Suwannee National Wildlife Refuge comprises approximately 52,935 acres of coastal marsh, of which 27,831 acres are located in Dixie County. The remainder is in Levy County and the Withlacoochee Regional Planning District. 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.

OKEFENOKEE NATIONAL WILDLIFE REFUGE

The Okefenokee National Wildlife Refuge consists of 396,000 acres, a small portion of which (236 acres) is located in 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.

O'LENO STATE PARK AND RIVER RISE STATE PRESERVE

O'leno State Park and River Rise State Preserve are adjacent state land holdings encompassing 5,824 acres along the Santa Fe River. O'leno State Park is on the Columbia County side of the river while River Rise State Preserve 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.

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.

OSCEOLA NATIONAL FOREST

Osceola National Forest consists of 198,484 acres, 96,003 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.[76] The red-cockaded woodpecker, Florida sandhill crane, American alligator, indigo snake, and Suwannee bass are among the listed species found within the forest.

The National Forest Management Act of 1976 authorizes 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.

PAYNES PRAIRIE STATE PRESERVE

Encompassing approximately 20,409 acres in southeastern Alachua County, Paynes Prairie State Preserve 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.

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[76] 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.

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.

Paynes Prairie State Preserve, 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 (CARL) program to link the preserve with Prairie Creek and Newnans Lake.

PEACOCK SPRINGS STATE RECREATION 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.[77] 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. The area also contains mature, second-growth and old-growth forest stands.

ST. MARKS NATIONAL WILDLIFE REFUGE

The St. Marks National Wildlife Refuge comprises approximately 68,000 acres, of which 519 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 Appalachee Regional Planning District.

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

SAN FELASCO HAMMOCK STATE PRESERVE

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 6,942 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.

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 1,950 acres of open pine sandhills, rich hardwood hammocks, and dense river swamps. The banks of 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.

WATER MANAGEMENT DISTRICT CONSERVATION AREAS

Water management districts have acquired approximately 111,573 acres of land in the region. The districts have also acquired conservation easements on an additional 30,790 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 Forest 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.

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 ten lakes, 11 river corridors, 49 springs, and 13 wetlands as natural resources of regional significance.

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 surfacewaters listed as natural resources of regional significance, is good, with a few localized exceptions.[78] 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.[79]

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[78]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.

[79]Hornsby and Raulston, page 35.

The Florida Fish and Wildlife Conservation Commission regularly tests the state's fresh water fish for pesticides, mercury, and other toxins. The Commission has three levels of advisory: Unrestricted Consumption; Limited Consumption; and No Consumption. A Limited Consumption advisory indicates that adults should limit their consumption to ½ lb. of fish per week from identified water bodies. The advisory also notes that nursing or pregnant women and children should limit consumption to ½ lb. of fish per month. As of January, 2000, north central Florida Natural Resources of Regional Significance classified for unrestricted consumption are Lake Lochloosa, Newnans Lake, Lake Sampson, Orange Lake, and the Aucilla River. Natural Resources of Regional Significance on a Limited Consumption Advisory include Alligator Lake, the Santa Fe River, the Suwannee River, the Alapaha River, and the Withlacoochee River. No Natural Resources of Regional Significance are under a No Consumption advisory. The region's advisories are in effect due to elevated levels of Mercury found in large-mouth bass, bowfin, and gar.

Required by the federal Clean Water Act (CWA), the Florida Department of Environmental Protection prepares biennial assessment of the quality of Florida's waters. The report, which is referred to as the "305(b) report" after that section of the federal law which requires the preparation of the report, provides a summary of water quality by water body type and identifies sources and causes of pollution. The 1996 report notes that the state's major surfacewater quality problems fall into five general categories: urban stormwater, agricultural runoff, domestic wastewater, industrial wastewater, and hydrologic modifications. It further notes that pollution from domestic wastewater has significantly lessened statewide, mostly due to upgraded wastewater treatment plants. 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.

The 305(b) report notes that Florida established its stormwater rules in 1979 and its first stormwater permitting program in 1982. Stormwater management is an effective way of reducing nonpoint source pollution to north central Florida surfacewaters as 80 percent of surfacewater pollutants can be removed through stormwater management systems. Most north central Florida's urban areas were constructed prior to requirements for stormwater management, creating a need for after-the-fact stormwater management retrofit projects. The Suwannee River Water Management District's Communities Needs Report identifies 23 north central Florida communities in need of stormwater management retrofit projects and/or a stormwater management plan.[80]

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[80]Jones, Edmunds & Associates, Inc., and Darabi and Associates, Inc., Suwannee River Water Management District Quality Communities Needs Report, Suwannee River Water Management District, Live Oak, Florida, 1998.

Section 303(d) of the CWA requires states to submit lists of surfacewaters that do not meet applicable water quality standards (impaired waters) after implementation of technology-based effluent limitations, and establish Total Maximum Daily Loads (TMDL) for these waters on a prioritized schedule. TMDLs establish the maximum amount of a pollutant that a water body can assimilate without causing violations of water quality standards. The U.S. Environmental Protection Agency, Region 4, approved the Florida 303(d) List on November 24, 1998. The list was prepared by the Florida Department of Environmental Protection with input from the water management districts. Implementation of TMDLs can be achieved through a combination of regulatory, non-regulatory, or incentive-based actions that attain the necessary reduction in pollutant loading. Florida, when establishing a TMDL, must provide reasonable assurance to EPA that all 303(d) listed waterbodies will be able to meet their allocated load reductions for the applicable pollutant. Table 4.8 identifies 303(d)-listed waters in north central Florida, the water quality parameters in question, and the year by which TMDLs are to be established.

TABLE 4.8
1998 SECTION 303(D) LIST, NORTH CENTRAL FLORIDA REGION

HUC Name	Water Segment	WBID	Parameter of Concern	Priority	Projected Year of TMDL Development
Econfina/Fenholloway	Rocky Creek	3489	Dissolved Oxygen, Coliforms, Nutrients, Biochemical Oxygen Demand	Low	2007
Econfina/Fenholloway	Bevins (Boggy) Creek	3603	Dissolved Oxygen, Coliforms	Low	2002
Econfina/ Fenholloway	Steinhatchee River	3573B	Dissolved Oxygen	Low	2002
Econfina/ Fenholloway	Fenholloway at Mouth	3473A	Dissolved Oxygen, Coliforms, Nutrients, Biochemical Oxygen Demand, Un-ionized Ammonia, Dioxin (Based on Fish Consumption Advisory)	High	2002
Econfina/ Fenholloway	Fenholloway Below Pulp	3473B	Dissolved Oxygen, Nutrients, Total Suspended Solids, Un-ionized Ammonia, Biochemical Oxygen Demand, Mercury (Based on Fish Consumption Advisory)	High	2002
Econfina/ Fenholloway	Fenholloway Above Pulp	3473C	Dissolved Oxygen, Nutrients	High	2002
Econfina/ Fenholloway	Econfina River	3402	Dissolved Oxygen, Coliforms, Cadmium	Low	2002
Santa Fe River	Rocky Creek	3641	Dissolved Oxygen, Coliforms, Nutrients, Biochemical Oxygen Demand	Low	2007
Santa Fe River	Lake Rowell	3598B	Nutrients	Low	2007
Santa Fe River	Hampton Lake	3635A	Dissolved Oxygen	Low	2007
Santa Fe River	Santa Fe River	3605A	Dissolved Oxygen, Nutrients, Mercury, (Based on Fish Consumption Advisory)	Low	2007

TABLE 4.8
1998 SECTION 303(D) LIST, NORTH CENTRAL FLORIDA REGION

HUC Name	Water Segment	WBID	Parameter of Concern	Priority	Projected Year of TMDL Development
Santa Fe River	Santa Fe River	3605B	Dissolved Oxygen, Nutrients	Low	2007
Santa Fe River	Santa Fe River	3605C	Dissolved Oxygen, Nutrients	Low	2007
Santa Fe River	Altho Drainage	3605F	Dissolved Oxygen, Mercury (Based on fish Consumption Advisory)	Low	2007
Santa Fe River	Five Mile Creek	3578	Dissolved Oxygen, Coliforms, Nutrients	Low	2007
Santa Fe River	Ichetucknee Spring	3519Z	Dissolved Oxygen, Nutrients	Low	2007
Santa Fe River	New River	3506	Dissolved Oxygen, Coliforms, Nutrients	Low	2007
Santa Fe River	Alligator Lake	3516	Dissolved Oxygen, Nutrients, Lead, Cadmium, Copper, Zinc	Low	2008
Suwannee River, Lower	Suwannee River, Lower	3422B	Dissolved Oxygen, Nutrients	Low	2002
Suwannee River, Lower	Allen Mill Pond	3525	Dissolved Oxygen, Nutrients	Low	2002
Suwannee River, Upper	Lake Jeffrey Outlet	3499	(Note: Listing of this segment is based on biological sampling. District office sampled last fall and will update information for possible delisting).	Low	2002
Suwannee River, Upper	Falling Creek	3477	Dissolved Oxygen, Nutrients	Low	2002
Suwannee River, Upper	Roaring Creek	3392	Dissolved Oxygen, Nutrients, total Suspended Solids, Turbidity	Low	2002
Suwannee River, Upper	Deep Creek	3388	Dissolved Oxygen, Coliforms, Nutrients	Low	2002
Suwannee River, Upper	Suwannee River (Upper)	3341	Dissolved Oxygen, Nutrients	Low	2002
Suwannee River, Upper	Camp Branch	3401	Dissolved Oxygen, Nutrients, Coliforms	Low	2002
Suwannee River, Upper	Swift Creek	3375	Dissolved Oxygen, Nutrients, Total Suspended Solids	Low	2002
Withlacoochee River, North	Jumping Gully Creek	3318	Dissolved Oxygen, Nutrients, Turbidity	Low	2007
Withlacoochee River, North	Withlacoochee River	3315	Dissolved Oxygen, Nutrients, Turbidity, Mercury (Based on Fish Consumption Advisory)	Low	2007

[1]Water Body Identification.

Source: 1998 303(d) List, Florida Department of Environmental Protection.

While Section 303(d) of the CWA calls for the development of TMDLs for listed waters, TMDLs are not required if proposed pollution control mechanisms provide reasonable assurance that water quality standards will be met in the future. TMDLs have yet to be established for north central Florida waterbodies. The state and the water management districts have so far avoided the establishment of TMDLs by relying on voluntary programs such as BMPs, funding assistance for stormwater retrofit programs, and permitting programs.

The efforts of voluntary water quality working groups may also play an important role in avoiding the establishment of TMDLs. Four voluntary water quality working groups have been established within the region. The oldest, the Orange Creek Basin Advisory Council was formed in 1994. The Ichetucknee Springs Water Quality Working Group was formed in 1995. The Suwannee River Basin Nutrient Management Working Group and the Santa Fe Springs Water Quality Working Group were formed since the adoption of the regional plan.

The Suwannee River Basin Nutrient Management Working Group was formed in response to increasing trends in nitrate-nitrogen concentration in the groundwater, springs, and surfacewaters of the Middle Suwannee River Basin. The working group is comprised of representatives of various state and regional agencies, local governments, state universities, and the agriculture industry. The group produced a work plan for implementing strategies and tasks needed to reduce nutrient loading to surface and groundwaters, and evaluating the success of those efforts.

The work plan is also Florida's proposal for implementing requirements of the CWA related to impaired waters in the Middle Suwannee River and its downstream estuary. The plan relies on the voluntary, cooperative development of Best Management Practices (BMPs) to address the major sources of nitrate, incentives for farmers that implement applicable BMPs, and the tracking of BMP implementation and maintenance. Working Group members acknowledge that many non-point pollution sources in the basin are outside of government regulatory authority. Therefore, voluntary participation by area stakeholders may achieve results more quickly and effectively than traditional regulatory approaches.

The Orange Creek Basin Advisory Council was established in 1994. The basin contains the drainage area of Newnans, Lochloosa and Orange Lakes as well as Paynes Prairie in southern Alachua County. Similar to the middle Suwannee group, the Orange Creek Basin Advisory Council is composed of representatives of state and local agencies, business interests, environmental groups, and property owners. The advisory council provides a forum through which the Orange Creek Basin community can define and provide informed recommendations to the St. Johns River Water Management District; educate the public concerning the water resource needs of the basin; facilitate consensus building within the Orange Creek Basin communities; and review technical studies and data gathering activities proposed to support a basin-wide management plan.

The purpose of the Ichetucknee Springs Water Quality Working Group is to help insure the long-term protection of the quantity and quality of water flowing from the springs located in Ichetucknee Springs State Park. The group was formed by FDEP as part of their place-based Ecosystem

Management Initiative for the Greater Suwannee Ecosystem Management Area. The working group is comprised of geologists, hydrologists, cave divers, water quality specialists, and land-use planners from state, federal and local agencies. The purpose of the working group is to enhance interagency communications, coordination, and cooperation in order to increase the protection of water flowing to the springs of Ichetucknee Springs State Park.

Perhaps the most important contribution of the working group has been to highlight the relationship between waters flowing from Alligator Lake, Rose Creek, and Clay Hole Creek to the Ichetucknee spring group and to highlight the economic importance of Ichetucknee Springs State Park to Columbia and Suwannee counties. The group has also brought attention to a potential threat posed by a limestone mining operation located near the springs, which may result in its purchase by the state. As a result of their efforts, Columbia County has sought state funds to purchase sinks which are hydrogeologically connected to the springs. Additionally, Columbia County is considering reducing maximum allowable development intensities in its portion of the Ichetucknee Trace to reduce the potential for stormwater runoff to degrade the water quality of the springs.

The accomplishments of the working groups may suggest approaches for handling water quality problems and prevent the imposition of more restrictive state and federal regulations. Through the use of voluntary working groups, the state may also be successful in keeping north central Florida waterbodies off the 303(d) list and/or prevent the establishment of TMDLs and accompanying regulations, while, at the same time, meet the minimum water quality standards for these listed waterbodies.

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 Altho 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 Wacassassa Flats.

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 Game and Fresh Water Fish 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 Hagin'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 Hagin's Cove.

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.[81]

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.

[81] Significant Natural Areas, pg. 54.

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.

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 Forest. Lochloosa Forest is located in southeastern Alachua County and comprises 28,451 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. Approximately 16 active bald eagle nests are in the area.[82] 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.[83] 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.[84]

The River Styx flows through the forest 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

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[82] Annual Report of the Conservation and Recreation Lands Section Committee, Division of State Lands, Tallahassee, Fl., 1985, pg. 211.

[83] 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, Fl.

[84] Significant Natural Areas, pg. 82.

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.

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 recently purchased 5,250 acres of Mallory Swamp in southwestern 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 5,567 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.

Wacassassa Flats. Occupying approximately 61,653 acres, Wacassassa Flats runs down the center of Gilchrist County. The flats are part of a larger wetland system which runs into Levy County and the Withlacoochee Regional Planning District. 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.

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 (SWIM) 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.[85] Two lakes are highlighted below.

ALLIGATOR LAKE

Alligator Lake is 1,200 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.

[85] Surface area information was generally obtained from Edward A. Fernald and Donald J. Patton, Water Resources in Florida, Florida State University, Tallahassee, FL., 1984, pg. 285. The surface area of Alligator Lake, is estimated by the North Central Florida Regional Planning Council, September, 1994.

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.[86] In 1988, the Suwannee River Water Management District classified Alligator Lake as a "priority water" in their Surface Water Improvement Management (SWIM) program. It is the only waterbody listed as a "restoration" waterbody on the District's SWIM 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.

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.[87] The lake obtains regional significance for several reasons. The northern lake shoreline is the boundary of Gum Root Swamp, a natural resource of 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.

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. In the case of the Econfina, and Steinhatchee rivers, as well as the River Styx, Prairie Creek, and Cross Creek, the river corridor consists of the river/stream channel and a buffer area extending landward 1/4-mile from the commonly-recognized river/stream banks. The buffers will be replaced by the 100-year floodplain of these rivers as floodplain information becomes available. The 1/4-mile river buffers and the 100-year floodplain of the Suwannee River system comprise 165,123 acres.

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[86]Myers, V.B. and Edmiston, Florida Lake Classification and Prioritization, Final Report. Project #S004388. Florida Department of Environmental Regulation Technical Report, Tallahassee, Fl., 1983.

[87]Ad Hoc Committee for Newnan's Lake Environmental Concerns, Report: 1983 Alachua County, Gainesville, Fl., 1983, pg. 13.

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 (cfs).[88]

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.

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 cfs.[89]

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.

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

[88]Water Resources Division, United States Geological Survey, Water Resource Data for Florida, Vol. 4, Northwest Florida, Tallahassee, Fl., 1984.

[89]Water Resource Data for Florida, Vol. 4, Northwest Florida.

development. The two wildlife management areas provide habitat for many plant and wildlife species.

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 cfs.[90] 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.

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.

[90] Water Resource Data for Florida, Vol. 4, Northwest Florida.

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 1,500 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.[91]

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.[92]

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.

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[91] Water Resource Data for Florida, Vol. 4, Northwest Florida.

[92] Significant Natural Areas, Gainesville, Fl., 1977, pg. 60.

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 cfs.[93] 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.

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 counties within the region.[94] The Suwannee River estuary is a complex system of diverse natural communities and is a major nursery for commercial fish and shellfish.

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[93] Water Resource Data for Florida, Vol. 4, Northwest Florida.

[94] Except Taylor County.

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.[95] 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.

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 specie 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.[96] West Indian manatees occur in the lower Suwannee River during the warmer months of the year. During the winter months, they

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[95] Water Resource Data for Florida, Vol. 4, Northwest Florida.

[96] 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, Md., 1982, pg. 132.

concentrate at Manatee Springs, one of six natural warm water refuges within the state for this endangered species.[97]

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.[98] 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.[99] 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.

Local governments have responsibility for establishing boating safety zones, which in turn are enforced by the Florida Game and Fresh Water Fish 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.

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[97] Gulf Coast Ecological Inventory: User's Guide and Information Base., pg. 130.

[98] Gulf Coast Ecological Inventory: User's Guide and Information Base, pg. 132.

[99] S. David Webb, "A Short Report on the Ecology of the Suwannee River Drainage", Florida State Museum, Gainesville, Fl., 1970, pg. 4-7.

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 cfs with an average flow of approximately 1,000 cfs.[100]

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 Game and Fresh Water Fish 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 mgd 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.

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[100] 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.

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.

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.[101]

Regionally significant springs are as follows:ALA112971, ALA930971, ALA930972, Alapaha Rise, Allen Mill Pond, Anderson, Bathtub, Blue Hole, Blue Sink, Blue Near Mayo, Bonnet, Branford, Cedar Head, Charles, COL61981, COL928972, COL930971, COL1012971, COL101974, Columbia, Copper, Darby, Devil's Ear, Devil's Eye, DIX625993, Dogwood, Ellaville, Falmouth, Fletcher, GIL84971, GIL94972, GIL107971, GIL107972, GIL729971, GIL1012971, GIL1012973, Ginnie, Grassy Hole, Guaranto, HAM610981, HAM610982, HAM610983, HAM610984, HAM612981, HAM1023971, HAM1023974, Hart, Holton, Hornsby, Ichetucknee, July, LAF718971, LAF718972, LAF924971, LAF929973, Lilly, Lime, Lime Run Sink, Little River, Lumbercamp, MAD610982, MAD612981, MAD612982, MAD922977, Mearson, Mill Pond, Mission, Morgan's, Nutall Rise, Orange Grove, Otter, Owens, Peacock, Perry, Pickard, Poe, Pot, Pothole, Rock Bluff, Rock Sink, Rum Island, Running, Ruth, Santa Fe Blue, Santa Fe Rise, Shingle, Steinhatchee Rise, Sunbeam, SUW107971, SUW923973, SUW925971, SUW1017972, Suwanacoochee, Suwannee, Suwannee Blue, TAY625992, TAY730991, Telford, Trail, Troy, Turtle, Twin, White, Wilson, and Withlacoochee Blue.

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[101] Jack C. Rosenau, et. al., Springs of Florida, Florida Bureau of Geology, Tallahassee, FL. 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.

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.

Ground water 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 ground water 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.

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.

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 ten first magnitude springs. More importantly, it is one of the few remaining first magnitude springs in a relatively undisturbed, natural state.[102] Endangered species found in the area include the gopher tortoise and Suwannee cooter. The area also contains the cedar

[102] Suwannee River Preserve Design Project, pg. 55.

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.[103]

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 mgd. 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.[104]

[103]Ibid, pg. 55.

[104]Significant Natural Areas, pg. 69.

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 establish a secondary wastewater treatment plant to service the unincorporated Dixie County town of Suwannee.[105]

3. A need exists to maintain an adequate supply of high-quality groundwater for all of north central Florida for future generations.

4. 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.

5. 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.

6. A need exists to ensure the survival of flora and fauna native to the region.

7. A need exists to ensure the survival of all listed species currently found in north central Florida.

8. A need exists for the state to protect the identified attributes of the habitats of listed species.

9. A need exists to plan and manage Planning and Resource Management Areas identified as Natural Resources of Regional Significance.

10. A need exists to maintain the quantity and quality of the region's surface water systems identified as Natural Resources of Regional Significance.

11. A need exists to map the capture zones of all springs identified as natural resources of regional significance.

12. 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.

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[105] See page II-49 for a discussion of the need for a wastewater treatment plant in the unincorporated Dixie County town of Suwannee.

13. 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.

REGIONAL GOALS AND POLICIES

COASTAL AND MARINE RESOURCES

BIG BEND SALT MARSH
BIG BEND SEAGRASS BEDS
FLORIDA MIDDLE GROUND

REGIONAL GOAL 4.1. 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 January, 2000, the Big Bend Salt Marsh (Dixie and Taylor County) coastline comprised 48,190 acres.

2. In December, 1991, that portion of the Big Bend Seagrass Beds extending four miles seaward of the Dixie and Taylor County coastline, was comprised of 37,775.6 acres of continuous seagrass, 95,342.9 acres of open water, 150.1 acres of mollusk/oyster reefs/beds, 28,447.0 acres which were not mapped, 28,446.1 acres of very sparse patchy seagrass, 2,348.2 acres of sparse patchy seagrass, 10,424.1 acres of moderate patchy seagrass, and 20,906.3 acres of dense patchy seagrass.[106]

3. In 1996, the Florida Middle Ground comprised 132,000 acres.

4. As of January, 2002, a Florida Department of Health No-Fish-Consumption Advisory is in effect for the Fenholloway River due to elevated dioxin levels in the river's fish.

5. As of January, 2002, there was one NPDES discharge permit within the Econfina-Fenholloway River watershed.

6. As of January, 2002, the communities of Fanning Springs and Old Town were not serviced by a centralized wastewater treatment system.

[106]Florida Marine Research Institute, January, 2000.

7. As of January, 2002, no offshore oil or natural gas wells are located within 100 miles of the Dixie and Taylor counties coastline.

8. As of January, 2002, no offshore oil or natural gas wells are located within the Florida Middle Ground.

Policy 4.1.1. Use non-structural water management controls as the preferred water management approach for the coastal areas of the region.

Policy 4.1.2. Provide technical assistance to local governments in ensuring the preservation of the region's coastal and marine resources through their local planning processes.

Policy 4.1.3. Minimize the need for excavating and/or filling of the region's coastal wetlands and ensure impacts are mitigated where such activity occurs.

Policy 4.1.4. Minimize the impacts of development activities which occur within and/or adjacent to the coastal wetlands.

Policy 4.1.5. Remove the Big Bend Seagrass Beds, the Florida Middle Ground, and a 100-mile buffer area off the Dixie and Taylor counties from the federal government list of areas available for oil, gas, and mineral leasing in the eastern Gulf of Mexico.

Policy 4.1.6. 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 4.1.7. 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.

Policy 4.1.8. 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 4.1.9. 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 4.1.10. Monitor the entire Big Bend Seagrass Beds 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 4.1.11. Ensure that local government comprehensive plans, DRIs, 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.

GROUND WATER RESOURCES

FLORIDAN AQUIFER
AREAS OF HIGH RECHARGE POTENTIAL TO THE FLORIDAN AQUIFER
ICHETUCKNEE TRACE
STREAM-TO-SINK WATERSHEDS
SINKS

REGIONAL GOAL 4.2. 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 2002, 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 1995, an estimated 205.7 mgd of water were withdrawn from north central Florida groundwater sources.

3. As of January, 2002, north central Florida contained 19 first-magnitude springs, 101 second-magnitude springs, and 70 third-magnitude springs.

4. As of January 1, 2000, the known Nitrate Nitrogen readings for north central Florida first magnitude springs, and their date of measure, were as follows (see Table 4.4):

Policy 4.2.1. Ensure that state policy is adopted which would require water shortage areas to establish other alternatives, such as desalinization, prior to the interbasin transfer of water to serve their needs.

Policy 4.2.2. Water management districts should monitor at regular intervals the water quality and flows of springs identified as Natural Resources of Regional Significance.

Policy 4.2.3. 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 4.2.4. 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 4.2.5. Coordinate land use and water resources planning for ground 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 4.2.6. Assist in environmental education efforts to increase public awareness of the region's ground water resources through the North Central Florida Tourism Task Force.

Policy 4.2.7. Identify and map the capture zones of all public water supply wellfields.

Policy 4.2.8. 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 4.2.9. Ensure that local government comprehensive plans, DRIs, 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.

REGIONAL GOAL 4.3. 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 January, 2000, the St. Johns River and Suwannee River Water Management Districts had identified and mapped 1,140,695 acres of areas of high recharge potential to the Floridan aquifer within north central Florida.

2. In fiscal year 1996-97, there were 170,890 visitors to Ichetucknee Springs State Park..[107]

3. As of January, 2000, the Suwannee River Water Management District had identified and mapped 148,587 acres of stream-to-sink watersheds located within both its jurisdictional boundaries and within north central Florida.

4. In 2001, eight sinks were designated as natural resources of regional significance in the North Central Florida Strategic Regional Policy Plan.

[107] 1998 Florida Statistical Abstract, Table 19.52.

Policy 4.3.1. Coordinate the mapping of high recharge areas in order to assure consistency in identification of such areas near district boundaries.

Policy 4.3.2. 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 4.3.4. 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 4.3.5. 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 4.3.6. Ensure that local government comprehensive plans, DRIs, 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 4.3.7. Work with the water management districts to develop and apply coordinated review procedures and criteria for reviewing ground water issues related to developments of regional impact, federally-assisted projects, local plan amendments and revisions, local comprehensive plan evaluation and appraisal reports, and local comprehensive plan intergovernmental coordination elements.

Policy 4.3.8. Minimize the effect of mining activities on water quality and quantity of the Floridan Aquifer.

NATURAL SYSTEMS

LISTED SPECIES

REGIONAL GOAL 4.4. Protect all listed species located in north central Florida.

Regional Indicators

1. As of February, 2000, the Florida Natural Areas Inventory Element Occurrence Database contains 769 locations within the region of sightings of listed plant and animal species.

2. As of February, 2000, 78 listed species exist in north central Florida.

Policy 4.4.1. Work with local governments and the Florida Game and Fresh Water Fish Commission to ensure the survival of all listed species found in the region.

Policy 4.4.2. Increase citizen awareness on the effects of human activities on listed species.

Policy 4.4.3. Coordinate planning efforts to protect listed species found within the region.

Policy 4.4.4. Endangered and threatened species and their habitats shall be protected.

Policy 4.4.5. When a land use designation change is proposed or an increase in allowable land use density or intensity is proposed, species of special concern, and their habitat, known to exist on site shall be protected. Protection should include, but not necessarily be limited to, the following:

a) conservation easement;
b) on and offsite mitigation banks;
c) tax breaks;
d) transferable densities;
e) management agreements; and,
f) agriculture and silviculture best management practices.

Policy 4.4.6. Working with private property owners, encourage voluntary protection of listed species and their habitat located on private property through the use of best management practices and public education programs.

Policy 4.4.7. 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.

Policy 4.4.8. Direct those land uses that are not consistent with the protection and maintenance of listed species and their habitats away from such resources.

Policy 4.4.9. Support agricultural and silvicultural practices that maintain the function and value of natural systems through the use of best management practices.

Policy 4.4.10. Detailed surveys and/or specific site assessments for listed plant and animal species, as well as habitat used by listed species shall be conducted in accordance with Rule 9J-2.041, Florida Administrative Code, for developments undergoing regional review as a Development of Regional Impact in order to evaluate the impacts of such developments on said species and habitats.

Policy 4.4.11. Ensure that local government comprehensive plans, DRIs, and requests for federal and state funds for development activities reviewed by the Council include adequate provisions for the protection of listed species.

PLANNING AND RESOURCE MANAGEMENT AREAS

PRIVATE CONSERVATION LANDS
PUBLIC CONSERVATION LANDS
SURFACE WATER IMPROVEMENT MANAGEMENT WATERBODIES

REGIONAL GOAL 4.5. Protect natural resources of regional significance identified in this plan as "Planning and Resource Management Areas."

Regional Indicators

1. As of January, 2000, north central Florida contained 32,095 acres of private conservation lands.

2. As of January, 2000, north central Florida contained approximately 1225,336 acres of federally-owned conservation lands.

3. As of January, 2000, north central Florida contained 156,687 acres of state-owned conservation and recreation lands.

4. As of January, 2000, north central Florida contained approximately 142,363 acres of water management District-owned conservation lands (including less than fee simple ownership).

5. In January, 2000, north central Florida had 18 waterbodies identified as SWIM waterbodies.

Policy 4.5.1. 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.

Policy 4.5.2. Seek the input of local governments and the regional planning council in the preparation of management plans for public conservation lands, private conservation lands, and SWIM water bodies identified as natural resources of regional significance.

Policy 4.5.3. 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 4.5.4. Ensure that local government comprehensive plans, DRIs, 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.

SURFACE WATER SYSTEMS

FRESH WATER WETLANDS
LAKES
RIVER CORRIDORS
SPRINGS

REGIONAL GOAL 4.6. 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 January, 2000, the water management districts had identified 1,109,868 acres of fresh water wetlands within the region.

2. As of January, 2002, 10 north central Florida lakes were identified as natural resources of regional significance in the North Central Florida Strategic Regional Policy Plan.

3. As of January, 2002, 11 river corridors were designated as natural resources of regional significance in the North Central Florida Strategic Regional Policy Plan.

4. As of January, 2002, 202,152 acres of river corridor were designated as natural resources of regional significance in the North Central Florida Strategic Regional Policy Plan.

5. As of January, 2000, 103 north central Florida springs were listed as Natural Resources of Regional Significance in the North Central Florida Strategic Regional Policy Plan.

6. In January, 2002, five north central Florida Natural Resources of Regional Significance were under an Unrestricted Consumption advisory for Large-mouth bass, Bowfin, and Gar.

7. In January, 2002, five north central Florida Natural Resources of Regional Significance were under a Limited Consumption advisory for Large-mouth bass, Bowfin, and Gar.

8. In January, 2002, no north central Florida Natural Resources of Regional Significance were under a No Consumption advisory for Large-mouth bass, Bowfin, and Gar.

9. As of January, 2002, neither Fanning Springs - Old Town, Archer, Lee, Steinhatchee, or the Dekle Beach - Keaton Beach area were serviced by centralized wastewater treatment systems.

10. As of January, 2002, 23 north central Florida communities were in need of stormwater management retrofit projects and/or a stormwater management plan.

Policy 4.6.1. 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 4.6.2. Continue the mapping of river floodplains.

Policy 4.6.3. Update the regional map series delineating river floodplains as this information becomes available**.**

Policy 4.6.4. Work with north central Florida local governments to standardize on a common source for wetland maps contained in local government comprehensive plans.

Policy 4.6.5. 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 4.6.6. 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 4.6.7. 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 4.6.8. Establish and enforce consistent boating safety zones along the Suwannee and Santa Fe rivers.

Policy 4.6.9. Assist local governments in establishing consistent regulations for development projects within river corridors identified as natural resources of regional significance.

Policy 4.6.10. 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 4.6.11. Provide technical assistance to local governments in obtaining grants to establish centralized sewer systems in identified septic tank problem areas.

Policy 4.6.12. Ensure that local government comprehensive plans, DRIs, 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 4.6.13. Work with local governments, state and federal agencies, and the local water management districts in the review of local government comprehensive plans and developments of regional impact 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 4.6.14. Minimize the effect of mining on the surface water quality and seasonal flows of surface waters identified as natural resources of regional significance.

Policy 4.6.15. Encourage water management districts to monitor at regular intervals the quality and quantity of surfacewaters identified as Natural Resources of Regional Significance.

Policy 4.6.16. Assist water quality working groups formed to meet the water quality standards of waterbodies included in the State of Florida 303(d) list.

REGIONAL TRANSPORTATION

amended August 28, 1997, and February 27, 2003

REGIONAL TRANSPORTATION

CONDITIONS AND TRENDS

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.

PUBLIC TRANSIT

Public transit is lightly utilized in north central Florida. The Gainesville Regional Transit System (RTS) is the region's only community with a fixed-route public transit system. Paratransit services are available throughout the region and is provided by Big Bend Transit, Inc., the Suwannee River Economic Council, A & A Transport, ATC Paratransit, and Suwannee Valley Transit Authority. The RTS also provides paratransit services in Alachua County. Intercity bus transportation is provided by Greyhound Bus Lines. The carrier stops in the following north central Florida municipalities: Gainesville, Waldo (flag stop), Starke, Lake City, Cross City (flag stop), Fanning Springs (flag stop), Greenville (flag stop), Madison, Live Oak, and Perry.[108]

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 2.0 percent of 1990 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 1.8 percent. Bradford County reported the lowest usage at 0.0 percent. The table also reveals a decline in public transit usage between 1980 and 1990. Not only is the 1990 usage rate lower than the 1980 rate of 2.9 percent, the region has experienced a decline in the absolute number of workers using public transit, dropping from 2,014 in 1980 to 1,729 in 1990.

[108]Greyhound Bus Lines, Inc., March 1996. Flag stops are non-terminal stops which typically occur along the side of the road at a designated location.

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	
	1980	1990	1980	1990	1980	1990
Alachua	64,241	83,897	1,694	1,510	2.4	1.8
Bradford	6,555	8,278	0	0	0.0	0.0
Columbia	14,030	17,323	144	52	0.4	0.3
Dixie	2,391	3,223	2	13	0.5	0.4
Gilchrist	2,069	3,504	1	4	0.2	0.1
Hamilton	3,031	3,723	19	34	1.1	0.9
Lafayette	1,430	2,083	6	0	0.0	0.0
Madison	5,290	5,986	18	36	0.7	0.6
Suwannee	8,182	10,289	65	21	0.3	0.2
Taylor	6,491	6,718	56	54	0.8	0.8
Union	2,459	3,283	9	7	0.3	0.2
Region	116,169	148,307	2,014	1,729	1.5	1.2
State	3,987,407	5,794,452	106,546	115,889	2.9	2.0

Source: Florida Statistical Abstract, 1984 and 1994, Table 13.01.

PUBLIC TRANSIT SERVICE PROVIDERS

BIG BEND TRANSIT, INC.

Big Bend Transit operates a demand-response system of vans and mini-buses within Madison and Taylor counties. The service is provided to employment centers as well as to social service, health, medical, shopping, and recreational 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. Big Bend Transit, Inc., is the designated coordinated community transportation provider for Madison and Taylor counties.

GAINESVILLE REGIONAL TRANSIT SYSTEM

The Gainesville Regional Transit System (RTS) 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 RTS to provide campus shuttles. RTS also contracts with ATC Paratransit to provide paratransit service.

Between 1996 and 1999, RTS fixed route ridership increased by 65.2 percent, from 1,148,568 to 3,299,933.[109] The growth in ridership was primarily due to the University of Florida student government providing a subsidy to RTS in exchange for allowing university students to ride the system free of charge.

SUWANNEE VALLEY TRANSIT AUTHORITY

Suwannee Valley Transit Authority (SVTA) 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 SVTA 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 SVTA 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 SVTA is the designated coordinated community transportation provider for Columbia, Hamilton, and Suwannee counties.

SUWANNEE RIVER ECONOMIC COUNCIL

The Suwannee River Economic Council provides demand-responsive paratransit services for senior citizens and is the designated coordinated community transportation provider for Bradford, Dixie, Gilchrist, and Lafayette counties.

PARATRANSIT SERVICES AND THE TRANSPORTATION DISADVANTAGED

Paratransit services for the transportation disadvantaged are available in all north central Florida counties. These systems operate as a part of Florida's Transportation Disadvantaged (TD) 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.[110]

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[109]Gainesville Rapid Transit System, June 2000.

[110]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

Transportation services for the transportation disadvantaged are provided through the systems using a variety of vehicles, including mini-buses, bans, mini-vans and automobiles. Many of the vehicles used are specially equipped to serve the needs of the disabled and public transit riders. Coordinated transportation systems which 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 (CTD) 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, an MPO or designated entity which performs long-range transportation disadvantaged planing and assists the CTD and the Local Coordinating Board in implementing the transportation disadvantaged program within a designated service area;

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 CTD in its designated service area;

The Community Transportation Coordinator (CTC), 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 the Florida Agency for Health Care Administration for Medicaid trips; and

Transportation operators, which are either public, private non-profit, or private for-profit entities which contract with a partial or complete brokerage CTC 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 CTCs 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

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children who are handicapped or high risk or at-risk as defined in s.411.202, F.S. (427.011(1), F.S. (1993)).

Transportation Planning Organization for the Gainesville Urbanized Area is the official planning agency for Alachua County and is staffed by the Council.[111]

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 2009 N.W. 67 Place, Ste. A Gainesville, FL 32653-1603 352/955-2200	ATC Paratransit 901 NW 8th Ave., Ste B-1 Gainesville, FL 32605 (full brokerage)
Bradford	North Central Florida Regional Planning Council 2009 N.W. 67 Place, Ste. A Gainesville, FL 32653-1603 352/955-2200	Suwannee River Economic Council P.O. Box 70 Live Oak, FL 32060 904/362-4115 (partial brokerage)
Columbia	North Central Florida Regional Planning Council 2009 N.W. 67 Place, Ste. A Gainesville, FL 32653-1603 352/955-2200	Suwannee Valley Transit Authority 1907 Voyles St. Live Oak, FL 32060 904/362-5332 (partial brokerage)
Dixie	North Central Florida Regional Planning Council 2009 N.W. 67 Place, Ste. A Gainesville, FL 32653-1603 352/955-2200	Suwannee River Economic Council P.O. Box 70 Live Oak, FL 32060 904/362-4115 (sole provider)
Gilchrist	North Central Florida Regional Planning Council 2009 N.W. 67 Place, Ste. A Gainesville, FL 32653-1603 352/955-2200	Suwannee River Economic Council P.O. Box 70 Live Oak, FL 32060 904/362-4115 (sole provider)
Hamilton	North Central Florida Regional Planning Council 2009 N.W. 67 Place, Ste. A Gainesville, FL 32653-1603 352/955-2200	Suwannee Valley Transit Authority 1907 Voyles St. Live Oak, FL 32060 904/362-5332 (partial brokerage)
Lafayette	North Central Florida Regional Planning Council 2009 N.W. 67 Place, Ste. A Gainesville, FL 32653-1603 352/955-2200	Suwannee River Economic Council P.O. Box 70 Live Oak, FL 32060 904/362-4115 (sole provider)
Madison	North Central Florida Regional Planning Council 2009 N.W. 67 Place, Ste. A Gainesville, FL 32653-1603 352/955-2200	Big Bend Transit, Inc. P.O. Box 1721 Tallahassee, FL 32302 904/222-4160 (partial brokerage)
Suwannee	North Central Florida Regional Planning Council 2009 N.W. 67 Place, Ste. A Gainesville, FL 32653-1603 352/955-2200	Suwannee Valley Transit Authority 1907 Voyles St. Live Oak, FL 32060 904/362-5332 (partial brokerage)

[111]See Coordination Outline, page VII-5, for additional information regarding the MTPO and the transportation disadvantaged program.

TABLE 5.2

NORTH CENTRAL FLORIDA
TRANSPORTATION DISADVANTAGED PROGRAMS

AREA	PLANNING AGENCY	COMMUNITY TRANSPORTATION COORDINATORS
Taylor	Taylor County Board of County Commissioners P.O. Box 620 Perry, FL 32347 904/838-3500	Big Bend Transit, Inc. P.O. Box 1721 Tallahassee, FL 32302 904/222-4160 (partial brokerage)
Union	North Central Florida Regional Planning Council 2009 N.W. 67 Place, Ste. A Gainesville, FL 32653-1603 352/955-2200	A & A Transport 55 North Lake Ave. Lake Butler, FL 32054 904/496-2008 (sole provider)

Source: North Central Florida Regional Planning Council, March 1996.

According to the CTD Florida Five Year Transportation Disadvantaged Plan, 1992-1996, the state's transportation disadvantaged program serves two population groups. The first group, the "TD Category I" population, includes disabled, elderly, and low-income persons and "high-risk" or "at-risk" children. These individuals are eligible for government and social service agency programs based on their demographic status. They are also eligible to receive agency subsidies for program and general trips. The second group, the "TD Category II" population, includes individuals who are transportation disadvantaged according to the guidelines in Chapter 427, F.S., (i.e., unable to transport themselves or purchase transportation) and are therefore eligible to receive TDTF subsidies for non-sponsored general trips. The TD Category II population is a subset of the TD category I population.

Table 5.3 presents 1995 to 2000 TD Category I and TD Category II population forecasts for north central Florida counties and the region as a whole. Forecasted annual rates of increase between 1995 and 2000 in the TD Category I population range from 19.0 percent for Gilchrist County to 3.9 percent for Madison County. Forecasted rates of increase in the TD Category II population range from 18.4 percent for Gilchrist County to 3.7 percent for Taylor County.

TABLE 5.3

PROJECTED TRANSPORTATION DISADVANTAGED POPULATION

Area/Group	1995	1996	1997	1998	1999	2000	Percent Increase, 1995-2000
Alachua							
TD Category I	74,437	75,500	76,577	77,670	78,779	79,904	7.3
TD Category II	8,868	8,996	9,126	9,258	9,392	9,528	7.4
Bradford							
TD Category I	9,213	9,301	9,389	9,478	9,568	9,658	4.8
TD Category II	2,593	2,617	2,641	2,666	2,690	2,715	4.7
Columbia							
TD Category I	20,842	21,373	21,921	22,486	23,068	23,669	13.6
TD Category II	6,374	6,525	6,682	6,842	7,008	7,179	12.6
Dixie							
TD Category I	6,704	6,885	7,072	7,265	7,463	7,667	14.4
TD Category II	1,794	1,840	1,887	1,935	1,985	2,036	13.5
Gilchrist							
TD Category I	4,718	4,884	5,057	5,236	5,421	5,614	19.0
TD Category II	1,487	1,538	1,591	1,645	1,702	1,760	18.4
Hamilton							
TD Category I	5,567	5,722	5,882	6,047	6,217	6,392	14.8
TD Category II	1,841	1,894	1,950	2,007	2,066	2,126	15.5
Lafayette							
TD Category I	2,700	2,749	2,800	2,852	2,905	2,960	9.6
TD Category II	756	769	782	795	808	822	8.7
Madison							
TD Category I	8,232	8,295	8,358	8,422	8,487	8,552	3.9
TD Category II	2,748	2,771	2,793	2,816	2,839	2,862	4.1
Suwannee							
TD Category I	13,277	13,454	13,685	13,920	14,159	14,402	8.5
TD Category II	3,411	3,468	3,526	3,585	3,645	3,705	8.6
Taylor							
TD Category I	7,496	7,556	7,617	7,678	7,740	7,802	4.1
TD Category II	2,089	2,104	2,119	2,135	2,150	2,166	3.7

TABLE 5.3

PROJECTED TRANSPORTATION DISADVANTAGED POPULATION

Area/Group	1995	1996	1997	1998	1999	2000	Percent Increase, 1995-2000
Union							
TD Category I	3,899	3,967	4,037	4,108	4,181	4,256	9.2
TD Category II	1,339	1,361	1,384	1,408	1,432	1,456	8.7
Region							
TD Category I	157,085	159,686	162,395	165,162	167,988	170,876	8.8
TD Category II	33,300	33,883	34,481	35,092	35,717	36,355	9.2

Sources: Bureau of Economic and Business Research, Populations by Age, Sex and Race for Florida and its Counties, 1994-2010 (July 1995); CUTR, Methodology Guidelines for Forecasting TD Population Demand at the County Level (May 1993).

These forecasts were prepared using the CUTR methodology guidelines cited above

Table 5.4 compares the 1995 and 2000 TD Category I and II population forecasts to the estimated and projected year 1995 and 2000 populations for north central Florida counties. It indicates that TD Category I populations range from a high of 54.1 percent of total county population in Dixie County to a low of 30.2 percent in Union County. It also indicates that the year 2000 percentage will be about the same as in 1995, ranging from a high of 54.8 percent of total county population in Dixie County to a low of 30.8 percent in Union County. TD Category II 1995 populations range from a high of 15.3 percent in Madison County to a low of 4.5 percent in Alachua County. As with Category I, the year 2000 Category II percentage of total population will be roughly the same as in 1995, ranging from 15.2 percent in Madison County to 4.5 percent in Alachua County.

TABLE 5.4

TRANSPORTATION DISADVANTAGED POPULATION AS PERCENTAGE OF TOTAL POPULATION

Area/ Group	1995 Population Estimates	1995 TD Population Forecasts	% TD	2000 Population Projections	2000 TD Population Forecasts	% TD
Alachua	197,879			210,903		
TD Category I		74,437	37.6		79,904	37.9
TD Category II		8,868	4.5		9,528	4.5
Bradford	24,494			25,598		
TD Category I		9,213	37.6		9,658	37.7
TD Category II		2,593	10.6		2,715	10.6
Columbia	50,000			54,701		
TD Category I		20,842	41.7		23,669	43.3
TD Category II		6,374	12.7		7,179	13.1
Dixie	12,399			13,998		
TD Category I		6,704	54.1		7,667	54.8
TD Category II		1,794	14.5		2,036	14.5
Gilchrist	11,898			13,900		
TD Category I		4,718	39.7		5,614	40.4
TD Category II		1,487	12.5		1,760	12.7
Hamilton	12,200			14,200		
TD Category I		5,567	45.6		6,392	45.0
TD Category II		1,841	15.1		2126	15.0
Lafayette	6,397			6,902		
TD Category I		2,700	42.2		2,960	42.9
TD Category II		756	11.8		822	11.9
Madison	18,004			18,798		
TD Category I		8,232	45.7		8,552	45.5
TD Category II		2,748	15.3		2,862	15.2
Suwannee	29,792			32,298		
TD Category I		13,277	44.6		14,402	44.6
TD Category II		3,411	11.4		3,705	11.5

TABLE 5.4

TRANSPORTATION DISADVANTAGED POPULATION AS PERCENTAGE OF TOTAL POPULATION

Area/ Group	1995 Population Estimates	1995 TD Population Forecasts	% TD	2000 Population Projections	2000 TD Population Forecasts	% TD
Taylor	18301			18900		
TD Category I		7,496	41.0		7,802	41.3
TD Category II		2,089	11.4		2,166	11.5
Union	12,902			13,803		
TD Category I		3,899	30.2		4,256	30.8
TD Category II		1,339	10.4		1,456	10.5
Region	394,266			424,001		
TD Category I		15,7085	39.8		170,876	40.3
TD Category II		33,300	8.4		36,355	8.6

Sources: Bureau of Economic and Business Research, Populations by Age, Sex and Race for Florida and its Counties, 1994-2010 (July 1995); CUTR, Methodology Guidelines for Forecasting TD Population Demand at the County Level (May 1993).

These forecasts were prepared using the CUTR methodology guidelines cited above.

Table 5.5 presents 1995 to 2000 general trip demand forecasts for north central Florida counties. They were computed by applying a trip rate of 1.2 trips per month for rural areas to the TD Category II population forecasts included in Table 5.3. The trip rate was developed through a study of seven paratransit systems around the country which were meeting most or all of the trip demand in their service areas, were providing high levels of service and ad eligibility guidelines similar to those contained in Chapter 427, F.S.[112] Surveys on the trip purposes of transportation disadvantaged persons in other U.S. paratransit systems indicate that approximately 35.0 percent of the general trips taken are medical trips, 20.0 percent are work or educational trips, 10.0 percent are shopping trips, and 35.0 percent are social, recreational, and other trips.[113]

[112]Rural areas include counties without an FTA Section 9 operator. The rate developed for urban areas is 1.0 trips per month. See Center for Urban Transportation Research, University of South Florida, Florida Five Year Transportation Disadvantaged Plan, 1992-1996, June 1992. Prepared for the Florida Transportation Disadvantaged Commission and the Florida Department of Transportation.

[113]Center for Urban Transportation Research, 1992.

TABLE 5.5

PROJECTED TRANSPORTATION DISADVANTAGED GENERAL TRIP DEMAND

Area	1995	1996	1997	1998	1999	2000
Alachua	319,481	324,441	329,480	334,601	339,804	345,091
Bradford	64,967	65,824	66,694	67,577	68,473	69,382
Columbia	169,037	174,029	179,174	184,476	189,941	195,573
Dixie	32,091	33,104	34,154	35,243	36,370	37,539
Gilchrist	26,502	27,203	27,936	28,704	29,506	30,345
Hamilton	65,407	67,125	68,889	70,701	72,560	74,469
Lafayette	20,896	21,376	21,867	22,370	22,885	23,413
Madison	69,689	70,564	71,452	72,352	73,266	74,193
Suwannee	113,227	115,422	117,662	119,948	122,282	124,664
Taylor	61,876	62,556	63,245	63,943	64,649	65,364
Union	32,632	33,652	34,710	35,809	36,950	38,135
Region	975805	995296	1015263	1035724	1056686	1078168

Sources: Bureau of Economic and Business Research, Populations by Age, Sex and Race for Florida and its Counties, 1994-2010 (July 1995); CUTR, Methodology Guidelines for Forecasting TD Population Demand at the County Level (May 1993).

These forecasts were prepared using the CUTR methodology guidelines cited above.

Table 5.9 reveals that an estimated 807,917 general demand trips for the transportation disadvantaged, 82.8 percent of total estimated demand, were unmet in 1995. No new information is available on unmet trips for the transportation disadvantaged population. It is anticipated that new estimates will be published after the release of the year 2000 census. Therefore, paratransit ridership statistics are used as a proxy measure to evaluate trends in transportation disabled ridership since most paratransit trips are made by the transportation disadvantaged.

As indicated in Table 5.6, north central Florida paratransit ridership decreased by 6.6 percent between 1996 and 1999. The drop in ridership occurred in Alachua, Madison, Taylor, and Union Counties. Ridership levels increased throughout the remainder of the region. Paratransit funding levels for the region experienced a similar divergence during this period. The 10-county area absent Alachua County experienced a 5.5 percent increase in funding, while Alachua County funding decreased by 7.1 percent.

TABLE 5.6

NORTH CENTRAL FLORIDA PARATRANSIT RIDERSHIP
FISCAL YEARS 1995-96 AND 1998-99

County	FY 1995-96	FY 1998-99	Pct. Change
Alachua	239,337	176,078	(26)
Bradford	42,945	61,048	42
Columbia, Hamilton, Suwannee	190,467	201,169	6
Dixie	11,850	12,050	2
Gilchrist	4,969	6,056	22
Lafayette	11,785	12,282	4
Madison	37,041	36,296	(2)
Taylor	39,057	33,773	(14)
Union	31,407	29,802	(5)
Region	608,858	568,554	(7)
Region w/o Al. Co.	369,521	392,476	6

Sources: 1996 & 1999 Annual Performance Reports, Florida Commission for the Transportation Disadvantaged, Tallahassee, Florida.

As indicated in Table 5.7, the region's transportation disadvantaged transit service providers experienced a drop in Medicaid transportation funding in 1999. Additionally, in 1999, the state's Transportation Disadvantaged Trust Fund, a primary funding source for the state's transportation disadvantaged service providers, ran out of surplus funds which were relied upon in previous years to fund service providers. The depletion of the surplus resulted in a drop in funding from this revenue source in 1999. It is unclear what impacts these declining revenue sources will have on future paratransit ridership.

TABLE 5.7

NORTH CENTRAL FLORIDA PARATRANSIT FUNDING
FISCAL YEARS 1995-96 AND 1998-99

County	FY 1995-96	FY 1998-99	Pct. Change
Alachua	$2,361,806	$2,192,689	(7.1)
Bradford	366,330	341,602	(6.8)
Columbia, Hamilton, Suwannee	929,921	836,887	(10.0)
Dixie	326,320	442,055	35.5
Gilchrist	119,319	137,976	15.6
Lafayette	171,593	152,952	(10.9)
Madison	445,048	617,026	38.6
Taylor	482,117	454,970	(5.6)
Union	204,565	228,757	11.8
Region	5,407,019	5,404,914	0.0
Region w/o Al. Co.	3,045,213	3,212,225	5.5

Sources: 1996 & 1999 Annual Performance Reports, Florida Commission for the Transportation Disadvantaged, Tallahassee, Florida.

Table 5.8 provides actual FY 1995-96 and projected FY 1996-97 to 1999-2000 funding for the counties in the region. Most general trips made through coordinated transportation systems are provided using subsidies available through trip equipment grants.[114] These grants, which are administered by the CTD, roughly doubled in size in FY 1994-95 due to a $1.00 increase in the vehicle registration fee for the TDTF enacted by the Florida Legislature in 1994.

[114]Center for Urban Transportation Research, 1992.

TABLE 5.8

FY 1995-1996 AND PROJECTED TRANSPORTATION DISADVANTAGED TRUST FUND FUNDING

Area	1995-1996 Funding Allocation	1996-1997 Projected Funding Allocation	1997-1998 Projected Funding Allocation	1998-1999 Projected Funding Allocation	1999-2000 Projected Funding Allocation
Alachua	$362,218	$414,919	$419,168	$423,417	$427,666
Bradford	$62,627	$68,456	$69,608	$70,403	$71,199
Columbia*	$339,948	$411,576	$415,951	$420,328	$424,705
Dixie	$100,672	$112,478	$113,984	$115,220	$116,457
Gilchrist**	$246,107	$267,557	$270,287	$273,018	$275,748
Hamilton*	$339,948	$411,576	$415,951	$420,328	$424,705
Lafayette	$75,289	$81,089	$81,911	$82,733	$83,555
Madison***	$851,633	$927,684	$937,023	$946,363	$955,702
Suwannee*	$339,948	$411,576	$415,951	$420,328	$424,705
Taylor***	$851,633	$927,684	$937,023	$946,363	$955,702
Union	$51,696	$55,670	$56,265	$56,860	$57,454

Source: Commission for the Transportation Disadvantaged, Grants Program Distribution, November 17, 1995.

* Columbia, Hamilton and Suwannee Counties' funding allocation combined.

** Gilchrist and Levy Counties' funding allocation combined.

*** Gadsden, Jefferson, Madison and Taylor Counties' funding allocation combined.

Even with the recent substantial increase, trip/equipment grant funding is not expected to meet more than a fraction of the demand for general trips in the region through the year 2000. Also, increasing pressure to use a part of the increased trip/equipment grant funding for program trips is complicating the funding situation.[115]

Some idea of the extent to which trip/equipment grant funding is meeting current demand for general trips in the region can be gleaned by performing the following computation:

> 1995 Forecasted Demand for General Trips for Year (Table 5.5) - Estimated Number of General Trips to be Provided Using FY 1995-96 Trip/Equipment Grant Funding = Estimated 1995 Unmet Demand for General Trips.

Table 5.9 computes this formula for eight north central Florida counties. The estimated number of

[115]Using TDTF monies to replace existing funding for transportation disadvantaged services provided by any federal, state, or local government agency has been and continues to be prohibited by CTD rule. See Rule 41-2.013, F.A.C.

general trips to be provided using FY 1995-96 trip/equipment grant funding is equal to the grant amount for FY 1995-96 (Table 5.6) divided by the average cost per trip from the most recent year data are available (FY 1993-94).[116]

TABLE 5.9

FY 1995-1996 AND PROJECTED TRANSPORTATION DISADVANTAGED RIDERSHIP

Area	Average Cost per Trip (dollars)	1995 Forecasted Demand for Trips	Estimated No. of General Trips to be Provided Using FY 95-96 Trip/Equipment Grant Funding	Estimated 1995 Unmet Demand for General Trips
Alachua	9.54	319,481	37,968	281,513
Bradford	10.33	64,967	6,063	58,904
Columbia	6.13	169,037	29,378	139,659
Dixie	19.77	32,091	5,092	26,999
Gilchrist	14.64	26,502	4,568	21,934
Hamilton	6.13	65,407	7,542	57,865
Lafayette	14.87	20,896	5,063	15,833
Madison	7.29	69,689	22,547	47,142
Suwannee	6.13	113,227	18,467	94,760
Taylor	7.29	61,876	23,248	38,628
Union	6.50	32,632	7,953	24,679
Region	7.97	975,805	167,888	807,917

Source: North Central Florida Regional Planning Council, March 1996.

As can be seen in Table 5.9, the vast majority of 1995 estimated trip demand is not met through the TD program. The lack of funding for general trips results in the use of a variety of demand-regulating measures by coordinated transportation systems in the region. Examples of such measures in use for general trips subsidized by the TDTF trip/equipment grants include eligibility criteria, trip priorities, advance notice requirements, fares, and limited days and hours of service. Continued use of demand-regulating measures for general trips is anticipated.

[116]This computation does not take into account possible changes in the configurations of transportation services offered and assumes no trip/equipment grant funding will be used to purchase equipment.

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, nine U.S. highways, 25 state roads, 11 local roads designated as hurricane evacuation routes, and four public transit service providers.[117]

TABLE 5.10

REGIONALLY SIGNIFICANT TRANSPORTATION FACILITIES

Type	Name	Description	Length (miles)
Airport	Gainesville Regional Airport	Gainesville	n/a
Public Transit Service Provider	A & A Transit	Designated coordinated community transportation provider for Union County	n/a
Public Transit Service Provider	ATC Paratransit	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	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	Designated coordinated community transportation provider for Bradford, Dixie, Gilchrist and Lafayette 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 (FIHS)	96
Regional Road Network - Interstate Highways	I-10	From the Madison County/Jefferson County line to the Columbia County/Baker County line (FIHS)	80.5
Regional Road Network - Local Roads Used as Hurricane Evacuation Routes	Dixie Co. Rd. 317	From terminus at unincorporated community of Old Town to US 19/98	2.5

[117]North central Florida regionally significant facilities and resources, as defined in Rule 27E.005, F.A.C., 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 5.8, and Regionally Significant Facilities and Resources, identified in Section VI.

TABLE 5.10

REGIONALLY SIGNIFICANT TRANSPORTATION FACILITIES

Regional Road Network - Local Roads Used as Hurricane Evacuation Routes	Dixie Co. Rd. 346A	From terminus at unincorporated community of Old Town to Dixie Co. Rd. 349	2.5
Regional Road Network - Local Roads Used as Hurricane Evacuation Routes	Dixie Co. Rd. 349	From unincorporated community of Suwannee to US 19/98	24
Regional Road Network - Local Roads Used as Hurricane Evacuation Routes	Dixie Co. Rd. 351	From terminus in Horseshoe Beach to US 19/98	19.5
Regional Road Network - Local Roads Used as Hurricane Evacuation Routes	Dixie Co. Rd. 357	From terminus at Shired Island to Dixie Co. Rd. 351	11
Regional Road Network - Local Roads Used as Hurricane Evacuation Routes	Dixie Co. Rd. 358	From terminus in unincorporated community of Jena to US 19/98	8
Regional Road Network - Local Roads Used as Hurricane Evacuation Routes	Dixie Co. Rd. 361	From terminus near Big Grassy Island to Dixie Co. Rd. 358	11.0
Regional Road Network - Local Roads Used as Hurricane Evacuation Routes	Taylor Co. Rd. 356	From terminus at Fenholloway River to US 19/98	11.0
Regional Road Network - Local Roads Used as Hurricane Evacuation Routes	Taylor Co. Rd. 361	From US 19/98 to S.R 51	37.0
Regional Road Network - Local Roads Used as Hurricane Evacuation Routes	Taylor Co. Rd. 361A	From Fish Creek to junction with Taylor Co. Rd. 361	0.7
Regional Road Network - Local Roads Used as Hurricane Evacuation Routes	Taylor Co. Rd. 361A	From Spring Warrior Swamp to US 19/98	16.0
Regional Road Network - State Roads	SR 2	From Columbia Co. - Georgia border to Columbia Co. - Baker Co. line	1.0
Regional Road Network - State Roads	SR 6	From I-10 to U.S. 41	1.5
Regional Road Network - State Roads	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 Roads	SR 18	From SR 121 to SR 231	4.5
Regional Road Network - State Roads	SR 20	From SR 26 to Alachua Co. - Putnam Co. line (FIHS)	18.0
Regional Road Network - State Roads	SR 21	From Putnam Co. Line to Clay Co. line	3.6

TABLE 5.10

REGIONALLY SIGNIFICANT TRANSPORTATION FACILITIES

Regional Road Network - State Roads	SR 24	Levy Co. - Alachua County line to US 441	17.0
Regional Road Network - State Roads	SR 24	From SR 26 to US 301	14.0
Regional Road Network - State Roads	SR 26	From US 19/98 to I-75 (FIHS)	34.5
Regional Road Network - State Roads	SR 26	From I-75 to Alachua Co. - Putnam Co. line	22.0
Regional Road Network - State Roads	SR 26A	From SR 26 to SR 26	2.0
Regional Road Network - State Roads	SR 47	From US 441 to US 129	41.0
Regional Road Network - State Roads	SR 51	From US 129 to terminus in unincorporated community of Steinhatchee	53.0
Regional Road Network - State Roads	SR 53	From Madison Co. - Georgia border to I-10	19.0
Regional Road Network - State Roads	SR 100	From US 90 to Bradford Co. - Clay Co. line	48.5
Regional Road Network - State Roads	SR 120	From US 441 to SR 24	2.5
Regional Road Network - State Roads	SR 121	From Union Co. - Baker Co. line to Alachua Co. - Levy Co. line	60.0
Regional Road Network - State Roads	SR 145	From Madison Co. - Georgia border to SR 53	16.0
Regional Road Network - State Roads	SR 222	From I-75 to SR 26	14.5
Regional Road Network - State Roads	SR 226	From SR 24 to SR 331	2.3
Regional Road Network - State Roads	SR 231	From Fl. Dept. of Corrections Lake Butler Receiving and Medical Center to SR 121	3.0
Regional Road Network - State Roads	SR 235	From US 441 to SR 121	21.2
Regional Road Network - State Roads	SR 238	From US 441 to SR 100	15.0
Regional Road Network - State Roads	SR 247	From US 129 to US 90	15.5
Regional Road Network - State Roads	SR 329	From SR 120 to SR 331	4.0
Regional Road Network - State Roads	SR 331	From I-75 to SR 20 (FIHS)	6.0

TABLE 5.10

REGIONALLY SIGNIFICANT TRANSPORTATION FACILITIES

Regional Road Network - State Roads	SR 349	From US 27 to US 19/98	24.5
Regional Road Network - US Highways	US 19	From Madison Co. - Jefferson Co. line to Gilchrist Co. - Levy Co. line (FIHS)	82.0
Regional Road Network - US Highways	US 27	From intersection with US 19 at Perry to Alachua Co. - Levy Co. line	96.0
Regional Road Network - US Highways	US 41	From Hamilton Co. - Georgia border to US 90	41.5
Regional Road Network - US Highways	US 90	From Jefferson Co. - Madison Co. line to Columbia Co. - Baker County line	91.0
Regional Road Network - US Highways	US 98	From Taylor Co. - Jefferson Co. line to intersection with US 19 at Perry	27.5
Regional Road Network - US Highways	US 129	From Hamilton Co. - Georgia border to Gilchrist Co. - Levy Co. line	78.0
Regional Road Network - US Highways	US 221	From Madison Co. - Jefferson Co. line to Perry	32.7
Regional Road Network - US Highways	US 301	From Bradford Co. - Clay Co. line to Alachua Co. - Marion Co. line (FIHS)	50.5
Regional Road Network - US Highways	US 441	From Columbia Co. - Georgia border to Alachua Co. - Marion Co. line	69.5
Regional Road Network - Local Roads Serving Regional Facilities and Developments of Regional Impact	All local roads which link Regional Facilities or DRIs to interstate, U.S., or state highways.		

Source: North Central Florida Regional Planning Council, October 2001

GAINESVILLE REGIONAL AIRPORT

Gainesville Regional Airport provides commercial air carrier service to north central Florida. The airport was established in the mid-1940s and is located in northeastern Gainesville. It is presently owned by the city of Gainesville, but ownership of the airport is being transferred to the Gainesville Airport Authority. 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 and three smaller shuttle/commuter airlines. Along with providing service to north central Florida, it also serves nearby Marion, Levy, and neighboring counties to the south and east of the region. 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.

In 1992, Gainesville Regional Airport enplaned 140,134 passengers and 212 tons of freight cargo. In 1994, Gainesville Regional Airport enplaned 134,346 passengers and 255 tons of freight cargo.[118] Between 1996 and 1999, enplaned passengers decreased by 6.0 percent, from 328.076 in 1996 to 308,263 in 1999.[119] The 1994 cargo data is the most recent data available.

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.[120]

REGIONAL ROAD NETWORK

The regional road network is comprised of interstate highways, U.S. highways, state roads, and county roads that serve as hurricane evacuation routes in Dixie and Taylor counties. Overall, the regional road network consists of 1,359 miles of roadways, of which 177 miles are comprised of interstate highways, 569 miles are U.S. highways, 470 miles are state roads, and 143 miles are local roads used as hurricane evacuation routes.[121] Additionally, 427.1 miles of the regional road network are designated as a part of the Florida Intrastate Highway System (FIHS). 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.

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[118] 1997 Florida Statistical Abstract, Table 13.92.

[119] "Gainesville Regional Airport Passengers Deplaned, Enplaned", Gainesville Regional Airport Authority, July, 2000, Gainesville, FL.

[120] Multi-County Regional Airport Task Force, Economic/Market Feasibility Study, pp. V-1 - V-13, Aviation Planning Associates, Inc., Cincinnati, OH, January 1989.

[121] University of Florida, Bureau of Economic and Business Research Florida Statistical Abstract 1993 Transportation To Work, Gainesville, Fl.: The University Presses of Florida, 1993,. p.388.

Chapter 163.3180, Florida Statutes, establishes 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. For the Florida Intrastate Highway System, the Florida Department of Transportation establishes minimum operating level of service (LOS) standards. These standards are incorporated into local comprehensive plans. Local comprehensive plans establish minimum LOS standards for all other roads. The level of service for a road segment is determined by the average travel speed a motorist can reasonably attain through the section. The 1998 highway capacity manual establishes five levels of service ranging from A (free-flowing traffic) to F (highly congested).

Development which impacts roadways operating below the minimum LOS standard can still occur provided the roadway is classified as Constrained or Backlogged in the local comprehensive plan. A Constrained roadway is one where it is infeasible to add lanes to meet current or future traffic needs due to physical, environmental, or policy constraints. Roadways designated as Constrained can operate at a lower level of service standard through a negotiated agreement between the local government and the Florida Department of Community Affairs. In order to designate a roadway as Constrained, DCA requires additional policies be included in the local government comprehensive plan circulation element which, typically, call for improvements to parallel roads, the installation of special turn lanes, and/or improvements to traffic signal timing.[122] A Backlogged roadway is an unconstrained facility operating at a level of service below adopted minimum LOS standards and not programmed for construction in the first three years of FDOT's adopted work program or the first three years of the five year schedule of improvements in the local plan's capital improvement element.

The Growth Policy Act, enacted by the Chapter 99-378, Laws of Florida, allows for the creation of Transportation Concurrency Exception Areas (TCEAs) for areas identified in local government comprehensive plans as urban infill and redevelopment areas. Transportation concurrency requirements are waived within TCEAs. Roads located adjacent to, but outside of, a TCEA may be adversely impacted by spillover traffic from redevelopment occurring inside a TCEA, even if such roads are identified as part of the regional road network or are located within another jurisdiction. The Act calls for regional agencies such as regional planning councils to support TCEAs when used to prevent urban sprawl and to promote urban infill and redevelopment. In order to create a TCEA, local government comprehensive plans must include policies designed to minimize adverse impacts to transportation facilities. As of September, 1995, 95.2 percent of the north central Florida regional road network was operating at or above the minimum operating level of service standard identified in local government comprehensive plans. Between 1995 and 1998, the region experienced a decline in the number of miles of regional road network operating below minimum service level standards. As of December, 1998, 1,328.2 miles, or 97.7 percent, of the regional road network was operating at or above the minimum operating level of service standard identified in

[122]Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area, Median Average Annual Daily Traffic Level of Service Report, North Central Florida Regional Planning Council, March, 1995.

local government comprehensive plans.[123]

The improvement is not attributable to reduced traffic volumes. Rather, it is likely the result of lowered local government level of service standards combined with increased calculated maximum service volumes for certain segments of the regional road network. The increased maximum service volumes are the result of changes in the methodology employed by traffic engineers to determine the maximum traffic volumes for a given level of service standard. Regional road network segments currently operating below minimum level of service standards are identified in Table 5.11, below:

[123]For roads outside the Gainesville MTPO, Florida State Highway System Level of Service Summary, District II, Florida Department of Transportation, Jacksonville, FL, May 1999. For roads within the Gainesville MTPO, Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area Average Annual Traffic Level of Service Report, North Central Florida Regional Planning Council, April 4, 2000.

TABLE 5.11

REGIONAL ROAD NETWORK
SEGMENTS CURRENTLY OPERATING BELOW
THE ADOPTED MINIMUM LEVEL OF SERVICE STANDARD

Road	Jurisdiction	From	To	Length (Miles)
I-75	Alachua Co.	CR 234	SR 331	8.7
SR 26	Alachua Co.	Beginning of 4-lane	I-75	2.4
SR 26	Gainesville	North-South Drive	US 441 (W 13th Str.)	0.5
SR 26A	Gainesville	SR 26 (Newberry Rd.)	SR 121 (W 34th Str.)	1.8
SR 26	Gainesville/ Alachua Co.	SR 222 (NE 39th Ave.)	Putnam Co. Line	11.0
U.S. 441	Gainesville	Archer Road	NW 29th Rd.	2.2
SR 121 (NW 34th Str)	Gainesville	University Ave.	NW 16th Ave.	0.9
US 90	Lake City	I-75	SR 10-A	2.4
US 301	Starke	CR 100A	SR 16	0.9
Total				30.8

Sources: For roads outside the Gainesville Urbanized Area, Florida State Highway System Level of Service Summary, District II, Florida Department of Transportation, Jacksonville, FL, May, 1999.

For roads within the Gainesville MTPO, Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area Average Annual Traffic Level of Service Report, North Central Florida Regional Planning Council, April 4, 2000.

For roads within Gainesville, Gainesville Department of Community Development, March, 2000.

For roads within unincorporated Alachua County inside the Gainesville Urbanized Area, Alachua County Public Works Department, March, 2000.

A review of the comprehensive plans of the region's 44 local governments reveals a total of 30.8 miles, 2.3 percent of the regional road network, currently operating below the local government's adopted roadway minimum level of service standard. An additional 133.2 miles, 9.9 percent of the regional road network, may drop below the local government's adopted minimum level of service standard by the year 2011. These road segments are identified in Tables 5.11 and 5.12. Some segments of the regional road network which may drop below the minimum standard are either being corrected or studies are in progress to determine the means by which the minimum standard can be restored.

TABLE 5.12

REGIONAL ROAD NETWORK SEGMENTS ANTICIPATED TO DROP BELOW THE ADOPTED MINIMUM LEVEL OF SERVICE STANDARD BY 2011

Road	Jurisdiction	From	To	Miles
I-10	Suwannee County	SR 51	CR 137	9.3
I-75	Alachua County	Marion County Line	CR 234	1.0
I-75	Alachua County	CR 234	Gainesville Urban Area Boundary	7.4
US 27	Alachua County	Columbia County Line	High Springs	1.0
US 41	Columbia County	Guderon Rd.	I-10	2.7
US 90	Suwannee County	I-10	Live Oak	5.5
US 90	Live Oak	Live Oak City Limits	SR 51/US 129	1.7
US 90	Lake City	SR 10-A	US 441	0.9
US 301	Starke	Starke City Limits	CR 100A	0.9
US 301	Starke	CR 100A	SR 16	0.9
US 441	City of Alachua	SR 235	City of Alachua City Limits	2.3
US 441/41	Columbia County	I-75	US 441	10.7
US 441	Lake City	SR 10A	US 90	0.4
US 441	Lake city	US 90	Lake City City Limits	1.1
SR 10A	Lake City	US 90	US 41	0.8
SR 20/SR 26	Gainesville	SR 331	SR 26	0.3
SR 20	Alachua County	CR 232	Hawthorne City Limits	5.2
SR 20	Alachua County	Hawthorne City Limits	Putnam County Line	1.5
SR 21	Bradford County	Putnam County Line	Clay County Line	3.6
SR 24	Alachua County	Levy County Line	Archer City Limits	1.9
SR 24	City of Archer	Archer City Limits	Archer City Limits	1.3
SR 24	Alachua County	Archer City Limits	Gainesville Urban Area Boundary	5.8
SR 24	Alachua County	I-75	SW 16th Ave.	2.4
SR 26	Gilchrist County	Fanning Springs City Limits	Trenton City Limits	6.9
SR 26	Gilchrist County	Trenton City Limits	Alachua County Line	9.3
SR 26	Alachua County	I-75	NW 8th Ave.	0.9
SR 26	Newberry	Gilchrist County Line	SR 45	3.0
SR 26	Newberry	SR 45	Newberry City Limits	4.4
SR 26	Alachua County	Beginning of 4-lane	I-75	2.4
SR 26	Gainesville	NW 34th Str.	North-South Drive	1.4
SR 26	Alachua County	SR 222	US 301	5.5
SR 26	Alachua County	US 301	Putnam County Line	5.5
SR 47	Columbia County	I-75	Lake City City Limits	3.1
SR 121	Alachua County	Levy County Line	Gainesville Urban Area Boundary	6.6

TABLE 5.12

REGIONAL ROAD NETWORK SEGMENTS ANTICIPATED TO DROP BELOW THE ADOPTED MINIMUM LEVEL OF SERVICE STANDARD BY 2011

Road	Jurisdiction	From	To	Miles
SR 121	Gainesville	NW 8th Ave.	NW 34th Str.	1.7
SR 222	Alachua County	NE 27th Ave.	SR 26	2.1
SR 222	Alachua County	W of I-75 ramps	NW 83rd Str.	1.2
SR 222	Alachua County	NW 83rd Str.	Gainesville City Limits	2.5
SR 222	Gainesville	NW 43rd Str.	US 441	3.0
SR 247	Columbia County	CR 242	Gainesville Urban Area Boundary	5.1
SR 247	Lake City	Lake City City Limits	US 90	0.4
Total Mileage				133.2

Sources: For roads outside the Gainesville Urbanized Area, Florida State Highway System Level of Service Summary, District II, Florida Department of Transportation, Jacksonville, FL, May, 1999.

For roads within the Gainesville MTPO, Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area Average Annual Traffic Level of Service Report, North Central Florida Regional Planning Council, April 4, 2000.

For roads within Gainesville, Gainesville Department of Community Development, March, 2000.

For roads within unincorporated Alachua County inside the Gainesville Urbanized Area, Alachua County Public Works Department, March, 2000.

Table 5.13 identifies segments of the regional road network which are scheduled to be improved or for which studies are underway to determine what should be done to improve them. Of the164.0 miles of regional road network identified as either currently operating or projected to operate below the minimum LOS standard, 35.3 miles are scheduled for improvements, along with 17 intersection turn lane projects. Most of the new construction is scheduled to occur within Alachua County.

TABLE 5.13

SCHEDULED REGIONAL ROAD NETWORK IMPROVEMENTS, 2000-2005

Jurisdiction	Project	From	To	Length (miles)	Description
Gainesville MPO	SR 222 AT: I-75	I-75/SR 222	I-75/SR 222		Replace 2-lane bridge with 4-lane bridge with sidewalks & bike trail over I-75
Gainesville MPO	SR 26 AT: SW 5th Ter AT: W 6th Str				Intersection Improvements: Realignment/Turn Bay/Lane
Gainesville MPO	SR 24 AT: Fred Bear Dr AT: SW 40th Blvd				Intersection Improvements: Realignment/Turn Bay/Lane
Gainesville MPO	SR 222 (NW 39th Ave) AT: SR 121 (NW 34th Str)				Intersection Improvements: Realignment/Turn Bay/Lane
Gainesville MPO	SR 331 (Williston Rd) AT: I-75				Intersection Improvements: Realignment/Turn Bay/Lane
Alachua County	SR 26 (Newberry Rd)	W of CR 241	CR 241	1.6	Add lanes
Alachua County	SR 20 (Hawthorne Rd)	Lakeshore Dr	CR 235	5.5	Add lanes
Alachua County	US 441 @ CR 235A				Add left turn lanes
Alachua County	SR 121	SR 331	SR 24		Add lanes & reconstruct
Alachua County	SR 20	End of curb and gutter	CR 325	5.5	Add lanes & reconstruct
Alachua County	SR 24	SR 45	Parker Rd	3.5	Add lanes & reconstruct
Alachua County	SR 20	CR 325	US 301	6.2	Add lanes & reconstruct
Alachua County	SR 26	W of CR 241		1.6	Add lanes & reconstruct
Alachua County	SR 26	SR 45 W of CR 241		5.0	Add lanes & reconstruct

TABLE 5.13

SCHEDULED REGIONAL ROAD NETWORK IMPROVEMENTS, 2000-2005

Jurisdiction	Project	From	To	Length (miles)	Description
Alachua County	SR 26 @ W 266 Str				Add left turn lanes
Bradford	SR 200 @ CR 225				Traffic Signal
Columbia	SR 10	Division Str	Lamond Ave.	1.3	Add Lanes & Reconstruct
Columbia	SR 47	I-75	US 41	3.7	Add Lanes & Reconstruct
Columbia	US 90	E of I-75	E of Commerce Blvd	0.2	Add Lanes & Rehab Pavement
Columbia	US 90	E of I-75 to SR 247	SR 247	1.3	Add Lanes & Reconstruct
Columbia	US 41/441 @ CR 778 @ CR 18 @ CR 238				Add Turn Lanes
Columbia	US 441 @ Waldo Street				Add Left Turn Lane
Columbia	SR 247 @ CR 242				Add Turn Lane
Columbia	SR 247 @ CR 242B				Add Turn Lane
Columbia	SR 47 @ CR 240 @King Rd				Add Turn Lanes
Gilchrist	SR 26 @ Wacassassa Rd @ CR 337				Add Left Turn Lanes
Columbia	SR 26 @ CR 341				Add Left Turn Lanes
Hamilton	SR 145 @ Livingston Str				Add Right Turn Lanes
Suwannee	US 90 @ Mitchell Rd @CR 133				Add Left Turn Lanes
Taylor	US 27 @ Center Str				Add Left Turn Lanes

TABLE 5.13

SCHEDULED REGIONAL ROAD NETWORK IMPROVEMENTS, 2000-2005

Jurisdiction	Project	From	To	Length (miles)	Description
Union	S 121 @ Rec Complex Rd				Add Left Turn Lanes
Total				35.3	

Sources: Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area, Fiscal Years 1999/2000 - 2003/2004 Transportation Improvement Program, July, 1999.

Florida Department of Transportation, District II, Florida's Adopted Five Year Work Program, July 1, 1999 through June 30, 2004, Lake City, Florida, July 1, 1999.

UNIVERSITY OF FLORIDA CAMPUS MASTER PLAN AND IMPACTS TO REGIONAL TRANSPORTATION FACILITIES

Chapter 240.155, F.S., 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 chapter 240.155(5), F.S., 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. Chapter 240.155(13), F.S., 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.

The University of Florida April 25, 1001, draft campus master plan calls for an enrollment increase of approximately 3,300 students, from a head count of 41,696 in the fall semester of 1999 to 44,994 by the fall of 2009.[124]

[124]Board of Regents, University of Florida, Draft University of Florida Comprehensive Master Plan 2000 - 2010, Tallahassee, Fl, April 25, 2001, pg 7-9.

In conjunction with increased enrollment, the plan calls for an expansion of on-campus housing facilities with the intent of increasing the number of beds by approximately 2,084 by 2010. This is anticipated by the draft plan to result in an increase of students housed on campus from 19.2 percent in 1999-2000 to 22.5 percent by the 2009-2010 academic year. The draft plan retains the long-term goal of housing 25 percent of all students on-campus.[125] The university may construct an additional 1,400 parking spaces by 2009-2010.

In order to relieve traffic congestion near the University, the draft plan calls for greater reliance on bicycle lanes, greater connectivity of bicycle and pedestrian trails to campus, the continued provision of public transit passes to all University students, faculty, and staff, an providing enhanced on-campus shuttle bus service.[126]

The draft plan also contains policy language calling for the University to work with the City of Gainesville, Alachua County, the MTPO, and RTS to evaluate to provision of "park and ride" facilities along the perimeter of the Gainesville Metropolitan Area may provide funding to support such facilities. While not addressed as policy, during the fall, 1999, semester, 593 class sessions with a duplicated enrollment of 20,357 began after 5:00 pm on week nights.[127] Evening classes are likely to help alleviate peak-hour traffic congestion near the University.

THE LIVABLE COMMUNITY REINVESTMENT PLAN

The Long Range (Year 2020) Transportation Plan of the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area (MTPO), also known as The Livable Community Reinvestment Plan, serves as a policy and program guide for the development of the Gainesville Metropolitan Area transportation system over the next 20 years. The MTPO is comprised of all members of the City and County Commissions of Gainesville and Alachua County.

The plan also guides the city and 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 the next 20 years.

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[125] Draft University of Florida Comprehensive Master Plan 2000 - 2010, Tallahassee, Fl, April 25, 2001, pg 7-4 and 7-10.

[126] Draft University of Florida Comprehensive Master Plan 2000 - 2010, Tallahassee, Fl, April 25, 2001, pg 11-1.

[127] Office of Institutional Research in conjunction with the Office of the University Registrar, University of Florida, June, 2000. Based on weekday classes beginning after 5:00 pm. If a course meets Monday, Wednesday, and Friday, it is counted as three class sessions since it meets three times. The number of students equals the students in each class session. Therefore, a class of 30 students which meets three times per week equals 90 students in the reported student statistic. Excludes TV replay classes which do not require on-campus attendance.

The plan includes a strategic vision for integrating transportation and land use decisions in the Gainesville area. The vision statement for the 2020 Transportation Plan is to "make transportation improvements that support livable community centers and neighborhoods by:

1. Reinvesting in the traditional core areas of Gainesville and the towns of Alachua County to develop walkable downtown centers;
2. Connecting a limited number of highly developed mixed use centers; and
3. Providing a high level of premium transit service in a linear Archer Road corridor."

The Livable Community Reinvestment Plan notes that the transportation system is the framework upon which the Gainesville Metropolitan Area's economic strength, 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's strategic vision statement is of regional importance.

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 maintain the regional road network at or above the minimum level of service standard contained in local government comprehensive plans.

4. A need exists to mitigate transportation impacts to the regional transportation facilities associated with increased enrollment at the University of Florida.

5. 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.

6. A need exists to maximize the use of the Gainesville Regional Airport before constructing a new regional airport.

REGIONAL GOALS AND POLICIES

REGIONAL ROAD NETWORK

REGIONAL GOAL 5.1. Maintain a regional road network which operates at or above the minimum level of service standard contained in local government comprehensive plans for those segments located outside Transportation Concurrency Exception Areas.

Regional Indicators

1. As of January, 1999, 2.5 percent of the north central Florida regional road network, exclusive of FIHS-designated roads, operated below the minimum operating level of service standard identified in local government comprehensive plans.

2. As of January, 1999, 3.9 percent of that portion of the north central Florida regional road network comprised of FIHS-designated roads operated below the minimum operating level of service standard established by the Florida Department of Transportation.

3. As of January, 1999, 8.4 percent of the north central Florida regional road network, comprised of non-FIHS roads, are anticipated to drop below the minimum operating level of service standard identified in local government comprehensive plans by 2011.

4. As of January, 1999, 13.9 percent of that portion of the north central Florida regional road network comprised of FIHS-designated roads, are anticipated to drop below the minimum operating level of service standard established by the Florida Department of Transportation by 2011.

Policy 5.1.1. Provide technical assistance to local governments in preparing and updating Traffic Circulation elements in local government comprehensive plans.

Policy 5.1.2. Coordinate with the Florida Department of Transportation regarding proposed improvements to the regional road network to assure consistency with local government comprehensive plans.

Policy 5.1.3. Review proposals for road widening and new transportation corridors for impacts upon natural resources of regional significance and adjacent local governments.

Policy 5.1.4. Provide technical assistance to local governments seeking funds for transportation improvements.

Policy 5.1.5. Provide technical assistance to the Gainesville Urban Area Metropolitan Transportation Planning Organization.

Policy 5.1.6. Develop recommended local government development orders for Developments of Regional Impact which mitigate adverse impacts of the development upon regionally significant transportation facilities.

Policy 5.1.7. Mitigate adverse impacts of development upon regional transportation facilities.

Policy 5.1.8. Mitigate impacts created by development so as to maintain the minimum level of service standard on the Florida Intrastate Highway System (FIHS) as established by the Florida Department of Transportation.

Policy 5.1.9. Mitigate impacts created by development so as to maintain the minimum adopted level of service standard on non-FIHS roads identified in this plan as significant regional transportation facilities as established in local government comprehensive plans.

Policy 5.1.10. Coordinate with state agencies to identify reserved or dedicated rights-of-way to protect critical transportation corridors.

Policy 5.1.11. Develop a mechanism by which regional transportation priorities are defined and understood among all counties that are not represented by the Metropolitan Transportation Planning Organization for the Gainesville Urban Area.

Policy 5.1.12. Direct future transportation improvements to aid in the management of growth and that promote economic development in designated areas.

Policy 5.1.13. Minimize the impacts of development within TCEAs to segments of the regional road network located outside TCEAs.

Policy 5.1.14. Minimize the impacts of development within TCEAs to local road segments located outside TCEAs either identified or functioning as arterials and when located beyond the jurisdiction of the local government enacting TCEAs.

UNIVERSITY OF FLORIDA

REGIONAL GOAL 5.2. Mitigate adverse impacts to regional transportation facilities associated with enrollment growth at the University of Florida.

Regional Indicators

1. During the 1999-2000 school year, the University of Florida had no off-campus parking areas.

2. During the fall, 1999 semester, the University of Florida offered 593 class sessions with a duplicated enrollment of 20,357 beginning after 5:00 pm on week nights.

3. During the 1999-2000 school year, 16.0 percent of University of Florida students lived in on-campus, non-fraternity/sorority housing.

Policy 5.2.1. Construct parking lots and garages which serve the University of Florida off-campus 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 5.2.2. Increase the percentage of students living in on-campus dormitories from the 1999-2000 school year level of 16.0 percent.

Policy 5.2.3. Provide an evening division of classes in order to reduce off-campus impacts on the regional road network during peak hour traffic periods.

Policy 5.2.4. Complete multi-modal corridor studies as soon as possible for the following roads:

A. State Road 26 from west of Interstate 75 east to State Road 24;

B. U.S. 441 from State Road 331 north to NW 6th Street;

C. State Road 121 from State Road 331 north to U.S. 441; and

D. State Road 24 from SW 75th Street east to U.S. 441.

Policy 5.2.5. 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 5.2.6. 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.

GAINESVILLE REGIONAL AIRPORT

REGIONAL GOAL 5.3. Maximize the use of the Gainesville Regional Airport before developing a new regional airport.

Regional Indicator

1. In 1999, Gainesville Regional Airport enplaned 308,263 passengers. In 1994, the airport enplaned 255 tons of freight cargo.[128]

Policy 5.3.1. 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.

PARATRANSIT SERVICES AND THE TRANSPORTATION DISADVANTAGED

REGIONAL GOAL 5.4. Reduce the unmet General Trip demand of the north central Florida Transportation Disadvantaged population.

Regional Indicators

1. An estimated 807,917 general demand trips, 82.8 percent of total estimated transportation disadvantaged trips, were unmet in 1995.

2. In fiscal year 1998-99, 568,554 paratransit trips were made in the region.

3 In fiscal year 1998-99, north central Florida paratransit service providers reported annual operating revenues of $5,404,914.

Policy 5.4.1. Improve mobility options for low-income, elderly and disabled citizens.

Policy 5.4.2. Increase funding for coordinated transportation systems for the transportation disabled.

Policy 5.4.3. Provide technical assistance to designated north central Florida community transportation coordinators.

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[128]"Gainesville Regional Airport Passengers Deplaned, Enplaned", Gainesville Regional Airport Authority, July, 2000, Gainesville, FL, and 1997 Florida Statistical Abstract, Table 13.92.

PUBLIC TRANSIT
THE LIVABLE COMMUNITY REINVESTMENT PLAN

REGIONAL GOAL 5.5. Increase the percentage of north central Florida residents using public transportation as a primary means of transportation.

Regional Indicators

1. In 1990, 1.2 percent of north central Florida residents used public transportation as a primary means of travel to work.[129]

2. The 1999 Gainesville Regional Transit System fixed-route ridership was 3,299,933.

Policy 5.5.1. 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 5.5.2. Coordinate with Big Bend Transit, Inc., the Suwannee Valley Transit Authority, 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 5.5.3. Assist the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area in implementing the vision statement contained in its Gainesville Metropolitan Area Year 2020 Transportation Plan entitled, The Livable Community Reinvestment Plan.

[129]Bureau of Economic and Business Research, University of Florida, 1995 Florida Statistical Abstract, Table 13.01.

REGIONALLY SIGNIFICANT FACILITIES AND RESOURCES

amended August 28, 1997, and February 27, 2003

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.[130]

Rule 9J-5.15.4(a), Florida Administrative Code (F.A.C.), requires local government comprehensive plan intergovernmental coordination elements to determine if development proposals would have a significant impact on regionally significant facilities and resources identified in the strategic regional policy plan. Rule 9J-5 also requires local government comprehensive plans to identify all regionally significant facilities and resources identified in the Strategic Regional Policy Plan and establish a process for mitigating these impacts. Regionally significant facilities and resources to be identified in the local plan are those which are located within the local government's jurisdiction, beyond the local government's jurisdiction but within its area of concern as defined by Rule 9J-5.015(l), and beyond the area of concern, based upon the characteristics of the facility or resource, which could be reasonably expected to be significantly impacted by development within the local government's jurisdiction.

Local government comprehensive plan intergovernmental coordination elements must contain a definition of significant impact to each identified regionally significant facility and resource within the government's jurisdiction. The definition is to be designed to ensure that regionally significant facilities and resources are protected and/or maintained in a manner which is in accordance with the provisions and criteria of the regional plan.

Intergovernmental coordination elements are to undergo a process with adjacent local governments to insure the compatible coordination of the management of impacts upon regionally significant facilities and resources. Under Rule 9J-5.15.(4)(a)4.(a)(I), F.A.C., local governments are encouraged to demonstrate compatibility through incorporation of any relevant portions of the regional plan which includes the compatible identification of regionally significant facilities and resources, definition of significant impacts, and description of mitigation criteria or standards. If the regional plan contains an model intergovernmental coordination element, local governments can demonstrate compatibility by adopting it or the applicable portions of it as their intergovernmental coordination element.

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[130]North central Florida regionally significant facilities and resources, as defined in Rule 27E.005, F.A.C., 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 5.8, and Regionally Significant Facilities and Resources, identified in Section VI.

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, 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.

Cultural Facilities

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

Educational Institutions

Bradford-Union County Vocational Technical Center
Lake City Community College
North Florida Junior College
Santa Fe Community College
Suwannee-Hamilton Vocational Technical Center
Taylor Technical Institute
University of Florida

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

Florida Greenways

Aucilla River Greenway (Madison and Taylor counties)
Bell Central Rail Trail (Gilchrist County)
Big Bend Coastal Greenway (Dixie and Taylor counties)
Depot Rail Trail (Alachua County)
Devil's Millhopper Bike Path/Transportation Corridor (Alachua County)
Dixie-Levy Greenway (Dixie and Gilchrist counties)
Gainesville-Hawthorne Rail Trail (Alachua County)
Hogtown Creek Greenway (Alachua County)
Ichetucknee River Greenway (Columbia and Suwannee counties)
Jasper Rail Trail (Hamilton County)
Live Oak Rail Trail (Suwannee County)
Lower Suwannee River Greenway (Dixie, Gilchrist, and Lafayette counties)
Middle Suwannee River Greenway (Lafayette, Madison, and Suwannee counties)
Newnans Lake/Lochloosa/Orange Creek Greenway (Alachua County)
Osceola National Forest Florida National Scenic Trail (Columbia County)
Pinhook Swamp/Okefenokee Greenway (Columbia County)
Santa Fe River Greenway (Alachua, Bradford, Columbia, Gilchrist, Suwannee, and Union counties)
Steinhatchee River Greenway (Dixie, Lafayette, and Taylor counties)
Sweetwater Creek/Matheson Greenway (Alachua County)
Upper Suwannee River Greenway (Columbia, Hamilton, and Suwannee counties)
Suwannee River Greenway at Branford (Suwannee County)
Waldo Road Rail Trail (Alachua County)

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

Hospitals

North Florida Regional Medical Center, Gainesville
Shands Hospitals in Alachua County
Veterans Administration Hospital, Gainesville
Veterans Administration Hospital, Lake City

Landfills

Alachua County Southwest Landfill (Alachua and Gilchrist counties)
New River Solid Waste Management Association (Baker, Bradford, & Union counties)
Suwannee Valley Solid Waste Management Association (Dixie, Jefferson, Madison, & Taylor counties)

Natural Gas Transmission Lines

Natural Gas Transmission Lines

State Prisons

Columbia Correctional Institution
Cross City Correctional Institution
Florida State Prison, Bradford County
Gainesville Community Correctional Center
Hamilton Correctional Institution
Lake Butler Reception and Medical Center
Lake City Community Correctional Center
Lancaster Correctional Institution
Lawtey Correctional Institute, Bradford County
Madison Correctional Institution
Mayo Correctional Institution
New River Correctional Institution
Santa Fe Community Correctional Institution
Union Correctional Institution

COORDINATION OUTLINE

amended August 28, 1997, and February 27, 2003

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.

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.

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.

CROSS-ACCEPTANCE

Chapter 186.505(22), Florida Statutes (F.S.), 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."

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.

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, F.S. 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.

The Florida Department of Community Affairs is considering use of the cross-acceptance process by including it in the new local government comprehensive plan Intergovernmental Coordination Element (ICE) rule 9J-5.015(4)(a)4.a.(iii), F.A.C., as an alternative means of demonstrating intergovernmental compatibility between plans. The Intergovernmental Compatibility requirement of 9J-5 states the ICE element must demonstrate consideration of the particular effects of the local plan upon development within adjacent and other affected local governments. Rule 9J-5 encourages local governments to accomplish this by demonstrating compatibility between local government ICEs, including the compatible identification of resources, facilities and community characteristics, definition of significant impacts, and description of mitigation criteria or standards in one of three ways, of which one is through the completion of the North Central Florida Regional Planning Council's cross-acceptance process.

THE 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, F.S., and through contractual agreements between the Council and the Florida Department of Community Affairs (DCA). 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 DCA 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 DCA through the Chapter 163, F.S., review process described above, with or without a recommendation to do so by the policy body of the Council.

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.

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, developments of regional impact 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.

INTERGOVERNMENTAL COORDINATION AND REVIEW (IC&R)

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 eleven 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.

DEVELOPMENT OF REGIONAL IMPACT (DRI) REVIEW PROCESS

The DRI review process provides state, regional, and local agencies the opportunity to evaluate the impacts of large-scale development projects. The potential impacts of a proposed DRI project on adjacent local governments and on regional resources and facilities are identified by the Council and measures to avoid or mitigate adverse impacts are developed for inclusion in the development order issued by the local government of jurisdiction.

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.

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.

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.

HAZARDOUS MATERIALS

The Emergency Planning and Community Right-to-Know Act (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act (SARA) 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 (LEPCs). The emergency response plan for the North Central Florida Region was adopted by the Local Emergency Planning Committee on June 9, 1989, and last updated on May 19, 1995.

Florida follow-up legislation also requires the state's 67 counties to each prepare a county hazardous materials emergency response plan. The county plans, in turn, form the basis of the regional plans. Council staff completed plan updates for seven of the region's eleven counties in 1995. The updates include site-specific information on facilities that contain extremely hazardous substances. The plans 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 LEPC, 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 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 Planing Organization for the Gainesville Urbanized Area (MTPO) 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.

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 MTPO 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.

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.

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.

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 DCA, 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.

FLORIDA COMMUNITIES TRUST GRANTS

The Council also assists local governments in preparing applications for Florida Communities Trust Florida Forever grant funds, a program designed to assist local governments in purchasing sensitive lands within their communities. The Council has prepared or helped to prepare six applications, five of which have been funded.

ECONOMIC DEVELOPMENT

The economic development program of the Council consists of economic development planning and technical assistance, Areawide Development Company (SBA loan packaging) activities, and tourism promotion.

ECONOMIC DEVELOPMENT DISTRICT (EDD)

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.

CERTIFIED DEVELOPMENT COMPANY (CDC)

In cooperation with local businesses, financial institutions, and community organizations, the Council created a non-profit corporation in 1983 to package Small Business Administration 504 loans. The corporation is certified by the SBA to operate as a Certified Development Company to provide subordinated mortgage financing to eligible small and medium-sized commercial and industrial businesses in the area. The Council also assists businesses with Small Business Administration 7(a) loan packaging and is currently in the process of establishing an intermediary relending (revolving) loan program.

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

amended August 28, 1997, and February 27, 2003

A. DISPUTE RESOLUTION RULE

amended August 28, 1997, and February 27, 2003

RULES

OF THE

NORTH CENTRAL FLORIDA REGIONAL PLANNING COUNCIL

CHAPTER 29C-8

RULES OF PROCEDURE AND PRACTICE PERTAINING TO

THE REGIONAL DISPUTE RESOLUTION PROCESS (RDRP)

29C-8.001	PURPOSE
29C-8.002	DEFINITIONS
29C-8.003	PARTICIPATION
29C-8.004	COSTS
29C-8.005	TIMEFRAMES
29C-8.006	ADMINISTRATIVE- PROTOCOLS
29C-8.;007	PUBLIC NOTICE. RECORDS, AND CONFIDENTIALITY
29C-8.008	PRE-INITIATION MEETING
29C-8.009	SITUATION ASSESSMENT
29C-8.010	INITIATION OF THE PROCESS BY JURISDICTIONS
29C-8.011	REQUESTS TO INITIATE PROCESS SUBMITTED BY OTHERS
29C-8.012	SETTLEMENT MEETINGS
29C-8-013	MEDIATION
29C-8.014	ADVISORY DECISION-MAKING
29C-8.015	SETTLEMENT AGREEMENTS AND REPORTS

29C-8.016 OTHER DISPUTE RESOLUTION PROCESSES

29C-8.001 PURPOSE

(1) The purpose of the rule is to establish a voluntary regional dispute resolution process (RDRP) 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 RDRP 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 RDRP may be used to resolve disputes involving: extrajurisdictional impacts as provided for in the intergovernmental coordination elements of local comprehensive plans as required by 163.3177, F.S.; inconsistencies between port master plans and local comprehensive plans, as required by 163-3178. F.S. ; the siting of community residential homes, as required by 419.001(5). F.S.; and any other matters covered by statutes which reference the RDRP.

(4) The RDRP 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 RDRP.

(5) Use of the RDRP 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 RDRP 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, F.S. Law Implemented 186.509. F.S. 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 RDRP with the RPC staff for resolving their dispute before formally initiating the RDRP.

(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). Being a "named party" in the RDRP does not convey or limit standing in any judicial or administrative proceeding.

(8) REPRESENTATIVE is an individual who is given guidance and authority to act, to the extent possible, by a named party in a RDRP case. Subsection 29C-8.003(4) 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) 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 RDRP and, at a minimum, attend at least one settlement meeting. Subsection 29C-8.010(3) 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, F.S. Law Implemented 186-509, F.S. 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 RDRP 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 29C-8-003(2). Fee allocation agreements may be amended as appropriate.

(2) All initiation and response letters made in accordance with intergovernmental coordination elements (ICE) 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 RDRP meetings, add public or private named parties by mutual agreement of all the current named parties.

(3) Other jurisdictions, public or private organizations, group or individuals seeking to become named parties shall submit to the North Central Florida Regional Planning Council (Council) a written petition to participate, including reasons for the request and information required in Subsection 29C-8.010(2). 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 RDRP meetings, except as provided-by 29C-8.003(2). Named parties who do not respond within thirty days of the initiation letter may not participate in the RDRP 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 RDRP 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 RDRP upon written notice to all other named parties and the Council.

Specific Authority 186-509, F.S. Law Implemented 186.509, F.S. History - New 7/12/94.

29C-8.004 COSTS

(1) There shall be no charge for processing a RDRP initiation request and facilitation of the initial settlement meeting. The RPC 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, F.S. Law Implemented 186-509, F.S. 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.

(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 RDRP 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. F.S. Law Implemented 186-509, F.S. 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, F.S. Law Implemented 186.509, F.S. 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, F.S. Law Implemented 186-509, F.S. 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, F.S. Law Implemented 186.509, F.S. 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.

(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, F.S. Law Implemented 186.509. F.S. 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 29C8.003(1) and 29C-8.003(2) 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 RDRP.

(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 RDRP 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 RDRP.

(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, F.S. Law Implemented 186.509, F.S. 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 29C-8.010(5). Such a request shall be submitted in writing and shall include the information required for an initiation letter as outlined in 29C-8.010(2).

(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, F.S. Law Implemented 186-509. F.S. 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).

(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 29C-8-015(4) 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. F.S. Law Implemented 186.509. F.S. 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 29C-8.015(4) at the conclusion of advisory decision-making.

Specific Authority 186.509, F.S. Law Implemented 186-509. F.S. 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) of this process.

Specific Authority 186.509, F.S. Law Implemented 186.509. F.S. 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 time frame 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 RDRP 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, F.S. Law Implemented 186-509, F.S. History - New 7/12/94.

29C-8.016 OTHER DISPUTE RESOLUTION PROCESSES

(1) The RDRP 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 RDRP negotiations.

(3) Use of the RDRP 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 RDRP 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.

Termination of the Development of Regional Impact Program Section 380.27, 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, F.S. Law Implemented 186-509. F.S. History - New 7/12/94.

B. GLOSSARY OF TERMS

amended August 28, 1997, and February 27, 2003

GLOSSARY

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.

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 LOS standards and not programmed for improvement in the first three years of FDOT's 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 (9J-5.003(19), F.A.C.).

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.

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 (9J-5.003(62), F.A.C.).

Listed Species: Listed species are those plant and animal species classified as either Endangered, Threatened, or Species of Special Concern in Florida's Endangered Species, Threatened Species and Species of Special Concern; Official Lists, published by the Florida Game and Fresh Water Fish Commission.

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), F.A.C.). 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. Bureau of the Census.

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. Bureau of the Census 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.

Overall Economic Development Plan: An economic development plan for the North Central Florida region developed under guidelines established by the U.S. Department of Commerce. The OEDP is the guiding plan for the activities of the North Central Florida Economic Development District.

Overcrowding: A dwelling unit with more than 1.0 persons (residents) per room.

Packet-switching Telephone Networks: Telephone networks designed exclusively for use by computers.

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), F.S. (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 Bureau of the Census. 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.

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 (9J-5.003(105), F.A.C.).

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), F.S. (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.

Rookery: The nesting or breeding grounds of gregarious (i.e., social) birds or mammals; also a colony of such birds or mammals.

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.

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. Bureau of the Census 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, F.S. (427.011(1), F.S. (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.

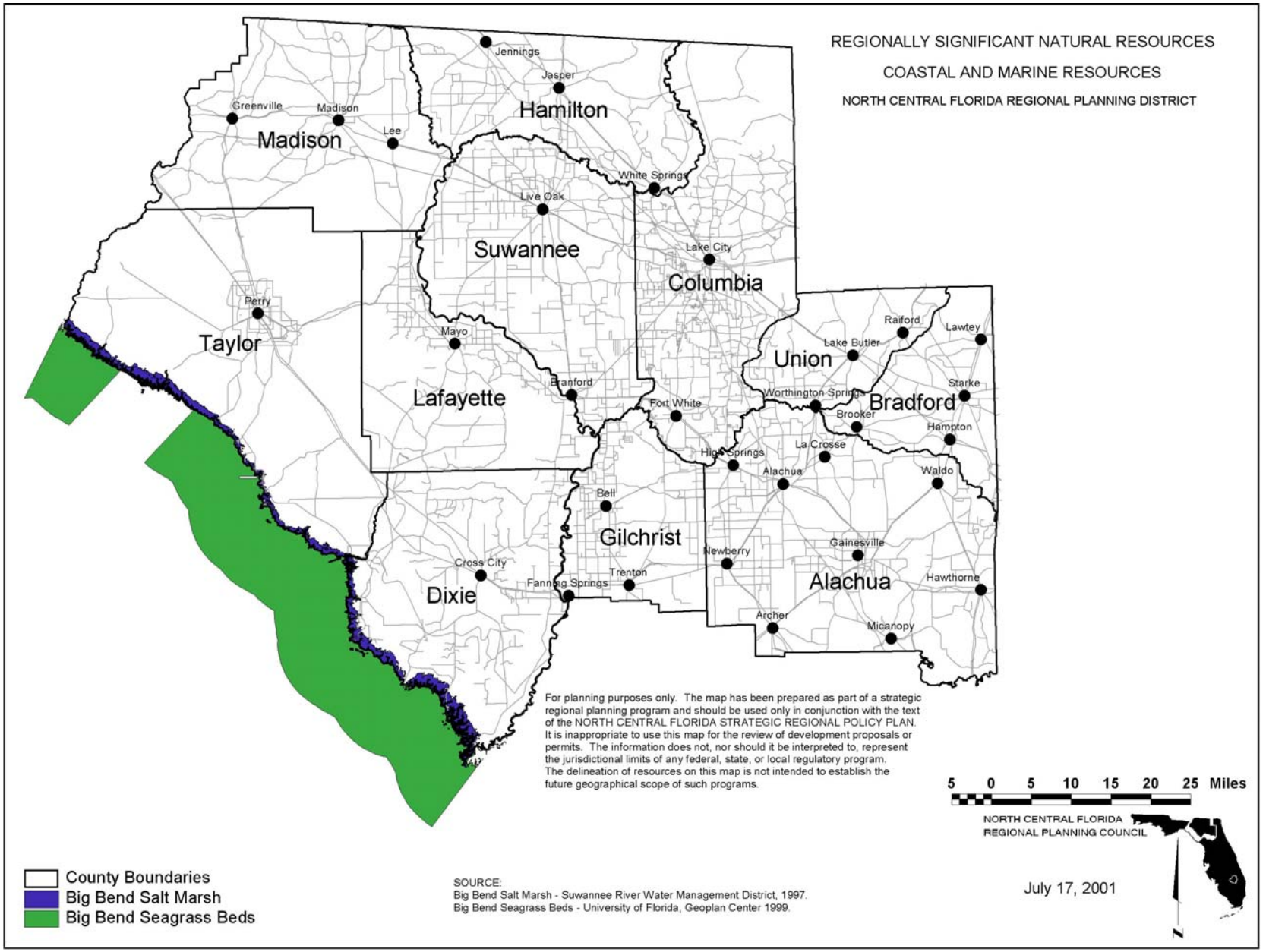
Very Low Income Household: A household with an annual income below 50 percent of the median annual income.

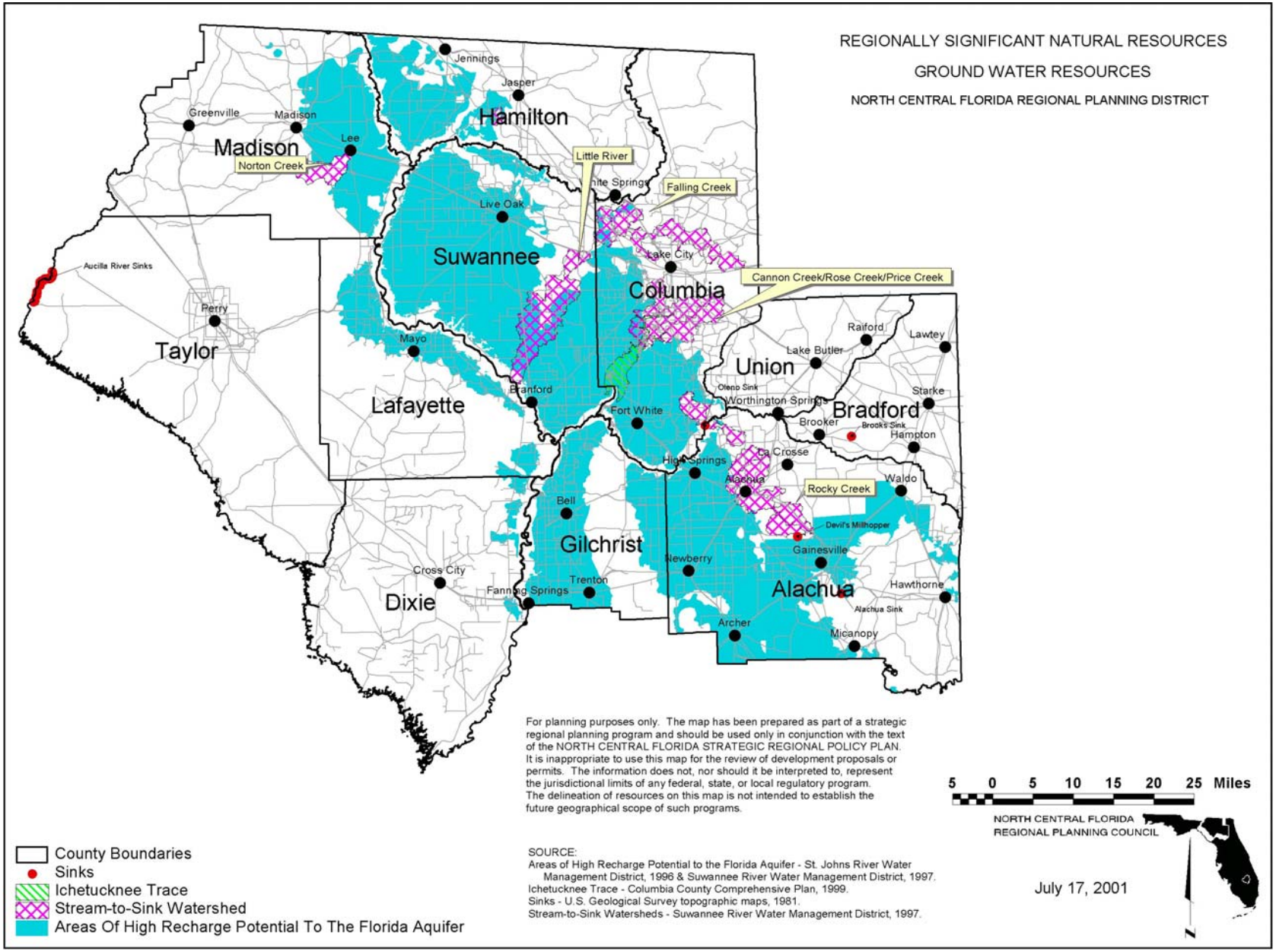
Vulnerable Zone: An area where the estimated chemical concentration from an accidental release is at a level where people's health could be adversely impacted during a worst-case release.

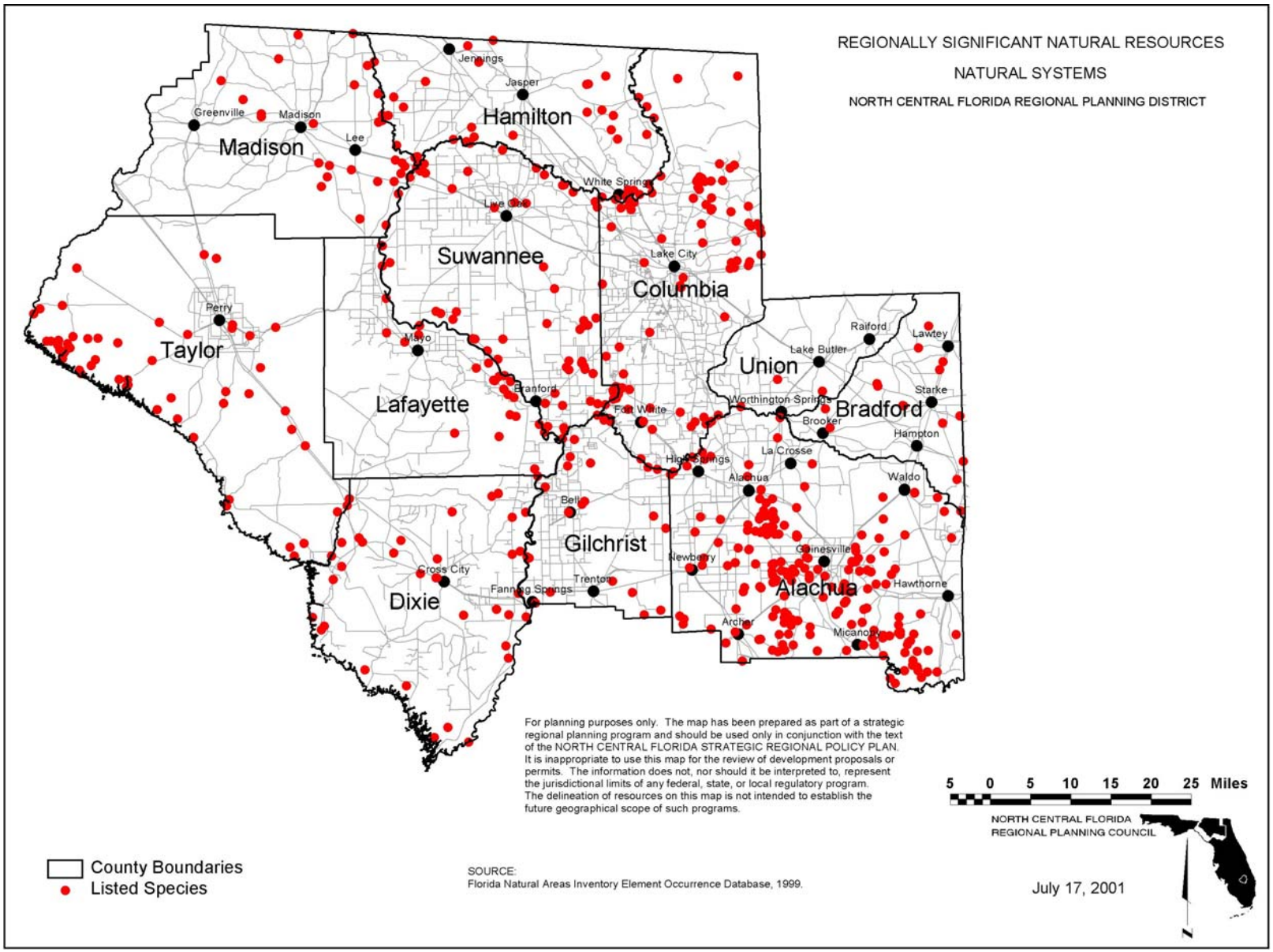
Wetland: An area which has hydric soils and hydrophilic vegetation where the ground is saturated for a portion of the year.

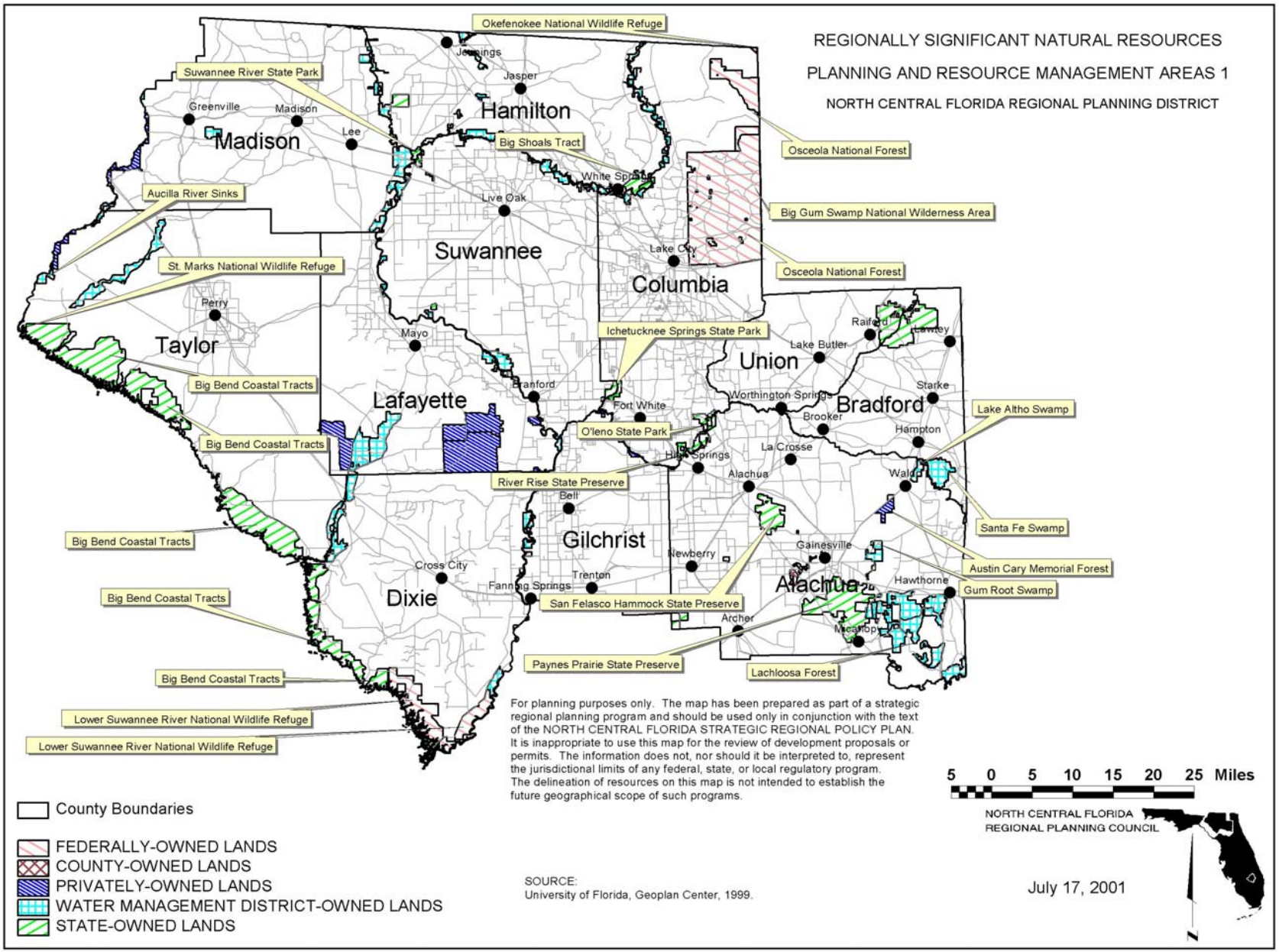
C. MAPS OF NATURAL RESOURCES OF REGIONAL SIGNIFICANCE

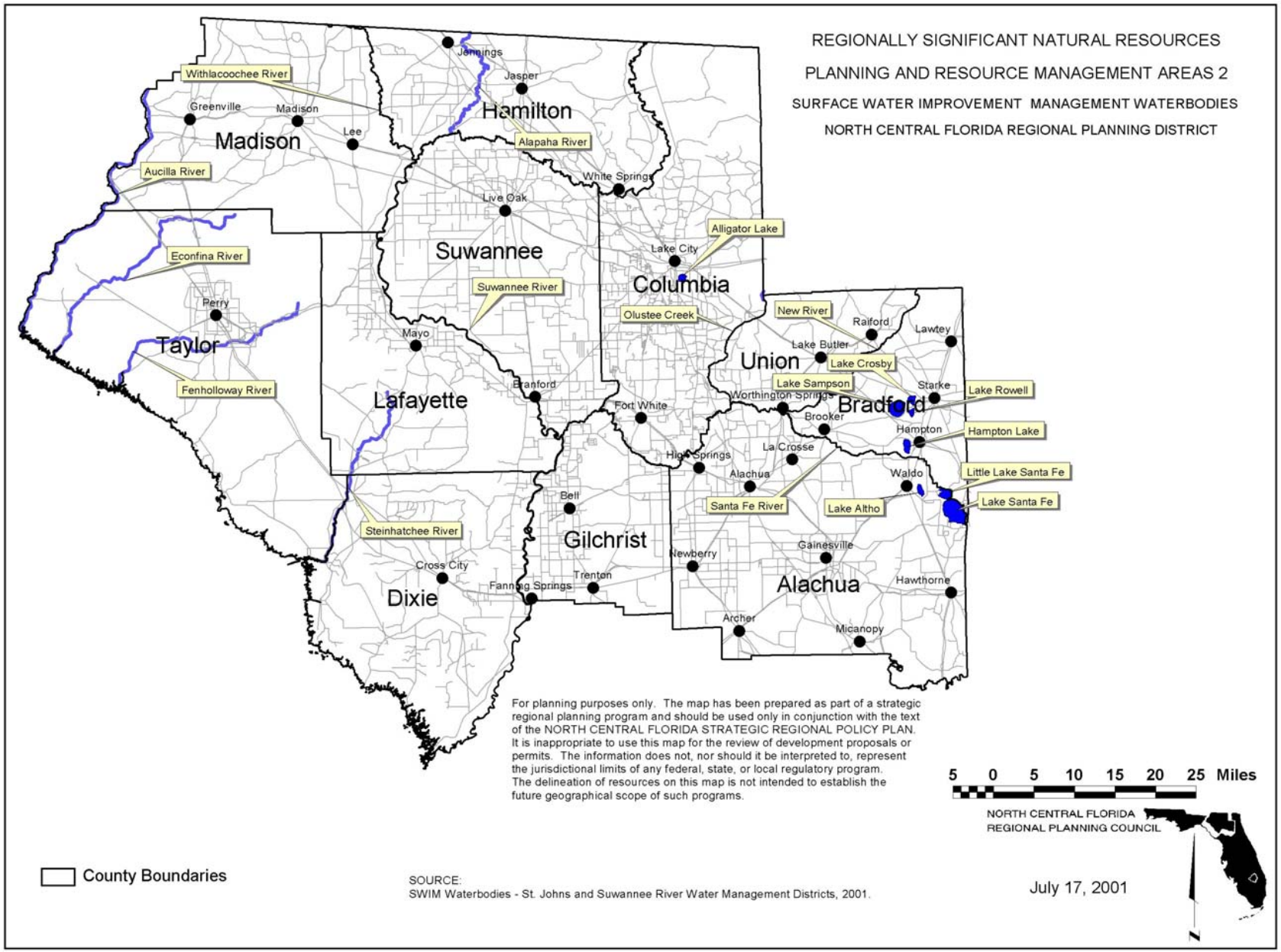
amended August 28, 1997, and February 27, 2003

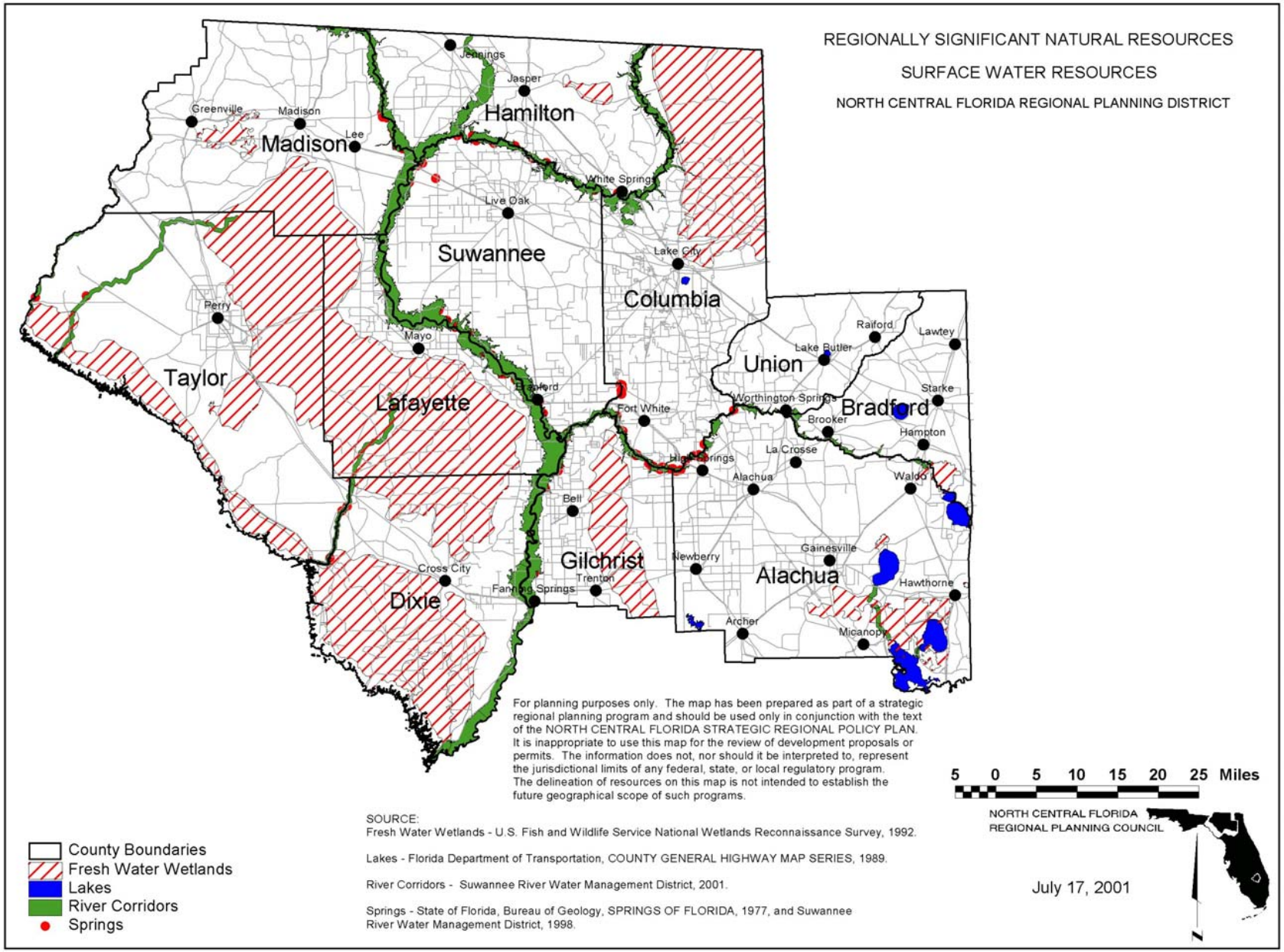

REGIONALLY SIGNIFICANT NATURAL RESOURCES
COASTAL AND MARINE RESOURCES
NORTH CENTRAL FLORIDA REGIONAL PLANNING DISTRICT
Jennings
Jasper
Hamilton
Greenville
Madison
Madison
Lee
White Springs
Live Oak
Suwannee
Lake City
Columbia
Perry
Taylor
Mayo
Raiford
Lawtey
Lake Butler
Union
Starke
Branford
Worthington Springs
Bradford
Fort White
Brooker
Hampton
La Crosse
High Springs
Alachua
Waldo
Lafayette
Bell
Gilchrist
Gainesville
Newberry
Cross City
Trenton
Fanning Springs
Alachua
Hawthorne
Dixie
Archer
Micanopy
For planning purposes only. The map has been prepared as part of a strategic regional planning program and should be used only in conjunction with the text of the NORTH CENTRAL FLORIDA STRATEGIC REGIONAL POLICY PLAN. It is inappropriate to use this map for the review of development proposals or permits. The information does not, nor should it be interpreted to, represent the jurisdictional limits of any federal, state, or local regulatory program. The delineation of resources on this map is not intended to establish the future geographical scope of such programs.
5 0 5 10 15 20 25 Miles
NORTH CENTRAL FLORIDA
REGIONAL PLANNING COUNCIL
County Boundaries
Big Bend Salt Marsh
Big Bend Seagrass Beds
SOURCE:
Big Bend Salt Marsh - Suwannee River Water Management District, 1997.
Big Bend Seagrass Beds - University of Florida, Geoplan Center 1999.
July 17, 2001


REGIONALLY SIGNIFICANT NATURAL RESOURCES
GROUND WATER RESOURCES
NORTH CENTRAL FLORIDA REGIONAL PLANNING DISTRICT
Jennings
Jasper
Hamilton
Greenville
Madison
Madison
Lee
Norton Creek
Little River
Falling Creek
Live Oak
Suwannee
Lake City
Columbia
Cannon Creek/Rose Creek/Price Creek
Aucilla River Sinks
Perry
Taylor
Mayo
Lafayette
Branford
Fort White
Raiford
Lawtey
Lake Butler
Union
Oleno Sink
Worthington Springs
Starke
Bradford
Brooker
Brooks Sink
Hampton
La Crosse
High Springs
Alachua
Rocky Creek
Waldo
Bell
Gilchrist
Devil's Millhopper
Gainesville
Newberry
Cross City
Trenton
Fanning Springs
Dixie
Alachua
Hawthorne
Alachua Sink
Archer
Micanopy
For planning purposes only. The map has been prepared as part of a strategic regional planning program and should be used only in conjunction with the text of the NORTH CENTRAL FLORIDA STRATEGIC REGIONAL POLICY PLAN. It is inappropriate to use this map for the review of development proposals or permits. The information does not, nor should it be interpreted to, represent the jurisdictional limits of any federal, state, or local regulatory program. The delineation of resources on this map is not intended to establish the future geographical scope of such programs.
5 0 5 10 15 20 25 Miles
NORTH CENTRAL FLORIDA REGIONAL PLANNING COUNCIL
County Boundaries
Sinks
Ichetucknee Trace
Stream-to-Sink Watershed
Areas Of High Recharge Potential To The Florida Aquifer
SOURCE:
Areas of High Recharge Potential to the Florida Aquifer - St. Johns River Water Management District, 1996 & Suwannee River Water Management District, 1997.
Ichetucknee Trace - Columbia County Comprehensive Plan, 1999.
Sinks - U.S. Geological Survey topographic maps, 1981.
Stream-to-Sink Watersheds - Suwannee River Water Management District, 1997.
July 17, 2001


REGIONALLY SIGNIFICANT NATURAL RESOURCES
NATURAL SYSTEMS
NORTH CENTRAL FLORIDA REGIONAL PLANNING DISTRICT
Jennings
Jasper
Hamilton
Greenville
Madison
Madison
Lee
White Springs
Lake City
Suwannee
Columbia
Perry
Taylor
Mayo
Raiford
Lawtey
Lake Butler
Union
Starke
Worthington Springs
Bradford
Brooker
Hampton
La Crosse
Lafayette
Branford
Fort White
High Springs
Alachua
Waldo
Bell
Gilchrist
Gainesville
Newberry
Cross City
Trenton
Fanning Springs
Hawthorne
Alachua
Dixie
Archer
Micanopy
For planning purposes only. The map has been prepared as part of a strategic regional planning program and should be used only in conjunction with the text of the NORTH CENTRAL FLORIDA STRATEGIC REGIONAL POLICY PLAN. It is inappropriate to use this map for the review of development proposals or permits. The information does not, nor should it be interpreted to, represent the jurisdictional limits of any federal, state, or local regulatory program. The delineation of resources on this map is not intended to establish the future geographical scope of such programs.
5 0 5 10 15 20 25 Miles
NORTH CENTRAL FLORIDA
REGIONAL PLANNING COUNCIL
County Boundaries
Listed Species
SOURCE:
Florida Natural Areas Inventory Element Occurrence Database, 1999.
July 17, 2001


REGIONALLY SIGNIFICANT NATURAL RESOURCES
PLANNING AND RESOURCE MANAGEMENT AREAS 1
NORTH CENTRAL FLORIDA REGIONAL PLANNING DISTRICT
Okefenokee National Wildlife Refuge
Suwannee River State Park
Aucilla River Sinks
St. Marks National Wildlife Refuge
Big Bend Coastal Tracts
Big Bend Coastal Tracts
Big Bend Coastal Tracts
Big Bend Coastal Tracts
Big Bend Coastal Tracts
Lower Suwannee River National Wildlife Refuge
Lower Suwannee River National Wildlife Refuge
Big Shoals Tract
Osceola National Forest
Big Gum Swamp National Wilderness Area
Osceola National Forest
Ichetucknee Springs State Park
O'leno State Park
River Rise State Preserve
San Felasco Hammock State Preserve
Paynes Prairie State Preserve
Lachloosa Forest
Lake Altho Swamp
Santa Fe Swamp
Austin Cary Memorial Forest
Gum Root Swamp
Jennings
Jasper
Hamilton
Greenville
Madison
Madison
Lee
White Springs
Live Oak
Suwannee
Lake City
Columbia
Perry
Taylor
Mayo
Lafayette
Branford
Fort White
Raiford
Lawtey
Lake Butler
Union
Worthington Springs
Bradford
Starke
Brooker
Hampton
La Crosse
Hildreth Springs
Alachua
Waldo
Bell
Gilchrist
Cross City
Dixie
Trenton
Fanning Springs
Newberry
Gainesville
Alachua
Hawthorne
Archer
Micanopy
5 0 5 10 15 20 25 Miles
NORTH CENTRAL FLORIDA
REGIONAL PLANNING COUNCIL
July 17, 2001
For planning purposes only. The map has been prepared as part of a strategic regional planning program and should be used only in conjunction with the text of the NORTH CENTRAL FLORIDA STRATEGIC REGIONAL POLICY PLAN. It is inappropriate to use this map for the review of development proposals or permits. The information does not, nor should it be interpreted to, represent the jurisdictional limits of any federal, state, or local regulatory program. The delineation of resources on this map is not intended to establish the future geographical scope of such programs.
SOURCE:
University of Florida, Geoplan Center, 1999.
County Boundaries
FEDERALLY-OWNED LANDS
COUNTY-OWNED LANDS
PRIVATELY-OWNED LANDS
WATER MANAGEMENT DISTRICT-OWNED LANDS
STATE-OWNED LANDS


REGIONALLY SIGNIFICANT NATURAL RESOURCES
PLANNING AND RESOURCE MANAGEMENT AREAS 2
SURFACE WATER IMPROVEMENT MANAGEMENT WATERBODIES
NORTH CENTRAL FLORIDA REGIONAL PLANNING DISTRICT
Jennings
Jasper
Hamilton
Withlacoochee River
Greenville
Madison
Madison
Lee
Alapaha River
Aucilla River
White Springs
Live Oak
Alligator Lake
Suwannee
Lake City
Econfina River
Columbia
Suwannee River
Perry
Olustee Creek
New River
Raiford
Lawtey
Taylor
Mayo
Lake Butler
Union
Lake Crosby
Lake Sampson
Starke
Lake Rowell
Branford
Fenholloway River
Lafayette
Worthington Springs
Bradford
Fort White
Brooker
Hampton
Hampton Lake
La Crosse
High Springs
Alachua
Waldo
Little Lake Santa Fe
Bell
Santa Fe River
Lake Altho
Lake Santa Fe
Steinhatchee River
Gilchrist
Gainesville
Newberry
Cross City
Trenton
Fanning Springs
Alachua
Hawthorne
Dixie
Archer
Micanopy
For planning purposes only. The map has been prepared as part of a strategic regional planning program and should be used only in conjunction with the text of the NORTH CENTRAL FLORIDA STRATEGIC REGIONAL POLICY PLAN. It is inappropriate to use this map for the review of development proposals or permits. The information does not, nor should it be interpreted to, represent the jurisdictional limits of any federal, state, or local regulatory program. The delineation of resources on this map is not intended to establish the future geographical scope of such programs.
5 0 5 10 15 20 25 Miles
NORTH CENTRAL FLORIDA
REGIONAL PLANNING COUNCIL
County Boundaries
SOURCE:
SWIM Waterbodies - St. Johns and Suwannee River Water Management Districts, 2001.
July 17, 2001


REGIONALLY SIGNIFICANT NATURAL RESOURCES
SURFACE WATER RESOURCES
NORTH CENTRAL FLORIDA REGIONAL PLANNING DISTRICT
Jennings
Jasper
Hamilton
Greenville
Madison
Madison
Lee
White Springs
Live Oak
Suwannee
Lake City
Columbia
Perry
Mayo
Raiford
Lawtey
Lake Butler
Union
Taylor
Lafayette
Starke
Worthington Springs
Bradford
Fort White
Brooker
Hampton
La Crosse
High Springs
Alachua
Waldo
Bell
Gainesville
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5 0 5 10 15 20 25 Miles
NORTH CENTRAL FLORIDA REGIONAL PLANNING COUNCIL
July 17, 2001
SOURCE:
Fresh Water Wetlands - U.S. Fish and Wildlife Service National Wetlands Reconnaissance Survey, 1992.
Lakes - Florida Department of Transportation, COUNTY GENERAL HIGHWAY MAP SERIES, 1989.
River Corridors - Suwannee River Water Management District, 2001.
Springs - State of Florida, Bureau of Geology, SPRINGS OF FLORIDA, 1977, and Suwannee River Water Management District, 1998.
County Boundaries
Fresh Water Wetlands
Lakes
River Corridors
Springs

D. LISTED SPECIES HABITAT DESCRIPTIONS[131]

[131]Reprinted from Florida Committee on Rare and Endangered Plants and Animals, Rare and Endangered Biota of Florida, Volumes 1-5, University Press of Florida, Gainesville, FL, 1992, and Rare and Endangered Biota of Florida, Volumes 3, 4, and 5, University Press of Florida, Gainesville, FL, 1978.

- (*Polygonum meisnerianum var. beyrichianum*)

HABITAT: The plant is restricted to wet, wooded lake shores. It grows with its lower stems submerged in water, or on exposed wet soil.

ALLIGATOR SNAPPING TURTLE (*Macrolemys temmincki*)

HABITAT: Typically, the Alligator Snapping Turtle is found in deep rivers and canals, but it is also found in lakes and swamps, especially those located near deep running water. Occasionally it is found in brackish water. This turtle is highly aquatic, rarely emerging from the water except for nesting purposes, and this may account for its failure to colonize apparently suitable habitat in the small, Panhandle rivers mentioned above.

AMERICAN ALLIGATOR (*Alligator mississippiensis)*

HABITAT: The Alligator is generally distributed in the various wetland types throughout the state, including the edges of large lakes and ponds, rivers, and the interiors of swamps and freshwater marshes. The reptile apparently is very adaptive and may be equally at home in ponds and lakes in urban areas or in the middle of the Everglades. Although not generally associated with salt water, it may occasionally enter brackish or even salt water habitats.

AMERICAN OYSTERCATCHER (*Haematopus palliatus*)

HABITAT REQUIREMENTS AND HABITAT TREND: The American Oystercatcher needs extensive beach, sandbar, mudflat, and mollusk beds for feeding and roosting. Oystercatchers feed on almost any nonvegetative life that can be gleaned from wet substrates by walking and wading. Listed among their foods are bivalves, gastropods, marine worms, crustaceans, small fish, and many insects (Bent 1929; Murphy 1936). Oystercatchers prefer large, sparsely vegetated sand areas for nesting, but will use wrack and marsh grass (Lauro, 1989).

ARCTIC PEREGRINE FALCON (*Falco pereginus tundrius*)

HABITAT REQUIREMENTS AND HABITAT TRENDS: Although migrant and wintering Peregrine Falcons may occur anywhere in Florida, they rely mainly on open terrain that permits the detection and pursuit of avian prey, which must be abundant and consistently available. Typical habitats include coastal and barrier island shorelines, lake and river margins, prairies, coastal ponds, sloughs, and marshes, and urban areas with adequate prey (Snyder 1978; Evans 1982; Palmer and White 1988).

Sherrod's (1978) summary of nine Peregrine studies indicated that birds comprised 70-100% of the diet. Waterfowl and shorebirds are particularly important prey (Howell 1932; Sprunt 1954; Sherrod 1978). The Peregrine's choice of habitats obviously is related to its prey preferences and foraging methods.

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Wetlands in Florida were reduced from about 7,000,000 ha in 1954 to only 1,500,000 ha by 1982 (Mitsch and Gosselink 1986). The development of coastal wetlands, where Peregrines most frequently occur, accounts for much of this habitat loss.

ATLANTIC RIDLEY TURTLE (*Lepidochelys kempi*)

LIFE HISTORY AND ECOLOGY: Atlantic Ridleys are associated with a wide range of coastal benthic habitats, usually sand or mud bottoms, that support an abundant fauna of crustaceans and other invertebrates. Their primary prey consists of portunid crabs, especially the genus *Callinectes*. However, other crab species are consumed, along with molluscs and other benthic species.

GULF STURGEON (*Acipenser oxyrhynchus desotoi*)

HABITAT: *Acipenser oxyrhynchus* is an anadromous species, spending most of its adult life in salt or brackish water and during certain years moving into fresh water to spawn. It frequently enters the ocean, where it may make extensive coastal migrations, and has been found in water as deep as 46 m (Bigelow and Schroeder 1953). It is less closely restricted to fresh water than *A. brevirostrum*, and in the St. John River estuary (New Brunswick) large juveniles of the two species were found to be ecologically separated on the basis of salinity, *A. oxyrinchus* predominating in water of >3 ppt and *A. brevirostrum* predominating in water of <3 ppt (Appy and Dadswell 1978; Dadswell 1979). As a result of its movements in the ocean and into fresh water, the Atlantic sturgeon encounters a broad range of substrates (ranging from soft mud to hard rock) and may occur in water of widely varying clarity. The species usually is found in areas devoid of submergent aquatic vegetation. Little or no current is usually present, except when the species enters rivers and moves upstream to spawn. Spawning occurs in areas with strong water movement, and the early life stages are spent under these conditions.

AUTUMN CORALROOT (*Corallorhiza odontorhiza*)

No information is provided on this specie in Rare and Endangered Biota of Florida.

BALD EAGLE (*Hialaeetus leucocephalus*)

HABITAT REQUIREMENTS AND HABITAT TREND: Although Bald Eagles occur in a wide variety of habitats throughout their range, proximity to water is important. Preferred habitat includes a high amount of water-to-land edge where prey is concentrated (Palmer 1988). Bald Eagles feed primarily on fish, but birds, smaller mammals, and carrion are also utilized. In north-central Florida freshwater catfish (*Ictalurus* spp.) and American Coot (*Fulica americana*) make up the bulk of the Bald Eagle's diet (McEwan and Hirth 1980), whereas in Florida Bay sea catfish (*Arius Felis*), mullet (Mugil spp.), and assorted wading birds (up to the size of Great White Heron, *Ardea herodias*) are taken (Curnutt, unpubl. data). Nesting habitat generally consists of older, taller trees with an unimpeded view of the surrounding area. A notable exception in Florida is found on the small keys

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of Florida Bay where the virtual absence of both mammalian predators and tall emergent trees has led to nesting within the crowns of mangroves, on nest platforms built by Great White Herons, and nesting on the ground (Shea and Robertson 1979) .

Under natural conditions habitat suitability of an area remains relatively constant so long as prey density is not diminished. The structural dynamics of undisturbed forests may lead to a decrease in the availability of emergent trees (i.e., the Gulf Coast mangrove forest of Everglades National Park), in which case eagles will occupy emergents along the inland edge of the forest if available. Much suitable Bald Eagle habitat in Florida has been developed for urban and recreational use. Recreational use of coastal areas and feeding areas while not affecting the structural integrity of suitable habitat, may have adverse effects on eagles during the breeding season by disrupting incubation and feeding of offspring and the ability to procure prey.

BARTRAM'S IXIA (*Sphenostigma coelistina*)

HABITAT: This is a plant of the wet, level grassy flatwoods, almost always under scattered slash or longleaf pines. It is associated with *Aletris obovata*, *Asclepias michauxii*, *Cleistes divaricata*, *Ctenium floridanum*, *Polygala ramosa*, *Psorlea virgata*, *Tephrosia hispidula*, and other Coastal Plain species of limited distribution. The dominant vegetation is usually Wiregrass, *Aristida stricta*. In the prolonged absence of fires this association becomes densely covered with grasses and other herbs, and the Ixia ceases to flower and seems almost to disappear. In the spring after a fire has removed the herbaceous cover, the Ixia produces a showy display of hundreds of plants where none was seen before. Then, with successive fireless years, the number of blooms dwindles annually, until again few or none are to be seen.

BLACK SKIMMER (*Rynchops niger*)

HABITAT REQUIREMENTS AND HABITAT TREND: Black Skimmers depend on healthy estuaries for feeding and on undisturbed coastlines for breeding and loafing. In Florida, colonies are located on dredge-material islands, natural sandbars, small coastal islands, and beaches with little vegetation usually within sight of open water (Schreiber and Schreiber 1978; Kale 1979; Clapp et al. 1983). In some parts of their range, but not yet in Florida, Black Skimmers nest on wrack in salt marshes (see literature review in Spendelow and Patton 1988; Burger and Gochheld 1990). This behavior is apparently of recent origin and is believed to be related to increasing human use of beaches. Skimmers require an adequate prey base of small fish near their nesting colonies. Skimmers are opportunistic feeders, taking any small fish of suitable size. They rely heavily on silversides (*Menidia* spp.), killifishes (*Fundulus* spp.), anchovies (*Anchoa* spp.), and mullet (*Mugil* spp.) (Erwin 1977; Loftin 1982; King 1989). Most prey items are less than 100 mm long (Loftin 1982; King 1989). Prey may range in weight from about 0.5 to 14.5 g (Loftin 1982; King 1989). Shrimp also are taken "coincidentally" (Barbour 1978).

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BRITTLE MAIDEN HAIR FERN (*Adiantum tenerum*)

No information is provided on this specie in Rare and Endangered Biota of Florida.

BROWN PELICAN (*Pelecanus occidentalis*)

HABITAT REQUIREMENTS AND HABITAT TREND: Nesting sites used by Brown Pelicans in Florida have consistently been small to medium-sized islands (most <5 ha, some to 10 ha), and most have been located along the Intracoastal Waterway. Only 4 of 49 sites used for nesting were not originally vegetated with mangrove *(Avicennia germinans* and *Rhizophora mangle*). Nesting occurs from 0.5-10.7 m above the high tide line (Schreiber 1978). In addition to nesting sites, Brown Pelicans require loafing and roosting habitats. Sand bars are "an important, non-nesting habitat used for roosting and loafing" (Schreiber and Schreiber 1982). Loafing and roosting mangrove islands often evolve into nesting sites after a period of increasing use (Schreiber and Schreiber 1982). Feeding habitat is not well understood and should be better researched since access to prey in adequate abundance is essential for successful reproduction (Anderson et al.1982).

Many (>75%) of the Florida nesting sites are on state or federal land (Williams et al. 1980). There is no security or protection for non-nesting habitats and undoubtedly many important sites have been lost to direct or indirect degradation through disturbance (Schreiber and Schreiber 1982) or pollution.

BURROWING OWL (*Speotyto cunicularia*)

HABITAT REQUIREMENTS AND HABITAT TREND: Florida Burrowing Owls typically occur in open, well-drained treeless areas where herbaceous ground cover is short. These requirements were met historically in Florida on the dry prairies of the central peninsula in the vicinity of burns and along the margins of depressional marshes during dry periods (Howell 1932; Bent 1938). Land clearing and wetland drainage have greatly expanded the amount of suitable Burrowing Owl habitat in Florida, and these activities probably played a major role in the range expansion of this species since the 1940s. Currently, Burrowing Owls still occur in dry prairies in central Florida, although they are most often associated with such unnatural elevated features as canal banks and road berms. In addition, they occur in tame-grass pastures, on airports, golf courses, athletic fields, and in partially developed residential and industrial areas where expanses of mowed lawn and ruderal grassland are maintained. The latter areas probably support the largest concentrations of Burrowing Owls in Florida at the present time. In Cape Coral, Burrowing Owls appear to prefer areas where developed lots occupy between 25 and 75% of the landscape (Wesemann and Rowe 1987). Burrowing Owl nesting density decreases under more or less intensive development (Wesemann and Rowe 1987). Although far from conclusive, these observations suggest that Burrowing Owl populations may actually thrive in some developing areas, but then decrease or collapse when the amount of developed land exceeds some critical, but unknown and probably variable, threshold. R Ashton (pers. comm.) found Burrowing Owls in Sumter, Lake and Marion counties most likely to nest in pastures that had been cleared for at least 4 years and that were heavily grazed.

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CATESBY'S LILY (*Lillium catesbaei*)

No information is provided on this specie in Rare and Endangered Biota of Florida.

CREEPING FERN (*Thelypteris reptans*)

No information is provided on this specie in Rare and Endangered Biota of Florida.

DWARF SPLEENWORT (*Asplenium pumilum*)

HABITAT: This species is found only on limestone or other calcareous rocks in most hammocks. It cannot stand removal of the forest covering.

EASTERN INDIGO SNAKE (*Drymarchon corais couperi*)

HABITAT: In peninsular Florida, the Indigo Snake may be found in habitats ranging from mangrove swamps and wet prairies to xeric pinelands and scrub. In the northern parts of its range, it typically winters in Gopher Tortoise (*Gopherus polyphemus*) burrows on the higher sand ridges, although it may forage in more hydric habitats during the warmer months.

FLORIDA CORKWOOD (*Leitneria floridana*)

HABITAT: This is a plant of muddy riverbanks and sawgrass marshes, usually within reach of occasional seawater inundations. It is usually in the open, but may grow at the edge of swampy woods.

FLORIDA BLACK BEAR (*Ursus americanus floridanus*)

HABITAT REQUIREMENTS AND HABITAT TREND: Black bears use a wide variety of forested landscapes, from temperate plant communities in northwestern Florida to subtropical communities in southern Florida. Some of the more important forest types include pine flatwoods, hardwood swamp, cypress swamp, cabbage palm forest, sand pine scrub, and mixed hardwood hammock. A combination of several major forest types is typical of occupied bear range. As with black bears in other parts of their range, seasonal changes in habitat use occur in response to food availability (Pelton 1982). In the Osceola National Forest, black bears use forested wetlands in greater proportion than available, and flatwoods in lower proportion than available. Mykytka and Pelton (1989) found that swamps larger than 150 ha were important components of bear habitat in Osceola National Forest. In the Ocala National Forest, bears prefer flatwoods and avoid longleaf pine forests (Wooding and Hardisky 1988).

Cover, especially for the female's denning requirements, also is an essential habitat component. Beds usually are located in remote swamps or thickets. Nests measure 45-75 cm across and 5-17 cm deep and often occur in a nearly impenetrable tangle of vines and stems characterized by *Lyonia lucida*, *Lyonia ferruginea*, *Clethra alnifoli*, *Serenoa repens*, *Ilex glabra,* and *Smilax* spp. Shrub cover at denning sites is usually dense, with midstory and overstory sparse (J.B. Wooding, unpubl. data). Bears in Florida also may use hollow trees for denning.

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The diet of black bears in Florida varies both temporally and geographically (Maehr and Brady 1982*a*, 1984*a*, 1984*b*) and includes a great variety of plants and animals (Maehr and DeFazio 1985). As with black bears in other parts of their range, Florida bears follow a chronology of food availability from herbaceous matter in early spring, to soft fruits in summer, to hard mast during fall (Pelton 1982:508). Major food items are the fruits and hearts of saw palmetto (*Serenoa repens*) and cabbage palm (*Sabal palmetto*) and the fruits of swamp tupelo (*Nyssa biflora*), oaks (*Quercus* spp.), blueberry (*Vaccinium* spp.), and gallberry (*Ilex glabra*). These species are found throughout the state and probably account for nearly 80 percent of the diet. Insects are the most important animal food, with the introduced honey bee (*Apis mellifera*) occurring most frequently. Other important insects include yellow jackets (*Vespula* spp.), carpenter ants (*Campanotus abdominalis floridanus*), bessie bugs (*Odontotaenius disjunctus*), and walking sticks (*Anisomorpha buprestoides*). For some plants requiring acid scarification of seeds, the black bear may act as an important agent of dispersal and germination (Maehr 1984*b*).

FLORIDA MILKWEED (*Matelea floridana*)

No information is provided on this specie in Rare and Endangered Biota of Florida.

FLORIDA MOUSE (*Podomys floridanus*)

HABITAT REQUIREMENTS AND HABITAT TREND: The Florida mouse is narrowly restricted to fire-maintained, xeric, upland vegetation occurring on deep, well-drained sandy soils. Specific plant communities in which the species has been recorded include sand pine scrub, coastal scrub, scrubby flatwoods, longleaf pine-turkey oak (sandhill), south Florida slash pine-turkey oak (southern ridge sandhill), upland hammock, live oak (xeric) hammock, and drier pine flatwoods (Bangs 1898; Layne 1963, 1978; Stout 1979). Occasional occurrences in such atypical habitats as mesic hammock, seasonal pond margin, freshwater marsh, and oldfields probably represent transients (Layne 1990). The two major habitats of the Florida mouse are scrub, including sand pine scrub and scrubby flatwoods, and sandhill. Scrub is the primary habitat and probably more closely similar to the ancestral habitat, while sandhill vegetation is a secondary habitat that may not have been generally occupied until historic times when the original state of the habitat - a pine savanna - was converted as a result of human disturbance (logging of pines and fire suppression) to a drier, more open condition more suitable for Florida mice (Layne 1990). A major difference in the two vegetation types is in the number of species and density of oaks. Scrub has a well-developed shrub layer usually dominated by three or four species of oaks, whereas sandhill characteristically has one major species, turkey oak, usually occurring in a relatively open stand. In addition to their greater abundance, scrub oak species also tend to have higher and more consistent acorn production than turkey oak (Layne 1990). The difference in acorn production between scrub and sandhill association is reflected in numerous demographic and behavioral differences between Florida mouse populations in these habitats.

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The combination of more widespread xeric vegetation and greatly expanded peninsular Florida landmass during the Late Wisconsinan glacial stage (Watts 1980) suggests that *Podomys* may have had a larger and more continuous distribution during that period than by the end of the Holocene, when the sea had risen to its present level, accompanied by large-scale replacement of xeric habitats by more mesic or hydric associations. During historic times, there has been a continuing loss of xeric upland habitats to real estate development and agricultural use. Much of the sand pine scrub association along the Atlantic coast has been destroyed, with resultant loss of *Podomys* populations. The same is true of the more disjunct scrubs along the Gulf coast of the peninsula. Vast areas of the original sandhill vegetation along the Lake Wales Ridge have been converted to citrus groves, and only a few small remnants continue to support *Podomys* populations. An example of the magnitude of Florida mouse habitat loss in some areas is provided by data compiled for Highlands County by Peroni (1983). During the period from 1940-44 to 1981, approximately 64 percent of the xeric upland habitat suitable for *Podomys* was destroyed and an additional 10 percent was disturbed. Since 1981, the rate of clearing of the remaining scrub and sandhill habitats for development and citrus has escalated sharply. In the northern portion of the range, many former sandhill and scrub sites have been converted to pine plantations. In addition, suppression of fire and the resultant successional changes have resulted in further reduction or elimination of *Podomys* populations in many remaining sandhill and scrub habitats.

FLORIDA PINE SNAKE (*Pituophis melanoleucus mugitus*)

HABITAT: The Florida Pine Snake occupies xeric sites, including Longleaf Pine-xerophytic oak woodlands, Sand Pine scrub, pine flatwoods on well drained soils, and old fields on former sandhill sites. Radio-telemetry studies in sandhill habitats in northern Florida indicate that this species prefers High Pine (Longleaf Pine-Turkey Oak association) and old fields over Sand Live Oak hammocks and other forest types with heavy canopies. Under drought conditions, Pine Snakes seek open habitats surrounding wetlands. Two radio-tracked females exhibited home ranges of 11 and 12 ha (27.5 and 30 ac) each, while 3 males used areas 2-8 times larger in size. The Florida Pine Snake is extremely fossorial, particularly seeking out the tunnel systems of pocket gophers and, to a lesser extent, the burrows of Gopher Tortoises. Radio-tracked snakes were observed to dig open pocket gopher mounds using methods described by Carpenter (1982) for the closely related Bullsnake (*Pituophis melanoleucus sayi*). Radio-tracked snakes were active between March and October but showed their greatest activity in May, June, July, and October. During these months, they made the greatest numbers of moves and traveled the greatest distances.

FLORIDA SANDHILL CRANE (*Grus canadensis pratensis*)

HABITAT REQUIREMENTS AND HABITAT TREND: Mean annual home-range size for 31 Florida Sandhill Cranes was 936 ha. Home range averaged 447 ha for 20 adult pairs and 2,132 ha for 9 subadults (Nesbitt and Williams 1990). The two most frequently used habitats were pastures/prairies and emergent palustrine wetlands dominated by pickerelweed (*Pontedaria cordata*) and maidencane (*Panicum hemitomon*). Cranes also showed a preference for transition zones

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between wetlands and pastures/prairies and between pastures/prairies and forested habitats. During summer, to avoid the heat of the day, cranes will either stand motionless in full shade or in a marsh area. Recently, the reduction in suitable wetland habitat, pointed out by Williams (1978), may have slowed somewhat due to concern for wetland protection. However, the loss of open, upland habitat, also critical to the subspecies, continues (Bishop 1988; Nesbitt and Williams 1990).

FLORIDA SCRUB-JAY (*Aphelocoma coerulescens*)

HABITAT REQUIREMENTS AND HABITAT TRENDS: The oak scrub to which Florida Scrub-Jays are restricted is a peculiar vegetation formation found only on extremely well-drained sandy soils formed by old coastal dunes or paleodunes (Laessle 1958, 1968). Davis (1967) mapped the scrubs of Florida.

The indigenous plants are adapted to nutrient-poor soils, periodic drought, high seasonal rainfall, and frequent fires. The most characteristic and, for the jays, essential plants are four stunted, low-growing oaks, which occur in varying percentages in scrubs around the peninsula: *Quercus Geminata, Q. chapmanii, Q. myrtifolia and Q. inopina* (the last is endemic to the Florida interior, mainly on the Lake Wales Ridge). In optimal habitat most of the oaks and other shrubs are between 1 and 4 m tall, and interspersed with numerous, small patches of bare sand. Trees are few and scattered, with canopy cover rarely exceeding 15% in occupied habitat. Herbaceous vegetation is sparse. The dominant trees are slash pines (*Pinus elliottis*) and sand pines (*P. clausa*). Slash pines tend to occur in lower areas, sand pines and Florida rosemary (*Ceratiola ericoides*) on the highest dune tops. Along with the oaks, two palmettos (*Serenoa repens* and *Sabal etonia* [interior only]), and several woody shrubs (especially of genera *Lyronia, Vaccinium, Carya, Befaria*, and *Osmanthus*) comprise most of the remaining dominant plants.

Fire is a frequent natural event in scrub habitats. From May to September, ground strikes by lightning are common in peninsular Florida. Lightning fires probably occurred at intervals of 8-20 years in most types of scrub during presettlement times (Myers 1990; Ostertag and Menges 1994). Natural fires usually leave many patches of scrub unburned. As a result entire Florida Scrub-Jay territories (average 10 ha or 25 ac.) rarely are completely burned.

Elimination of scrub habitat through human activities has occurred throughout the Florida Scrub-Jay's native range. Conversion of scrub habitat to citrus groves and dwellings proceeded throughout the 20th century, with rapid acceleration in the 1950s and 1960s. Continued loss of habitat to rural residential development, mobile-home parks, industrial construction, shopping malls, golf courses and other recreational uses closely tracked the rapid growth of the human population in Florida throughout the 1970s and 1980s. Conversion of scrub to citrus groves no doubt eliminated scrub and jays from hundreds of xeric-soil patches as early as the 1920s. Major killing freezes caused rapid southward expansion of the citrus industry in the 1970s and 1980s, especially in the interior peninsula, which resulted in the elimination of much additional scrub. Scrub land vacated by citrus growers is not restored to its natural condition and rarely reverts to a habitat suitable for Florida Scrub-Jays.

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Fire suppression by humans has caused many of the remaining patches of scrub to become tall (>3 m) and dense, with a canopy of oaks and pines and a thick leaf litter. Under these conditions, death rates for breeding adults exceeds recruitment (Fitzpatrick and Woolfenden 1986). This demographic scenario inevitably causes the jays to die out. Entire local populations of Florida Scrub-Jays have disappeared as a result, despite the persistence of native xeric vegetation.

FLORIDA SPINEY-POD (*Matelea floridana*)

No information is provided on this specie in Rare and Endangered Biota of Florida.

FLYR'S BRICKLE-BUSH (*Brickellia cordifolia*)

HABITAT: Flyr's Nemesis (read Brickle-Bush) grows in dry upland woods, at times under large Live Oaks.

FLORIDA WILLOW (*Salix floridana*)

HABITAT: *Salix floridana* grows only in very wet soils, usually in dense, swampy woods. It often favors the edges of cool, clear spring runs, as along the Ichetucknee River and in swamps south of Interlachen, Putnam County.

GODFREY'S PRIVET (*Foresteria godfreyi*)

No information is provided on this species in Rare and Endangered Biota of Florida.

GOPHER (CRAWFISH) FROG (*Rana capito*)

HABITAT: Most records of the species in Florida are from native, xeric, upland habitats, particularly longleaf pine-Turkey Oak sandhill associations which, are not coincidentally, often support the densest populations of Gopher Tortoises. They also are known from pine flatwoods, sand pine scrub, xeric hammocks, and ruderal successional stages of these plant communities. Preferred breeding habitats include seasonally flooded, grassy ponds and cypress heads that lack fish populations. Populations of Gopher Frogs are known only from sites that support Gopher Tortoises. Even prime sandhill habitat, if more than a mile front suitable breeding sites, rarely supports Gopher Frogs.

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GOPHER TORTOISE (*Gopherus polyphemus*)

HABITAT: Three environmental conditions are especially important: well-drained loose soil in which to burrow, adequate low-growing herbs for food, and open sunlit sites for nesting. The Gopher Tortoise is primarily associated with Longleaf Pine-Xerophytic Oak Woodlands (sandhills), but it is also found in Sand Pine scrub, coastal strands, Live Oak hammocks, dry prairies, pine flatwoods, and mixed hardwood-pine communities. Disturbed habitats, such as roadsides, fence rows, clearings, and old fields, often support relatively high densities.

GRAY BAT (*Myotis grisescens*)

HABITAT REQUIREMENTS AND HABITAT TREND: Gray bats are almost exclusively cave-dwelling and are narrowly restricted to particular cave environments. In summer they roost in warm caves (13-26° C), but they move to colder ones (6-11° C) to hibernate (Tuttle 1975, 1976). Because caves having stable, cold temperatures are rare, as much as 95 percent of the total population of gray bats is believed to hibernate in just nine caves (Tuttle 1979).

Available roosting and hibernating habitat has declined as caves have been flooded by man-made reservoirs, lighted for commercial tours, or sealed shut for various reasons (Tuttle 1979). Natural flooding and "cave ins" may also result in the loss of cave habitat. The number of caves lost in these ways is not known; however, since 1967 at least three gray bat maternity caves in Florida have been filled or closed (Wenner 1984).

Gray bats forage primarily over water, especially over streams or pools bordered by forests (Tuttle 1976; LaVal et al. 1977). foraging gray bats have been found more than 25 km from the cave roost (LaVal et al. 1977). Gray bats may use corridors of forest cover when traveling between roosts and foraging sites (Tuttle 1979). Availability of foraging habitat is not believed to be limiting populations of gray bats, but few quantitative data exist regarding the species' requirements for foraging habitat (Brady et al. 1982).

GREEN TURTLE (*Chelonia grisescens*)

No description of the habitat of this ocean species is provided in Rare and Endangered Biota of Florida

GREEN ADDER'S-MOUTH (*Malaxis unifolia*)

HABITAT: The plants are usually found in the partial shade of second-growth mixed oak-pine woods.

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HARTWRIGHTIA (*Hartwrightia floridana*)

HABITAT: This is a plant of wet, open areas. It is found in marshy grassland or among sphagnum in boggy swales.

LEAST TERN (*Sterna antillarum*)

HABITAT REQUIREMENTS AND HABITAT TREND: Nesting habitat of the Least Tern has been characterized in detail by several authors (Jernigan et al 1978; Thompson and Slack 1982; Gochfeld 1983; Kotliar and Burger 1986), and Gochfeld (1983) and Carreker (1985) prepared models to evaluate potential nesting habitat. Least Terns routinely select a nesting site with a substrate of sand or gravel. Substrate composition varies among sites, but light colored sands with less than 20% shell fragments are typical. Shell fragments make the eggs more difficult to see and may keep sand from blowing onto the nest. Clays or other fine materials are unsuitable for nesting substrate because they do not drain well and may stick to the eggs (Thompson and Slack 1982).

Most nesting sites are nearly bare and few have vegetation covering more than 20% of the area; but, as with the substrate, the amount of vegetation that will be tolerated is variable. Colonies that have been successful at a given site in past years are likely to tolerate more vegetation (Burger 1984; Kotliar and Burger 1986). Vegetation at nesting sites is usually short, thus providing cover chicks but not for large predators.

The Least Tern historically nested along the coast on broad, sparsely vegetated sandy beaches (Bent 1921; Gochfeld 1983). Unfortunately, as the human population has increased, many of the traditional Least Tern nesting sites have been usurped by human activities and buildings. The loss of nesting habitat apparently began earlier in the northeast (Nisbet 1973) than in the mid-Atlantic or southeast (Downing 1973; Gochfeld 1983). The loss of traditional nesting areas has been offset somewhat by the creation of new nesting habitat. Least Terns now nest in a variety of artificial open habitats such as dredged-material deposits (Downing 1973; Jernigan, et al. 1978), gravel-covered roofs (Fisk 1975), and ground cleared by mining, construction, and other activities (Lohrer and Lohrer 1973; Loftin 1973; Maehr 1982; Gore 1991).

LEATHERBACK TURTLE (*Demochelya coriaccea*)

No description of the habitat of this ocean species is provided in Rare and Endangered Biota of Florida.

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LIMPKIN (*Aramus guarauna*)

HABITAT REQUIREMENTS AND HABITAT TRENDS: The apple snail appears to be the most important habitat requirement of Limpkins, as their distributions are almost identical (Harper 1936). Limpkins are found along the wide and well-vegetated shallows of rivers and streams statewide, as well as around lakes in peninsular Florida and in the marshes, broad swales, strand swamps, sloughs, and impoundments in south Florida. Much natural riparian habitat has been reduced or degraded by human activities, including agricultural conversion, river channelization, wetland drainage, aquifer and surface water depletion, and the introduction of exotic aquatic plants. While the steady trend of habitat loss has certainly slowed considerably, piecemeal conversion and the spread of exotic plants continue. Nests are built in an impressively wide variety of situations. These include on piles of slowly-sinking aquatic vegetation, among tall marsh grasses, especially bulrush (*Scirpus* spp.), between the knees of bald cypress (*Taxodium distichum*), in vine-covered shrubs, in the tops of sabal palms (*Sabal palmetto*), and on high cypress branches. An abandoned Osprey nest also was recorded to have been used and a cypress tree cavity 30 feet high was used by one individual for several years (Bryan 1992). In all these sites any usable material is pulled from nearby or, rarely, carried to construct the piled or crudely woven nest.

LITTLE BLUE HERON (*Egretta caerulea*)

HABITAT REQUIREMENTS AND HABITAT TREND: As with other ardeids, the Little Blue Heron requires relatively shallow freshwater, brackish, and saltwater foraging habitats that provide access to adequate prey. The Little Blue's diet is quite diverse and includes fishes, amphibians, and invertebrates (Meanley 1955; Jenni 1969; Domby and McFarlane 1978; Telfair 1981; Rodgers 1982). Little Blue Herons nesting in marine-estuarine regions often will fly inland to forage at freshwater sites (Rodgers 1982), possibly as a consequence of nestlings being intolerant of a high salt content of prey.

Breeding habitat requirements for Little Blue Herons are similar to other ardeids (Rodgers 1980b). Little Blue Herons nest in a variety of woody vegetation including cypress (*Taxodium distichum*), southern willow (*Salix caroliniana*), red maple (*Acer rubrum*), buttonbush (*Cephalanthus occidentalis*), red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*), cabbage palm (*Sabel palmetto*), and Brazilian pepperbush (*Schinus terebenthifolius*). Little Blue Herons usually breed in mixed-species colonies located in flooded vegetation or on islands.

In Florida, much alteration of freshwater and marine-estuarine foraging habitat has had an adverse effect on the Little Blue Heron and probably has contributed to a decrease in its population. Further degradation of the foraging habitat of all ardeids probably will occur in the future.

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LOGGERHEAD TURTLE (*Caretta caretta*)

HABITAT: The habitat frequented varies as a function of life stage and season. Loggerheads inhabit continental shelves, bays, lagoons, and estuaries in temperate, subtropical waters. They occur offshore to the western edge of the Gulf Stream, although most individuals prefer the shallow waters of the continental shelf. In the spring, flotillas rarely are sighted along the outer reefs of the Florida Keys and Cay Sal Bank. Major developmental feeding grounds include large bays, such as Chesapeake Bay in Virginia. Hatchlings and small juveniles are most often associated with floating mats of *Sargassum* in pelagic habitats.

MARIAN'S MARSH WREN (*Cistothorus palustris marianae*)

HABITAT REQUIREMENTS AND HABITAT TRENDS: Marsh Wrens breed in tidal marshes dominated by tall (1-2 m) vegetation, chiefly saltmarsh cordgrass (*Spartina alterniflora*) and black needlerush (*Juncus roemerianus*). Juncus is the dominant vegetation on the Gulf coast, and Spartina is dominant on the Atlantic coast. Wrens prefer the taller marsh vegetation that grows along tidal creeks. Some habitat has been lost to the northward invasion of mangroves along both coasts. During the 1950s and 1960s, some habitat was lost to coastal dredge and fill operations, but for the most part habitat for the Marsh Wrens appears stable.

MOUNTAIN LAUREL (*Kalmia latifolia*)

HABITAT: This species is found in rich, shady woods, usually near streams, on moist, wooded ravine slopes, or on river bluffs.

NARROWLEAF NAIAD (*Najas filifolia*)

No description of the habitat of this species is provided in Rare and Endangered Biota of Florida.

NETTLE-LEAVED SAGE (*Salvia urticifolia*)

No description of the habitat of this species is provided in Rare and Endangered Biota of Florida.

NON-CRESTED COCO (*Pteroglossaspis ecristata*)

No information is provided on this specie in Rare and Endangered Biota of Florida.

PINEWOOD DAINTIES (FLORIDA LEAF FLOWER) (*Phyllanthus liebmanianus*)

HABITAT: In Florida, this plant is found in low grassy pinelands and low hammocks.

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PIPING PLOVER (*Charadrius melodus*)

HABITAT REQUIREMENTS AND HABITAT TREND: The Piping Plover nests on sandy beaches along the Atlantic Coast and Great Lakes, and on river sandbars and shallow alkali wetlands throughout the Great Plains region (USFWS 1985). Piping Plovers are primarily associated with barrier beach systems during the wintering period. Haig and Oring (1985) found plovers on sandy beaches adjacent to inlets on their winter survey of the Gulf of Mexico. Similarly, Nicholls and Baldassarre (1990b) observed plovers on accreting ends of barrier islands and spits, at coastal inlets, and on low-lying barrier islands with overwash intertidal flats. In this study, comparisons along 36 Atlantic Coast and 75 Gulf Coast wintering sites indicated that foraging activity was most associated with sandflats (27%), mudflats (25%), sandy-mudflats (32%), and occasionally lower beach or foreshore (10%) and dredge spoil (6%). Roosting birds were primarily observed along the upper beach or berm area adjacent to intertidal feeding areas. However, more roosting sites need to be located and characterized to determine specific features because few roosting birds were found (Nicholls and Baldassarre 1990b). Nicholls and Baldassare (1990b) noted that sites with the highest concentrations of plovers such as Honeymoon Island State Recreation Area and Fort Desoto County Park (Pinellas County) consist of complex systems with expansive sand/mudflats in close proximity. These diverse coastal systems may concentrate plovers because of the juxtaposition of foraging and roosting areas. Winter habitat loss is difficult to document, but historical data suggests that degradation has occurred along portions of the Atlantic and Gulf coasts (Baldassarre 1986; Dyer et al. 1988; USFWS 1988, 1994, 1995). For example, on the Atlantic Coast of Florida, plovers were considered abundant from July to August (Bent 1929; Stevenson 1960), but now only number from 20-30 birds, excluding the Keys (Nicholls 1989).

PONDSPICE (*Litsea aestivalis*)

No information is provided on this specie in Rare and Endangered Biota of Florida.

POPPY MALLOW (*Callirhoe papaver*)

HABITAT: In Florida, Poppy Mallow is a plant of dry woodlands, upland areas with oak and usually pine. At times it persists along the upper unmowed edge of roadside rights-of-way.

RAIN LILY (*Zephyrantes simpsonii*)

No description of the habitat of this species is provided in Rare and Endangered Biota of Florida.

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RED-COCKADED WOODPECKER (*Picoides borealis*)

HABITAT REQUIREMENTS AND HABITAT TREND: The distribution of the Red-cockaded Woodpecker is related closely to the occurrence of fire. Throughout Florida and the northern Gulf coast states, weather patterns associated with the Gulf of Mexico result in a frequency of electrical storms matched nowhere else in North America (Jackson et al.1986). Average annual thunderstorm frequency ranges from 90 days in central Florida to 60 days in the more northern portions of the southeastern United States. Prior to human intervention, lightning-caused fires occurred annually in peninsular Florida and at 3-5 year intervals elsewhere in the coastal plain (Komarek 1974). This fire-dominated community was the primary selective force in the formation of the southern pine ecosystem with which the Red-cockaded Woodpecker is so intricately associated. Under this fire regime, the southern pines evolved adaptations for fire resistance - their bark and needles form insulating layers that protect the growing tissues from fire (Jackson 1987). In turn, the Red-cockaded Woodpecker adapted to this fire-climax ecosystem by excavating cavities in fire-tolerant living pines.

Red-cockaded Woodpeckers require old-growth, living pines for nesting and roosting. Although longleaf pine (*Pinus palustris*) is preferred when avail able (Hopkins and Lynn 1971; Lennartz et al. 1983a; Hovis and Labisky 1985), cavities also are constructed in loblolly (*P. taeda*), shortleaf (*P. echinata*), pond (*P. serotina*), slash (*P. elliottii*), pitch (*P. rigida*), and Virginia (*P. virginiana*) pines. Regardless of species, Red-cockaded Woodpeckers preferentially select old-age pines for cavity excavation (Hovis and Labisky 1985; Conner and O'Halloran 1987; DeLotelle and Epting 1988; Rudolph and Conner 1991). Average cavity-tree ages range between 63 and 130 years for longleaf pine and between 62 and 149 years for all other pine species (Hopkins and Lynn 1971; Jackson et al. 1979b; Wood 1983; Rudolph and Conner 1991). Cavity trees have thinner sapwood and greater heartwood diameter than other mature pines (Conner et al. 1994) and typically are infected with *Phellinus pini*, a fungus that decays the heartwood and facilitates cavity excavation (Jackson 1977b; Conner and Locke 1982; Conner and O'Halloran 1987; Hooper 1988; Conner et al. 1994). Cavity excavation usually requires from one to several years, but once a cavity is completed it often is used for many years (Jackson et al. 1979b). Red-cockaded Woodpeckers always construct their cavities in live pines; however, after a cavity tree dies the birds may continue to use it for several years (Hooper 1982). The number of cavities per tree typically ranges between one and two (Hopkins and Lynn 1971; Shapiro 1983; Hovis and Labisky 1985).

Most active clusters occur in open, mature pine stands with sparse midstory vegetation. Rangewide, overstory basal areas and stem densities within active clusters are consistently <18 m^2/ha and <300 stems/ha, respectively (Thompson and Baker 1971; Locke et al. 1983; Shapiro 1983; Hovis and Labisky 1985). Midstory basal area and stem density are typically <5.0 m^2/ha and <400 stems/ha, respectively (Van Balen and Doerr 1978; Locke et al. 1983; Hovis and Labisky 1985). Although most biologists agree that Red-cockaded Woodpeckers cannot tolerate a well-developed hardwood midstory, Conner and Rudolph (1989) were the first to statistically correlate hardwood encroachment with cluster abandonment.

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Red-cockaded Woodpeckers feed primarily on arthropods (Bear 1911; Ligon 1970; Baker 1971), which they locate by scaling the bark from trees. Fruits and mast also may be eaten but comprise a minor portion of the diet. Throughout their range, Red-cockaded Woodpeckers prefer to forage in pine-dominated habitats, and within these habitats, large (>20 cm dbh) living pines are the preferred foraging substrate (Ramey 1980; Hooper and Lennartz 1981; DeLotelle et al.1983; Porter and Labisky 1986). However, home range size is variable and apparently is related to the amount and quality of available habitat. In general, home ranges tend to be larger in habitats with poorly stocked pine stands and a paucity of larger trees. In central and southern Florida, where the habitat is considered to be relatively poor (<7m^2/ha pine basal area), home range size averages about 150 ha (Nesbitt et al.1983b; DeLotelle et al. 1987). In coastal South Carolina, where the habitat is better (pine basal area averages 11.8 m^2/ha), home range size averages 86.9 ha (Hooper et al. 1982). Habitat in northern Florida appears to be intermediate between the two extremes. Porter and Labisky (1986) reported a mean home range size of 129 ha for a population on the Apalachicola National Forest and the birds preferred to forage in pine stands with a mean basal area of 16.1 m^2/ha.

Red-cockaded Woodpecker habitat, particularly nesting and roosting habitat, has declined throughout the species' range. Lennartz et al. (1983b) estimated that only 2.5% of the commercial pine acreage in the southeastern United States was suitable as nesting and roosting habitat. Between 1953 and 1977, the amount of old-growth pine in the southeastern United States declined by 13%; the loss was most severe in the longleaf and slash pine forest type where a 25% decline occurred over the 25-year period. In Florida, the acreage of longleaf pine declined by 83% in the 30 years between 1950 and 1980 (Bechtold and Knight 1982). However, the reduction in old-growth pine forests has been most rapid on private lands where there are no legal requirements or incentives to perpetuate the habitat for this endangered species (Lennartz 1988).

REDDISH EGRET (*Egretta rufescens*)

HABITAT REQUIREMENTS AND HABITAT TREND: Reddish Egrets nest exclusively on coastal islands that are located near suitable foraging habitat and afford protection from terrestrial predators.

RIVER COOTER (*Pseudemys concinna*)

HABITAT: In Florida, the River Cooter is restricted to rivers, spring runs, and associated backwaters and impoundments that drain into the Gulf of Mexico. Abundant aquatic vegetation, such as *Naias* and *Sagittaria*, is essential to maintaining healthy populations. Although this turtle has been reported from estuaries, river mouths, and marine grass flats, the salinities at these sites have not been recorded, and the salinity tolerance of the species is poorly known.

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ST. JOHNS SUSAN (*Rubdeckia nitida*)

HABITAT: This is a species of moist, grassy openings in low pine flatwoods.

SANTA FE CAVE CRAYFISH (*Procambarus erythrops*)

HABITAT: Procambarus erythrops occupies debris cones under large flooded sinkholes. As yet, no colonies have been found in association with bat colonies. Little or no water flow, other than vertical movements associated with local changes in the water table, has been noted in cave sites where this species occurs. This suggests that this species, like others in *lucifugus* complex, prefers the more stagnant portions of cave systems where detrital material can accumulate without being washed away.

SCOTT'S SEASIDE SPARROW (*Ammodramus maritimus pininsulae)*

See SEASIDE SPARROWS.

SEASIDE SPARROWS (*Ammodramus maritimus* spp.)

HABITAT REQUIREMENTS AND HABITAT TRENDS: Habitat for the Seaside Sparrow consists of saltmarshes along the Atlantic and Gulf coasts. Optimal habitat on the Atlantic coast is the extensive tidal marshes that occur behind barrier islands and vegetated chiefly by saltmarsh cord grass (*Spartina alterniflora*) and (in Duval County) patches of black needlerush (*Juncus roemerianus*). On the Gulf coast optimal habitat is the mixture of dense stands of Juncus and Spartina, and scattered stands of salt grass (*Distichlis spicata*) that front on the Gulf of Mexico from Port Richey north to Appalachee Bay, and in the bays behind the barrier islands westward to Escambia Bay. Seaside Sparrows can tolerate early invasion of their grassy habitat by Red (*Rhizophora mangle*) and Black (*Avicennia germinans*) mangroves, but the sparrows abandon the site when these woody plants cover a major portion of the habitat. Nicholson (1946, 1950) documented the disappearance of Seaside Sparrows from the marshes near New Smyrna as mangroves moved northward. In the past, dredging and filling of coastal marshlands impacted Seaside Sparrow habitat, but current governmental policy against wetland destruction now protects the habitat. The impact of rising sea level on marsh stability over the next 50-100 years may be of some concern in the future.

SHERMAN'S FOX SQUIRREL (*Sciurus niger shermani*)

HABITAT REQUIREMENTS AND HABITAT TREND: The mature, fire-maintained longleaf pine-turkey oak sandhills and flatwoods are the optimal habitat for Sherman's fox squirrels. Only 10-20 percent of the original habitat is still intact, however, having been greatly altered through extensive logging; conversion to pasture, single-stand short-rotation forestry, agricultural, commercial, and residential development; and by lack of fire (Bechtold an Knight 1982). Man's

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intense and widespread modification of the mature pine-oak communities of the sandhills has fragmented fox squirrel populations and reduced the quality of most remaining habitat. As habitat quality decreases, the area required to support viable squirrel populations increases. To accommodate the squirrel's large home range and varied food resources, suitable habitat must be fairly extensive and, in addition to the drier hilltops (upland), it should include the more productive lower slopes of the sandhills, where the predominant longleaf pines and turkey oaks are interspersed with sand post oak (*Quercus stelata* var. *margaretta*), live oak (*Q. virginiana*), laurel oak (*Q. hemisphaerica*), and bluejack oak (*Q. incana*). Kantola and Humphrey (1990) suggested that the highest-quality habitat might be along the edge of longleaf pine savanna and live oak forest, because live oak acorns appear to be a major food source when turkey oak acorn crops fail.

Moore (1957) considered longleaf pine seeds and turkey oak acorns to be the primary foods of Sherman's fox squirrel. Kantola and Humphrey (1990), however, found production of these two seed crops to be extremely patchy, varying considerably from year to year and site to site. During mast failures of turkey oak, squirrels moved downslope to include live oak forest in their home ranges during the mast season. Consequently acorns of live oak appear to be a major component of the diet. Pine cones are cut from the trees from late May through October, beginning while they are still green. Acorns are harvested from both the trees and ground beginning in late September, and some are cached for later use. Other acorns and nuts, fungi, bulbs, vegetative buds, insects, and staminate pine cones also are eaten. Squirrel reproduction, and thus densities, may be expected to vary with resource abundance (Weigl et al. 1989).

Tree cavities occasionally are used for nesting, but they apparently are not as important for Sherman's fox squirrel as they are for more northern squirrels. Instead, leaf nests are used extensively. These usually are located in large oaks and often contain Spanish moss (*Tillandsia usneoids*), which provides insulation. Turkey oaks in the low slopes of the sandhills typically are larger, have more Spanish moss, and produce more acorns than those in the upland, making the lower slopes a more important component of fox squirrel habitat.

SHORT-TAILED SNAKE (*Stilosoma extenuatum*)

HABITAT: *Stilosoma extenuatum* is restricted chiefly to Longleaf Pine - Turkey Oak plant associations. It occasionally is found in upland hammock and Sand Pine scrub, hut is usually closely adjacent to Longleaf Pine - Turkey Oak stands. Two specimens were dug from a sphagnum bog adjacent to a stand of the typical habitat (Carr 1940 and personal communication).

The ecological factors, other than preferred habitat distribution, which limit the distribution of this species are not known. Preliminary data indicate that the species selects Norfolk, Blanton fine, and St. Lucie soils over a variety of other types for burrowing when placed in choice situations. The extensive stands of Longleaf Pine-Turkey Oak habitat (now chiefly Turkey Oak) in Marion and Lake counties still maintain populations, and stands of apparently acceptable habitat still exist scattered elsewhere throughout its original range.

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SINGLE-SORUS SPLEENWORT (*Asplemium monanthes*)

No information is provided on this specie in Rare and Endangered Biota of Florida.

SINKHOLE FERN (*Blechnum occidentale)*

HABITAT: This fern is found in deep-shaded ravines or elsewhere in moist and dense hammocks. Occasionally it occurs on the sheer rock walls of spectacularly deep sinkholes, as near Newberry, Alachua County.

SNOWY EGRET (*Egretta thula*)

HABITAT REQUIREMENTS AND HABITAT TREND: The Snowy Egret in Florida nests in both coastal and inland wetlands, often in mangroves (*Rhizophora mangle*, *Avicennia germinans*, *Laguncularia racemosa*) or in willows (*Salix caroliniana*) (Bent 1926; Palmer 1962). Nesting also occurs in many other species of woody shrubs and small trees, including Australian pine (*Casuarina* sp.), cypress (*Taxodium* sp.), pond apple (*Annona glabra*), Brazilian pepper (*Schinus terebinthifolius*), buttonbush (*Cephalanthus occidentalis*), and elderberry (*Sambucus canadensis*) (Nesbitt et al.1982). Almost all nesting occurs over shallow water or on islands separated from the mainland by relatively broad expanses of open water. Snowy Egrets feed in a wide variety of permanently and seasonally flooded marshes, swamps, lake and stream shorelines, and water impoundments, or even in very temporarily flooded ditches and agricultural fields, usually where the water is relatively shallow and calm (Palmer 1962; Sykes and Hunter 1978; Bancroft et al. 1990; Edelson and Collopy 1990). The Snowy Egret also feeds in upland grasslands and at the edge of the surf along beaches (Palmer 1962; Ogden, unpubl. data).

Although difficult to document, the overall impression is that significant losses of feeding habitat have been occurring for several decades in Florida, and that it is these losses rather than destruction of colony sites that has been primarily responsible for the population declines (W. Robertson and P. Frederick, pers. comm.). The pattern of population recovery prior to the 1950s, followed by several recent decades of decline, has been explained as an artificially depressed population (plume hunting) building to its regional carrying capacity, then declining as that carrying capacity diminished as wetlands were lost (Robertson and Kushlan 1974).

SOUTHERN LIP FERN (*Cheilanthes microphylla*)

The Southern Lip Fern is always found on limestone or other calcerous formations. The Duval and Collier county stations are on aboriginal shell mounds, while the Miami location is on a limestone wall. The habitats are dry, or at least periodically so, and are usually shaded.

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SOUTHERN MILKWEED (*Asclepias viridula*)

No description of the habitat of this species is provided in Rare and Endangered Biota of Florida.

SOUTHEASTERN AMERICAN KESTREL (*Falco sparverius paulus*)

HABITAT REQUIREMENTS AND HABITAT TREND: American Kestrels are secondary cavity-nesters, depending on cavity excavators (e.g., woodpeckers) and natural processes to produce nesting sites. In a study of 95 nest sites in north-central Florida (Hoffman 1983; Hoffman and Collopy 1987), kestrels were found to nest predominately in longleaf pine (*Pinus palustris*) snags (53%); of the remaining nests, 32% occurred in sand pines (*P. clausa*), 12% in turkey oaks (*Quercus laevis*), 3% in live oaks (*Q. Virginiana*), and <1% in post oaks (*Q. stellata*). In an area with a wide size range of potential nesting trees (8-40+ cm dbh), kestrels preferred snags that were 32-40 cm dbh (Hoffman 1983). In a comparison study area that had a smaller size range of snags available (8-32 cm dbh), 93% of the kestrels nested in the largest size class available (24-32 cm dbh).

In a longleaf pine-turkey oak sandhill study site in north-central Florida, kestrel cavities (n = 29) were most frequently old Pileated Woodpecker (*Dryocopus pileatus*) excavations (45%) or enlarged cavities of *Melanerpes* or *Colaptes* woodpeckers (38%) (Hoffman 1983). Kestrel nest cavities (n = 31) in the sand pine clearcuts of the Ocala National Forest were predominately (61%) old Northern Flicker (*C. auratus*) holes. In addition to the presence of snags and woodpeckers to excavate cavities, kestrels require open fields to forage for food. In a roadside survey conducted in north-central Florida, *paulus* kestrels generally preferred open areas (e.g., pastures, fields, and open woodlands), and avoided hardwood stands and slash, pine plantations (Bohall-Wood and Collopy 1986). Smallwood (1987) showed that the percent coverage of a kestrel's winter territory by woody canopy was negatively correlated with the foraging quality of that habitat; nearly all hunting attempts occurred in grasses and weedy forb <25 cm in height. Nesting and foraging habitats preferred by kestrels have and are continuing to decline rapidly throughout Florida.

SQUIRREL CHIMNEY CAVE SHRIMP (*Palaemonetes cummingi*)

No information is provided on this specie in Rare and Endangered Biota of Florida.

SUWANNEE BASS (*Micropterus motius*)

HABITAT: The Suwannee bass occurs most in shoal areas having a moderate to swift current, a bottom comprised of limestone (often covered by sand), and water of high pH and hardness. Individuals observed in spring runs are often seen resting along the banks under dense overhanging or floating vegetation.

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SUWANNEE COOTER (*Pseuedemys concinna suwanniensis*)

See RIVER COOTER (*Pseudemys concinna*)

SWEET SHRUB (*Calycanthus floridus*)

No information is provided on this specie in Rare and Endangered Biota of Florida.

TRICOLORED HERON (*Egretta tricolor*)

HABITAT REQUIREMENTS AND HABITAT TREND: Nesting colonies of the Tricolored Heron in Florida are most often located on mangrove (*Rhizophora mangle, Avicennia germinans, Laguncularia racemosa*) islands along the coast, or in willow (*Salix caroliniana*) thickets in freshwater wetlands (Bent 1926; Palmer 1962). Nesting also may occur in other woody thickets, including Australian pine *(Casuarina* sp.), cypress *(Taxodium* sp.), pond apple (*Annona glabra*), Brazilian pepper (*Schinus teretbinthifolius*), saltbush (*Baccharis* sp.), and wax myrtle *(Myrica cerifera*) (Nesbitt et al. 1982). Almost all colony sites are located on islands or in woody vegetation over standing water. Tricolored Herons feed in a wide variety of permanently and seasonally flooded marshes, mangrove swamps, tidal streams, roadside ditches, and shallow edges to ponds and lakes (Bancroft et al. 1990). The long history in Florida of wetland degradation by drainage, creation of impoundments, and changes in water quality are thought to be the major cause for the population decline of Tricolored Herons. It appears that losses of wetlands essential as feeding habitats for Tricolored Herons during the nesting season may be having the greatest adverse impact on these birds. For example, water management practices in the Everglades region have altered the timing, location, and frequency of natural hydrological patterns (Johnson and Ogden 1990; Johnson et al. 1992). These hydrological changes have caused colonial nesting wading birds to abandon traditional colony sites and to have reduced levels of nesting success (Frederick and Collopy 1989; Bancroft 1989; Ogden 1994).

WAKULLA SEASIDE SPARROW (Ammodramus maritimus junciolus)

See SEASIDE SPARROWS.

WATER SUNDEW (*Drosera intermedia*)

HABITAT: This plant is called the Water Sundew because it often grows as an aquatic. It occurs in clear streams or ponds with its stems and most of its leaves submerged. It is also found in bogs (almost always with Sphagnum moss), which although periodically flooded are seasonally above water. In such a habitat the Water Sundew can locally become very common.

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WEST INDIAN MANATEE (*Trichechus manatus*)

HABITAT REQUIREMENTS AND HABITAT TREND: Florida manatees occupy coastal, estuarine, and some riverine habitats. Primary habitat requisites are access to vascular aquatic plants, freshwater sources, proximity to channels 1-2 m deep, and access to natural springs or man-made warm-water refugia during winter (Hartman 1978). Sheltered bays, coves, and canals are important for resting, feeding, and reproductive activity (Bengtson 1981; Powell and Rathbun 1984). Florida manatees forage on a wide variety of aquatic plants including seagrasses, bank grasses, overhanging mangrove, and submerged, rooted, or floating species (Hartman 1979; Best 1981). In summer individuals may range widely, and seasonal migrations of 850 km to wintering areas have been documented (U.S. Fish and Wildlife Service, unpubl. data). These wide-ranging movements require access to travel corridors that are unobstructed by dams, shallows, or congested boat traffic.

Manatee habitat in Florida has been and continues to be greatly altered by residential and commercial development of coastal land (Packard and Wetterqvist 1986). Dredge-and-fill activities may destroy areas of aquatic vegetation, whereas new channels and inlets may allow access to additional habitat. Tampa Bay, for example, has experienced an 81 percent decrease in seagrass acreage in the last century due to adjacent urbanization (Lewis et al. 1985). Water pollution poses a threat to aquatic plants as a food base. Manatees are not known to accumulate significant residues of most persistent environmental contaminants, because of their low position in the food chain. Exposure to copper-containing aquatic herbicides, however, has potential harmful effects (O'Shea et al. 1984). The number of boats using manatee habitat has increased rapidly (O'Shea 1988), creating substantial disturbance as well as greater potential for injury and death. An increase in artificial warm-water sources in the 1950s and 1960s and a proliferation of exotic aquatic vegetation have proven of short-term benefit to manatee populations (Powell and Rathbun 1984; Shane 1984), but some industrial sources of warm water will soon reach the end of their designed operating life.

WHITE IBIS (*Eudocimus albus*)

HABITAT REQUIREMENTS AND HABITAT TREND: White Ibises show very broad habitat tolerances for both foraging and nesting. The species nests and feeds commonly in freshwater, brackish, and saline environments, and adults appear to prefer foraging in freshwater areas when feeding young. Though adults are capable of excreting salt through a nasal salt gland, young will not grow when fed salty diets or denied access to fresh water (Johnston and Bildstein 1990). The success of breeding is therefore dependent on access to freshwater feeding areas, especially when nesting on marine islands. This limitation was probably the cause of the collapse of breeding by Scarlet Ibises in Trinidad's Caroni Swamp (Bildstein 1990), where an estuarine swamp became salinized through canalization of a major river. White Ibises prefer relatively shallow water depths when feeding (5-15 cm), though often they have been noted feeding on lawns and pastures. Foraging habitats include bottomland hardwood and cypress swamps, river banks, salt marsh meadows, wet prairies, floating vegetated mats, mudflats, mangrove swamps, sawgrass strand edges,

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hydric hammocks, canal edges, beach flats, and landfills. Ibises feed primarily on aquatic arthropods, especially crayfishes and insects, although small amphibians and reptiles also are commonly taken. Ibises will eat fish when available, but the fish must usually be extremely abundant or vulnerable for ibises to capture them. Although receding water levels in south Florida seem to be critical to the stimulation and success of nesting, this is not necessarily true of breeding in other parts of the range. In coastal South Carolina, White Ibises foraging in riparian bottomlands may nest in larger numbers during years of higher rainfall (Bildstein et al. 1990). Ibises are tactile feeders and forage effectively in turbid waters and in waters with dense vegetation.

Nesting colonies are usually surrounded by water, as this species is quite vulnerable to predation by terrestrial mammals. Ibises tend to nest in shrubby vegetation with moderate shade, although their preferences often include ground nesting on clumps of grasses and in trees to 15 m. White Ibises can travel long distances from colonies to feeding areas; regular trips to sites 30 km away have been associated with successful breeding in several locations. Foraging and breeding habitat has declined considerably in the last 25 years, both due to the drainage or degradation of wetlands through human encroachment and through manipulation of intact wetlands. While drainage and physical destruction of habitat has been largely discontinued in the state, habitat degradation, encroachment of human development, and water management remain important sources of further habitat degradation.

WOOD STORK (*Mycteria americana*)

HABITAT REQUIREMENTS AND HABITAT TRENDS: Wood Storks nest in colonies located in woody vegetation over standing water or on islands surrounded by relatively broad expanses of open water (Nesbitt et al. 1982). Most natural colony sites in Florida have been in cypress (*Taxodium* sp.) or mangrove (often *Rhizophora mangle*), although colonies also have been located in southern willow (*Salix caroliniana*), pond apple (*Annona glabra*), led in mixed associations of swamp hardwoods (e.g., *Magnolia, Nyssa*) (Rodgers et al.1988; Ogden 1991). Primarily since the 1970s, storks also have nested at sites where water has been artificially impounded by roads or levees or where islands have been created by dredge activities (Ogden 1991). Nests in these altered or artificially created colony sites may be in the same species of trees as in the natural sites, but also have been in dead or dying upland trees (e.g., *Pinsus, Quercus*), in exotic species such as Australian pine (*Casuarina* sp.) and Brazilian pepper (*Schinus terebinthefolius*), or even in low thickets of cactus (*Opuntia* sp.) on islands. The use of altered or artificial colony sites suggests that, in some regions or in years of low rainfall, storks have been unable to locate natural nesting habitat that is adequately flooded during the nesting season. Use of altered or artificial habitats as stork nesting habitat in central and north Florida has increased from approximately 10% of all nesting pairs in 1959-1960 to 60-82% between 1976 and 1986.

Storks feed primarily in water between 5 and 40 cm (2-15 in.) deep, where the water is relatively calm and uncluttered by aquatic vegetation (Kahl 1964; Coulter 1987). Almost any shallow wetland depression where fish tend to become concentrated, either through local reproduction by fishes or as a consequence of area drying, may be good feeding habitat. These sites include drying marshes,

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shallow roadside or agricultural ditches, narrow tidal creeks and pools, and depressions in cypress heads or swamp sloughs. However, all such sites must have sufficiently long annual hydroperiods or adequately strong hydrological connections with more permanent water to produce or make available necessary densities of fishes as prey for storks.

Differences among years in patterns and amounts of rainfall result in differences among years in where and when storks feed. Colony sites that are successful over time will be those that have a large number of potential feeding sites, including relatively shallow and deep sites that may only be suitable in years of rainfall extremes (Courter 1987).

The increase in both number and percentage of the population nesting in central and northern Florida since the 1970s has been characterized by a regional increase in the number of colonies active each year, rather than by an increase in the size of existing colonies (Ogden et al. 1987). Presumably limitations in the total area of wetland foraging habitat within flight range of each site may limit colony size in this region. By contrast, the south Florida region, where much more expansive wetlands once occurred, was formerly characterized by a relatively small number of much larger colonies being active each year.

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E. COMMENTS

amended August 28, 1997, and February 27, 2003

EXECUTIVE OFFICE OF THE GOVERNOR

STATE REPORT OF FINDINGS AND RECOMMENDATIONS FOR THE NORTH CENTRAL FLORIDA REGIONAL PLANNING COUNCIL'S STRATEGIC REGIONAL POLICY PLAN

February 27, 1996

INTRODUCTION

The *State Report of Findings and Recommendations for the North Central Florida Regional Planning Council's Strategic Regional Policy Plan* has been prepared in accordance with sections 186.507 and 186.508, *Florida Statutes*, and Rule 27E-5, *Florida Administrative Code*.

This report identifies the significant findings and recommendations compiled from the review comments received from state and regional agencies and other entities. It sets forth findings that identify concerns with the North Central Florida Regional Planning Council's (NCFRPC's) proposed strategic regional policy plan (SRPP). Additionally, it includes specific recommendations for each finding necessary to make the plan consistent with the Chapter 187, *Florida Statues* (State Comprehensive Plan), Chapter 186, *Florida Statutes*, Rule 27E-5, *Florida Administrative Code*, and other pertinent state regulations. The report and the reviewing agencies' comments are provided to assist the NCFRPC in its continuing development and improvement of the north central Florida region's plan.

A copy of the *State Report of Findings and Recommendations for the North Central Florida Regional Planning Council's Strategic Regional Policy Plan* shall be included in the adopted plan in a comment section, pursuant to section 186.508, *Florida Statutes*. By attachment, the NCFRPC may indicate where recommended revisions have been incorporated into the region's plan.

FINDINGS AND RECOMMENDATIONS

1. Finding:

Other state and regional reviewers have provided the Governor's Office of Planning and Budgeting (OPB) with critical and important review comments regarding the proposed SRPP.

Copies of all comments submitted to the Governor's Office regarding the NCFRPC's proposed SRPP are incorporated herein for the Council's consideration and use.

Recommendation:

To finalize the SRPP for rulemaking and to help develop the Council's future work plan for continuing to amend the region's plan, the critical and other important comments provided by state and regional government entities need to be considered as the Council finalizes its plan. Those include comments received from the departments of Transportation, Community Affairs, Environmental Protection, Commerce, State, Health and Rehabilitative Services, Florida Game and Fresh Water Fish Commission, Suwannee River Water Management District, and St. Johns River Water Management District. Additionally, any comments received from other reviewers, particularly local governments, are to be considered in revising your plan. As the NCFRPC continues to develop its region's SRPP, it should ensure that the plan is consistent with and furthers the State Comprehensive Plan (SCP).

NCFRPC Response: Revisions to the proposed plan have been made, when appropriate, to address all EOG comments. Additionally, the Council has reviewed and considered all comments received from state and regional agencies as well as local governments. Many changes have been made to the plan in response to these comments.

2. Finding:

The state's review and analysis of the proposed SRPP were enhanced by the February 5, 1996, meeting with the NCFRPC executive director and staff and representatives of state and regional agencies. The meeting was held to discuss comments, questions and concerns regarding the proposed plan. As expressed at that meeting, the NCFRPC's commitment to amend and improve the plan will allow the SRPP to be as strategic, accurate and updated as possible to serve as a guide for the north central Florida region.

Recommendation:

As discussed in the February 5, 1996 meeting, the RPC may wish to pursue implementing a SRPP amendment process similar to the local government comprehensive plan amendment process, i.e., twice annually. Such a process would facilitate incorporation of meaningful regional guidance from new legislation, future revisions to the SCP, updated data and information, and the findings and recommendations of other current planning activities and programs, such as the metropolitan planning organization (MPO) Year 2015 Transportation Plan, Campus Master Plans, Florida Greenways, and ecosystem management projects. Pertinent regional guidance from such programs should be incorporated into the north central Florida region's SRPP.

NCFRPC Response: The Council has been guided in the preparation of the regional plan by the plans and programs of local governments and state agencies, including but not limited to the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area, the Florida Greenways Commission, the Florida Department of Environmental Protection's Ecosystem Management Program as applied to Ichetucknee Springs State Park, and local government comprehensive plans. Since these plans and programs change from time to time, it is important for the Council to constantly monitor and amend its plan accordingly.

3. Finding:

Goals 4.1. through 4.4. and Goal 4.6. are not consistent with and do not further the SCP. Use of the word "should" rather than "shall" makes these goals more permissive than the goals and policies in the SCP. Further, these goals do not provide an adequate and clear description of the long-term end toward which programs and activities are ultimately directed.

Recommendation:

The goals contained in the *Natural Resources of Regional Significance* section of the proposed SRPP must be amended to be consistent with the SCP, other pertinent statutes and rules, and to provide an adequate and clear description of the long-term end toward which programs and activities are ultimately directed. Goals 4.1. through 4.4. and Goal 4.6. must be revised to omit the terms "should" and "shall" or the term "should" must be replaced with "shall." For example, Goal 4.1., could be rewritten as follows:

Preserve the natural functions and integrity of the Big Bend coastal and marine resources for existing and future generations of residents.

OR

The natural functions and integrity of the Big Bend coastal and marine resources ***SHALL*** *be preserved for existing and future generations of residents.*

NCFRPC Response: The referenced goals have been amended as follows:

REGIONAL GOAL 4.1. <u>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.</u> ~~Recognizing their economic as well as ecological importance to the region and the state, the natural functions and integrity of the Big Bend Coastal and Marine Resources should be preserved for existing and future generations of residents.~~

REGIONAL GOAL 4.2. **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.** ~~**Recognizing its importance to the continued growth and development of the region, an adequate supply of high-quality groundwater should be maintained to meet all the needs of the residents of the region, both now and in the future.**~~

REGIONAL GOAL 4.3. ~~**Recognizing their importance to maintaining adequate supplies of high-quality groundwater for residents of the region, both now and in the future,**~~ **Protect** ~~**the natural functions of**~~ **all sources of recharge to the Floridan aquifer** ~~**should be protected**~~ **from** ~~**any**~~ **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 4.4. **Maintain the identified attributes of regionally significant habitat areas in order to ensure the survival of flora and fauna native to the region.** ~~**In order to ensure the future survival of flora and fauna native to the region, the natural functions and integrity of strategic habitat conservation areas identified as natural resources of regional significance should be maintained.**~~

REGIONAL GOAL 4.6~~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.** ~~**Recognizing their importance to the continued growth and development of the region, the quantity and quality of the region's surface water systems should be maintained for future generations.**~~

4. Finding:

Goal 4.5., page IV-54, is not consistent with the SCP, is not meaningful and does not provide adequate guidance to the region because:

1) the condition of protection of the "Planning and Resource Management Areas" is more permissive than the SCP [section 187.201(10)(a), *Florida Statutes*];
2) the "amount and degree of protection" needed is undefined in the plan;
3) the goal creates an undefined test of *proportion* to *need*;
4) the plan does not provide for quantifying the "need to protect;" and
5) the "purpose and function" of the natural resources is undefined.

Recommendation:

Goal 4.5., must be amended or rewritten to be consistent with the SCP and provide adequate guidance to the region.

NCFRPC Response. Goal 4.5 has been amended as follows:

> **REGIONAL GOAL 4.5<u>6</u>. <u>Protect natural resources of regional significance identified in this plan as "Planning and Resource Management Areas."</u> ~~The amount and degree of protection established by state and local agencies for areas included in this classification entitled "Planning and Resource Management Areas" should be directly proportional to the need to protect their purpose and function.~~**

5. Finding:

The proposed SRPP is not consistent with section 187.201(10)(b)4. and 5., *Florida Statutes*, and sections 27E-5.002(4), and 27E-5.004(3), *Florida Administrative Code* because the proposed plan does not adequately identify and address endangered and threatened species, and species of special concern, and does not justify their omission as natural resources of regional significance.

Recommendation:

To be consistent with section 187.201(10)(b)4. and 5., *Florida Statutes*, and sections 27E-5.002(4), and 27E-5.004(3), *Florida Administrative Code*, the trends and conditions statement (TCS) must be amended to identify endangered and threatened species, and species of special concern, and the problems and opportunities related to the protection of these species and their habitat. The plan also must be amended to include goals and policies that provide for the protection of endangered and threatened, and species of special concern.

NCFRPC Response. The Natural Resources of Regional Significance TCS has been amended to recognize listed species as natural resources of regional significance. Additionally, the following goal and policies have been added to address listed species:

> **<u>REGIONAL GOAL 4.5. Protect all listed species located in north central Florida.</u>**
>
> **<u>Regional Indicators:</u>**
>
> > **<u>As of November, 1995, the Florida Natural Areas Inventory Database contains 610 locations within the region of sightings of listed plant and animal species</u>.**
>
> **<u>Policy 4.5.1. Work with local governments and the Florida Game and Fresh Water Fish Commission to ensure the survival of all listed species found in the region.</u>**

Policy 4.5.2. Increase citizen awareness on the effects of human activities on listed species.

Policy 4.5.3. Coordinate planning efforts to protect listed species found within the region.

6. Finding:

The SRPP is to provide guidance for the physical, economic and social development of the region, to serve as a basis for review of DRIs and local government comprehensive plans, and to provide a regional basis and perspective for the resolution of identified problems and needs. Several of the proposed goals are too broad, and contain vague or undefined terminology making it impossible to determine consistency with the SCP. They also do not provide specific guidance to the region as required by section 27E-5.004(6), *Florida Administrative Code*. For example:

- Goal 2.1., page II-54, implies that the region's goal is to expand and retain *existing* businesses but provides no regional guidance addressing *new* business recruitment.

- Goal 2.3, page II-55, is too broad to provide regional guidance for expanding tourism in the region.

- Goal 5.2., page V-16, addresses a problem that is not established as regionally significant in the associated TCS. Most of the problems and threats posed by the University of Florida growth should be able to be addressed or settled in the Campus Development Agreement due to be submitted to the City of Gainesville on July 29, 1996, rather than in the SRPP.

- Goal 5.3., page V-17, appears to be superfluous because it addresses maximizing the use of the existing airport facilities before developing new facilities when the associated TCS and regional indicator show that enplanements have been decreasing in the region since 1980, and dramatically since 1990. The necessity and validity of the goal is unclear. Further, the TCS indicates that enplanements are ***increasing***, yet the data presented in the plan (page V-6) demonstrates that enplanements are ***decreasing***.

Recommendation:

Each of the proposed goals must be thoroughly evaluated for consistency with the SCP, to provide clear and specific guidance to the region, to determine validity, and to respond adequately to the regionally significant problems and opportunities identified in the associated TCSs. For example, Goal 2.1. could be rewritten as follows:

Attract new high paying and value-added industries and expand existing businesses.

NCFRPC Response. Regional goals 2.1, 2.3, and 5.2 have been revised as follows:

> **REGIONAL GOAL 2.1.** ~~**Retain and expand existing businesses located within the region**~~ **Attract new high paying, value-added industries and expand existing businesses in the region.**
>
> **REGIONAL GOAL 2.3~~4~~. Expand the regional tourism industry.**
>
> **REGIONAL GOAL 5.2.** Mitigate adverse impacts to ~~the Gainesville Central City TCMA~~ regional transportation facilities associated with enrollment growth at the University of Florida.

With regards to Goal 5.3, additional language has been added to the TCS which documents the need for this goal. Conflicting language within the TCS regarding enplanements has been corrected.

7. Finding:

Several of the proposed policies are inconsistent with section 27E-5.004(7), *Florida Administrative Code,* and may not be consistent with the SCP because they contain vague or undefined terminology and/or the purpose is unclear making it impossible to determine consistency with the SCP, and/or do not provide adequate guidance to the region. For example:

- Policies 4.3.3., 4.4.5., 4.5.2., and 4.6.1. do not provide adequate guidance to the region because:

  1) they are unclear as to what "environment" is to be pursued, and
  2) the justification for "minimum regulatory burden" is not defined or established in the proposed plan.

- In addition to the above, Policy 4.5.2. does not:

  3) define or explain "natural function/purpose," and
  4) clearly identify the referenced "classifications."

- There are no associated policies for Goal 3.1., page III-13, regarding development in the Coastal High Hazard Areas.

Recommendation:

The proposed policies in the plan must be thoroughly evaluated to determine consistency with the SCP, to provide clear and specific guidance to the region, to clarify their purpose, and to respond adequately to the regionally significant problems and opportunities identified in the associated TCSs.

For example, policies could be added to Goal 3.1. similar to the following:

Avoid expenditure of state funds that subsidize development in Coastal High Hazard Areas.

NCFRPC Response: The Council has added the following policy to Goal 3.1:

> **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.**

Additionally, the Council has amended the referenced policies as follows:

> **Policy 4.3.3. ~~Encourage state and local regulatory agencies to p~~ Pursue an regulatory environment consisting of the minimum regulatory burden necessary for the maintenance of ~~the natural functions~~ the quantity and quality of groundwater recharge in~~of~~ Areas of High Recharge Potential to the Floridan Aquifer, Ichetucknee Trace, Stream-to-Sink Watersheds and Sinks identified as natural resources of regional significance.**
>
> **~~Policy 4.4.5. Encourage state and local regulatory agencies to pursue an environment consisting of the minimum regulatory burden necessary for the maintenance of the identified attributes of strategic habitat conservation areas identified as natural resources of regional significance.~~**
>
> **Policy 4.5~~6~~.3~~2~~. Provide technical assistance to local governments in the development of appropriate local government comprehensive plan policies and land development regulations necessary to maintaining ~~the natural functions and purpose of~~ areas ~~or~~ and water bodies ~~included in this classification~~ identified as natural resources of regional significance classified in this plan as "Planning and Resource Management Areas.**
>
> **Policy 4.6~~7~~.1. ~~Encourage state and local regulatory agencies to p~~ Pursue an regulatory environment consisting of the minimum regulatory burden necessary for the maintenance of the quantity and high quality of the region's surface water systems.**

The phrase "regulatory environment" refers to all government plans, goals, policies, standards, and regulations which directly or indirectly affect land and land development. The phrase "regulatory environment" has been added to the Glossary. The "minimum regulatory burden" is defined by the courts on a case-by-case basis.

8. Finding:

The TCSs included in the proposed SRPP are inconsistent with sections 186.507(3) and (4), *Florida Statutes*, and section 27E-5.004(4), *Florida Administrative Code,* because they are not based upon expected growth patterns of the region and do not include any discussion or analyses of the region's current or future population or growth patterns. Additionally, the TCS for each strategic regional subject area does not provide a basis and framework for the associated regional goals and policies. Examples include:

- Goal 1.2., page I-28, addresses premature deterioration/demolition of residential units, but no analysis is provided in the associated TCS concerning the subjects of the goal.

- Goal 3.3., page III-14, addresses improving response times of regional hazardous materials response teams, but there is not any data about response times, the number of cases in which response times were too slow or the magnitude of the threat to the region because of slow response times.

- Goal 5.4., page V-17, references the region's railroads; however, the associated TCS fails to provide any analysis that shows any threat or problem that could result in the loss of the railroads.

- Several policies contained in the *Natural Resources of Regional Significance* section (i.e., Policies 4.3.6., 4.4.6., 4.5.4., and 4.6.3.) encourage continued or expanded public acquisition of properties within the region to provide resource protection. The need for continued or expanded public acquisition or the viability of alternative resource protection methods such as less-than-fee purchase is not discussed or "set-up" in the associated TCS.

- Policy 4.5.7., page IV-55, requires the implementation of the "Green Line protection goals and objectives;" however, these "goals and objectives" are not identified or discussed in the trends and conditions.

- Policy 5.1.5., page V-15, requires that the NCFRPC provide technical assistance to the north central Florida Transportation Disadvantaged service providers. This program is not discussed in the associated trends and conditions and the service providers are not identified.

Recommendation:

The TCS must be amended to provide a discussion and analysis of the growth patterns of the region (including an analysis of the current **AND** projected population of the region) and the associated impacts on the strategic regional subject areas.

The TCS associated with **EACH** of the strategic regional subject areas must be amended to provide a basis\background or to establish the region's need for each regional goal and policy.

NCFRPC Response. The Economic Development element has been amended to include an extensive analysis of population trends and conditions.

With regards to comments addressing premature deterioration/demolition of residential units, Goal 1.2 and its associated policies and regional indicators have been deleted from the plan.

With regards to comments regarding Goal 3.3, the Emergency Preparedness element has been amended to address response times of regional hazardous materials response teams.

With regards to Goal 5.4, the Transportation element TCS has been amended to address regional concerns regarding potential adverse economic development impacts as a result of a loss of rail access to north central Florida communities.

Policies 4.3.6, 4.4.6, 4.5.4, and 4.6.3, theses policies have been temporarily deleted until such time as the Council has the resources to properly "set-up" these policies in the TCS.

With regards to Policy 5.1.5, the Council has substantially revised the Regional Transportation element TCS to address the transportation disadvantaged. As a result of the revision, Policy 5.1.5 has been replaced with Goal 5.5 and associated policies which are as follows:

Public Transit Service Providers

REGIONAL GOAL 5.5. Reduce the unmet General Trip demand of the north central Florida Transportation Disadvantaged population.

Regional Indicator

An estimated 807,917 general demand trips, 82.8 percent of total estimated transportation disadvantaged trips, were unmet in 1995.

Policy 5.5.1. Improve mobility options for low-income, elderly and disabled citizens.

Policy 5.5.2. Increase funding for coordinated transportation systems for the transportation disabled.

Policy 5.5.3. Provide technical assistance to designated north central Florida community transportation coordinators.

9. Finding:

The TCSs in the SRPP provide a good description of each strategic regional subject area; however, the TCSs are inconsistent with section 186.507(3), *Florida Statutes*, and 27E-5.002(11), *Florida Administrative Code* because they do not provide the necessary background ***analyses*** of factors that describe current conditions and ***projections.***

Recommendation:

As required by section 27E-5.002(11), *Florida Administrative Code*, the TCSs for each strategic regional subject area must be amended to include background ***analyses*** that interpret significant trends, conditions and **projections**.

NCFRPC Response: Additional analysis has been added to every TCS. The Council recognizes that, in many instances, the SRPP does not contain projections of current trends. Projections will be added to the plan as time and resources allow.

10. Finding:

The proposed SRPP may be inconsistent with section 186.507(3), *Florida Statutes*, and section 27E-5.004(5), (6) and (7), *Florida Administrative Code*, because it does not address some significant regional problems and needs in the TCSs, goals and policies. Examples of significant regional problems and needs not identified and analyzed in the plan include:

- hurricane evacuation routes and clearance times;
- the regional value of natural areas such as uplands, estuaries and wetlands;
- mining activities in environmentally sensitive areas;
- partnerships with the University of Florida for regional advancements, such as agriculture, tourism, mining, and value-added industry; and
- the influx of elder residents into the region.

Recommendation:

To be consistent with section 186.507(3), *Florida Statutes*, and section 27E-5.004(5), (6) and (7), *Florida Administrative Code*, the SRPP must be amended to provide TCS analyses and policy guidance for all significant regional problems and needs.

NCFRPC Response. With regards to hurricane evacuation routes and clearance times, the Emergency Preparedness Element has been revised to address and identify hurricane evacuation clearance times and shelter capacities.

With regards to the regional value of natural areas such as uplands, estuaries, and wetlands, the SRPP identifies and addresses all uplands, estuaries, and wetlands which are identified by the Council as Natural Resources of Regional Significance.

With regards to mining activities, the following policies have been added to the SRPP:

> **Policy 4.3.9. Minimize the effect of mining activities on water quality and quantity of the Floridan Aquifer.**
>
> **Policy 4.7.16. Minimize the effect of mining on the surface water quality and seasonal flows of surface waters identified as natural resources of regional significance.**

With regards to partnerships with the University of Florida, the following policy has been added to the SRPP:

> **Policy 2.3.2. Continue working with the University of Florida to improve the regional economy.**

With regards to the influx of elder residents to the region, the Economic Development element TCS has been revised to include trends and projections regarding elderly populations.

11. Finding:

The regional goals and policies contained in the proposed SRPP are to be developed from, and related to the problems, needs and opportunities identified in the TCSs. The TCSs in the proposed SRPP are inconsistent with section 186.507(4), *Florida Statutes*, and section 27E-5.004(6) and (7), *Florida Administrative Code,* because they identify several regionally significant problems, needs or opportunities that do not have associated goals and policies. For example:

- The *Affordable Housing* section highlights several housing ***problems*** facing the region such as increased reliance upon mobile homes, housing quality, and housing affordability. The proposed SRPP does not include adequate goals or policies that specifically address these regional problems.

- The *Economic Development* section demonstrates that the per-farm income in north central Florida is only 37.7 percent of the statewide average, and that the region's farm acreage has declined by 28.7 percent from 1982 to 1992. This is a significant regional ***problem***; however, the plan does not include goals or policies to guide the region in addressing these problems.

- The *Economic Development* section, page II-48, identifies private-public sector cooperation as a regional ***opportunity*** for downtown revitalization and economic development within the region. However, there are no associated goals or policies to guide the region to build upon these opportunities.

Recommendation:

The proposed SRPP must be amended to include goals and policies for the significant regional problems, needs and opportunities identified in the TCSs.

For example, the agricultural problems and opportunities identified in the TCSs could be addressed by adding a goal, indicators and policies similar to the following:

Goal: *Expand food, agriculture, aquaculture, silviculture and related industries in order to be a competitive force in state, national and international marketplaces.*

Indicators: *Farm cash receipts from and acres of land currently used for agriculture.*

Gross sales and acres of land used for silviculture.

Gross sales and acres of water surface used for aquaculture.

Policy: *Protect and expand agricultural and forestry resources and activities by implementing initiatives such as ad valorem tax incentives and best management practices.*

Policy: *Work with the Institute of Food and Agricultural Science at the University of Florida to research, develop, and apply agricultural technology to be utilized in the production and marketing of the region's agricultural products.*

Policy: *Establish public/private partnerships to provide technical, financial and information services to the agricultural sector.*

NCFRPC Response. Every TCS has been amended to include a subsection entitled "Problems, Needs, and Opportunities." The Introduction section of the SRPP states that this subsection of the TCS is the only place the regional plan identifies problems, opportunities, and needs as required by Rule 27E-5.002(11). This subsection has been added for purposes of clarification so that the reader may clearly identify problems, opportunities, and needs.

The EOG has misinterpreted the regional plan by identifying mobile homes as a problem. The TCS identifies an increasing percentage of the region's housing stock as comprised of mobile homes. While this is an observation of the TCS, it is not recognized in the SRPP as a problem.

The Affordable Housing Problems, Needs, and Opportunities subsection has been amended as follows:

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

With regards to EOG comments regarding the TCS as identifying public-private sector cooperation as a regional opportunity for downtown revitalization, the referenced sentence, which is located on page II-54 of the TCS, has been deleted as not being material to the discussion.

With regards to agriculture, the Council has added the following goal and associated policies to the Economic Development element:

> **REGIONAL GOAL 2.3. Expand north central Florida food, agriculture, aquaculture, forestry and related industries in order to be a competitive force in state, national, an international marketplaces.**
>
> **Regional Indicators**
>
> **1. In 1990, 6,914 north central Florida residents were employed in Agriculture, Forestry, and Fishing.**
>
> **2. In 1990, 4.6 percent of all north central Florida employed residents were employed in Agriculture, Forestry, and Fishing.**
>
> **Policy 2.3.1. Protect and expand agricultural and forestry resources and activities by implementing initiatives such as best management practices.**
>
> **Policy 2.3.2. Continue working with the University of Florida to improve the regional**

economy.

Policy 2.3.3. Establish public/private partnerships to provide technical, financial, and information services to the agricultural sector.

12. Finding:

The *Regional Resources and Facilities* section is not consistent with section 186.507(3), *Florida Statutes*, and section 27E-5.004(5), *Florida Administrative Code,* because:

- the section does not ***address*** regional resources and facilities identified in the *Regional Resources and Facilities* section, and

- the proposed SRPP does not identify and address all resources and facilities that are regionally significant such as historical and archeological sites, evacuation shelters, Florida Greenways (see attached copy of a Governor's Greenways Proclamation and a list of proclaimed Florida Greenways located in the NCFRPC) and U.S. Highway 90, and other resources and facilities that may be regionally significant such as ecosystem management projects, hiking trails, and cultural facilities.

Recommendation:

The SRPP must be amended to identify and ***address*** regionally significant resources and facilities including historical and archeological sites, evacuation shelters, Florida Greenways and U.S. Highway 90. Further, in order to make the lists of Regional Resources and Facilities more user friendly, the plan needs to be amended to incorporate a comprehensive listing of all identified regionally significant resources and facilities and/or amended to refer to the various lists (and their location, i.e., page numbers) contained throughout the proposed plan.

Florida Greenways, Marjorie Kinnan Rawlings State Historical Site, the Center for Performing Arts, and the Florida Trail have been added to the Regional Facilities element. Evacuation shelters have been added to the list of regionally significant emergency preparedness facilities. U.S. Highway 90 has been added to the list of regionally significant transportation facilities.

13. Finding:

As written, many of the proposed policies are not consistent with the definition of "policy" as provided in section 27E-5.002(6), *Florida Administrative Code* because they do not identify the ways in which programs and activities are to be conducted to achieve the region's goals. The use of such terms as *"encourage," "ensure," "promote," "support,"* and *"address,"* do not provide clear guidance to be consistent with the SCP or do they provide adequate guidance for local governments to amend their comprehensive plans in order to be consistent with the SRPP. Policies

which do not adequately identify how the region will achieve its goals include: Policies 1.1.2., 2.2.1., 2.2.3., 3.3.4., 4.6.16., 5.2.2., and 5.4.1.

Recommendation:

The SRPP must be amended to delete the use of terms which do not provide clear regional guidance and to be consistent with the SCP. For example, Policy 5.4.1. could be rewritten as follows:

Maintain and/or upgrade freight rail lines to meet federal and state safety standards.

As another example, Policy 1.1.2., could be rewritten as follows:

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.

NCFRPC Response. The Council has revised all SRPP policies accordingly.

14. Finding:

The proposed maps and list of natural resources of regional significance (NRRS) are not consistent with section 186.507(11), *Florida Statutes*, and Rule 27E-5.004(3)(a), *Florida Administrative Code*, because they do not identify endangered and threatened species or species of special concern on the maps and list of NRRS.

Recommendation:

The NRRS maps and list must be amended to incorporate the best available data regarding natural resources of regional significance including endangered and threatened species and species of special concern.

NCFRPC Response: ~~The SRPP identifies and maps Strategic Habitat Conservation Areas greater than 20 acres in size as natural resources of regional significance. As indicated in the TCS, these are areas which are either inhabited by or provide habitat capable of supporting listed species. Each SHCA is described and a listing of species found in each area is included in the TCS. The plan includes goals and policies designed to ensure the survival of SHCAs and by so doing, the survival of all species native to north central Florida, including listed species.~~ In response to the EOG comment, the SRPP has been amended to identify all listed species as natural resources of regional significance. Maps of Strategic Habitat Conservation Areas have been deleted from the regional plan. The Council has substituted regionally significant habitat areas for Strategic Habitat Conservation Areas in Table 4.1.

15. Finding:

Many of the proposed SRPP policies describe work activities of the RPC staff rather than define programs and activities and provide guidance toward goal attainment. As a result, the policies are inconsistent with sections 27E-5.001(1), and 27E-5.003(1), (6) and (7), *Florida Administrative Code*. Examples of these policies include those associated with Goal 5.1., and Policies 1.1.5., 2.3.1., and 2.3.2.

Recommendation:

The proposed policies contained in the SRPP which imply work activities solely for the RPC must be amended to provide clear guidance to the region to support goal attainment rather than RPC workload. For example, the policies associated with Goal 5.1. could include any or all of the following:

- *Mitigate adverse impacts of development upon regional transportation facilities.*

.

- *Prevent highway demands created by growth from degrading level of service standards on the Florida Intrastate Highway System (FIHS) below those established by the Florida Department of Transportation.*

- *Prevent highway demands created by growth that will degrade level of service standards on non-FIHS facilities below those adopted in LGCPs.*

- *Coordinate with state agencies to identify reserved or dedicated rights-of-way to protect critical transportation corridors.*

- *Develop a mechanism by which regional transportation priorities are defined and understood among all counties that are not represented by the Gainesville MPO.*

- *Direct future transportation improvements to aid in the management of growth and to promote economic development in designated areas .*

NCFRPC Response. The following policies have been added to Regional Goal 5.1:

Policy 5.1.7. Mitigate adverse impacts of development upon regional transportation facilities.

Policy 5.1.8. Mitigate impacts created by development so as to maintain the minimum level of service standard on the Florida Intrastate Highway System (FIHS) as established by the Florida Department of Transportation.

Policy 5.1.9. Mitigate impacts created by development so as to maintain the minimum adopted level of service standard on non-FIHS roads identified in this plan as significant regional transportation as established in local government comprehensive plans.

Policy 5.1.10. Coordinate with state agencies to identify reserved or dedicated rights-of-way to protect critical transportation corridors.

Policy 5.1.11. Develop a mechanism by which regional transportation priorities are defined and understood among all counties that are not represented by the Metropolitan Transportation Planning Organization for the Gainesville Urban Area.

Policy 5.1.12. Direct future transportation improvements to aid in the management of growth and that promote economic development in designated areas.

16. Finding:

Most regional *indicators* contained in the proposed SRPP will not allow progress to be adequately measured towards goal achievement and therefore are inconsistent with section 27E-5.004(6), *Florida Administrative Code*. For example:

- Indicators 1 and 2, for Goal 2.3., page II-55, measure licensed hotel/motel rooms and restaurant seating capacity. It is unclear how these indicators adequately measure progress in expanding regional tourism throughout the ***entire*** north central Florida region rather than in the corridors adjacent to the interstate highways. Further, it is confusing to use only these indicators in absence of other indicators such as tourism/recreational sales tax, by type, collected by the Department of Revenue.

- The indicators for Goal 3.1., page III-13, measure the number of weather buoys and emergency warning sirens, and the National Oceanographic and Atmospheric Administration weather radio transmission coverage for the region. It is unclear how these indicators adequately measure regional emergency ***preparedness*** because they do not include measurement of emergency shelter capacity and evacuation clearance times.
- The indicators for Goal 4.1., page IV-50, measure the acreage of the Big-Bend saltmarsh and seagrass beds, and the Florida Middle Ground. It is unclear if the data related to these areas in the proposed plan are valid, who collects this data, and how and by whom it will be collected in the future.

Additionally, the proposed SRPP does not define "indicators" or explain how this plan component is to be used.

Recommendation:

The indicators in the proposed SRPP must be evaluated and amended to provide valid, reliable and appropriate measures by which progress can be assessed toward goal attainment as required in rule 27E-5.004(6), *Florida Administrative Code*. The purpose and function of the indicators also must be defined in the SRPP in order that the interested public may understand their intended use.

NCFRPC Response. Good regional indicators which fully meet the requirements of 27E-5.004(6), F.A.C., are difficult to find. The Council remains open to specific recommendations for better regional indicators. Regional Goal 2.3 and its associated indicators are as follows:

REGIONAL GOAL 2.~~3~~4. Expand the regional tourism industry.

Regional Indicators

1. **In 1993, there were 7,315 licensed hotel and motel rooms in the region.**

2. **In 1993, the licensed seating capacity of all north central Florida restaurants was 51,208.**

3. **In Fiscal Year 1993-94, total annual attendance at state parks, preserves, and other state-owned areas located in north central Florida was 530,626.**

Council review of Department of Revenue sales tax reporting categories reveals no such "tourism/recreational sales" category. The closest tourist-related categories are #8, Restaurants and Lunch Rooms, #9 Taverns, Night Clubs, #59 Admissions, and #85, Hotels, Apartment Houses, Etc. The Council fails to see how reporting sales tax revenue collected at restaurants, lunch rooms, taverns, and night clubs offers a better understanding of tourism activity than the Council's chosen measure, licensed restaurant seating capacity. Additionally, sales tax rates can change over time, skewing year-to-year comparisons. The measure of annual attendance at state parks, preserves, and other state-owned areas is a superior measure of tourism activity when compared to Admissions sales tax revenues as the Admissions sales tax category includes the sale of movie theater tickets. The number of licensed hotel rooms is a superior measure of tourism activity than the Apartment Houses, Etc, sales tax category since the latter includes dwelling units which are more likely to be occupied by residents than tourists.

Since only 4 of the 11 counties in the region have enacted a tourist development tax, using tourism development tax receipts would produce an inaccurate measure of regional tourism activity since counties drop the optional tax. Counties could also change the amount of the tax over time, thereby adding even more confusion to this proposed indicator.

With regards to EOG comments on emergency preparedness, the Regional Indicators for Regional Goal 3.1 have been amended as follows:

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

Regional Indicators

1. **As of June 1, 1995, one coastal weather buoy exists in the Gulf of Mexico located approximately 100 miles southwest of Horseshoe Beach.**

2. **As of June 1, 1995, NOAA weather radio transmissions covered 20.0 percent of the region.**

3. **As of June 1, 1995, one north central Florida coastal community had an emergency warning siren.**

4. **As of January 1, 1996, Dixie County had a surplus of 1,569 public shelter spaces.**

5. **As of January 1, 1996, Taylor County had a surplus of 4,931 public shelter spaces.**

6. **As of January 1, 1996, Dixie County had a Long Response clearance time of 9.00 hours.**

7. **As of January 1, 1996, Taylor County had a Long Response clearance time of 9.25 hours.**

With regards to EOG comments on the Big Bend Saltmarsh and Big Bend Seagrass Beds, Goal 4.1 and its associated regional indicators have been amended as follows:

REGIONAL GOAL 4.1. 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. ~~Recognizing their economic as well as ecological importance to the region and the state, the natural functions and integrity of the Big Bend Coastal and Marine Resources should be preserved for existing and future generations of residents.~~

Regional Indicators

1. **In 1996, the Big Bend Salt Marsh comprised 46,189 acres.**

~~2. In 1996, the Big Bend Seagrass Beds comprised 165,599 acres.~~

2. **In 1983, the Big Bend Seagrass Beds, extending to the jurisdictional limits of the State of Florida off Dixie and Taylor counties, were comprised of 1,781,670 acres of Dense Seagrass, 92,320 acres of Patchy Seagrass, and 208,980 acres of Sparse Seagrass.**[1]

3. **In 1996, the Florida Middle Ground comprised 132,000 acres.**

The footnote to Regional Indicator 2 reads as follows:

Tim Leary, Florida Marine Research Institute, March, 1996. According to the Dick Sargent, Assistant Research Scientist at the Institute, the 1983 data represents the best available information regarding the aerial extent of the Big Bend Seagrass Beds. A new study currently underway will map the Big Bend Seagrass Beds based upon aerial photo-interpretation which will be done by the National Biological Service using December 1991 1:24,000 natural color aerial photos. The new seagrass classification system will consist of "continuous" and "patchy" categories. Patchy will break down into 4 classifications of percent of cover. The 1983 data will not be directly comparable to the 1991 data as the older study used a combination of aerial photos and diver tows/transects to map those seagrasses not visible on aerial photos The new study will only map habitat which is directly visible from aerial photos.

17. Finding:

The proposed SRPP includes several internal discrepancies and contradictory statements. For example:

- Goal 2.4., page II-55, is vague, and is unclear because it seeks to maintain "economic stability" in a region that has high unemployment and low opportunity, thereby seeking maintenance of a condition or state that does not exist.

- The *Affordable Housing* section identifies mobile homes as a regional ***opportunity*** as an "affordable alternative to conventionally-built, detached, single-family residential homes." However, the *Emergency Preparedness* section presents the increased reliance upon mobile homes as a regional ***problem*** due to the adverse impact on the region's emergency shelter capacity. Additionally, the plan does not include goals or policies to address the affordable housing or emergency preparedness issues of mobile homes.

- The Strengths and Weaknesses portion of the *Economic Development* section, page II-44, states that "Many industrial parks with water, sewer, natural gas, and electricity to meet the demands of new industries;" however, the proposed SRPP states on page II-45, that "many north central Florida communities are lacking in facilities and infrastructure normally associated with and necessary for industrial activities."

- The Transportation section, page V-6, states that enplaned passengers *increased* by 6.1 percent from 1980 to 1990; however, figures provided show that the number of passengers *decreased* from 177,104 in 1980, to 166,264, in 1990, to 140,134, in 1992.

Recommendation

The plan must be amended to address these discrepancies.

NCFRPC Response. Goal 2.4 has been amended as follows:

> **REGIONAL GOAL 2.4~~5~~. ~~Maintain economic stability throughout the region~~ Reduce the regional unemployment rate.**

EOG is misinterpreting the regional plan with regards to mobile homes. The Affordable Housing TCS does not identify mobile homes as a regional opportunity nor does the Emergency Preparedness element identify the increased reliance upon mobile homes and their impact on emergency shelter capacity as a regional problem. As noted in Table 3.2, the region has, and is projected to continue to have, a large surplus of emergency shelter spaces through the year 2000. The Emergency Preparedness TCS problems, needs, and opportunities subsection does identify a need for all north central Florida local governments to become signatories to the Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery in order to assure that shelter space will be provided when needed by inland north central Florida local governments.

The Council has addressed EOG's comments regarding discrepancies contained in the Economic Development and Regional Transportation elements.

18. Finding:

The proposed plan does not identify and address the relationships among the strategic regional subject areas. Clearly, the problems and opportunities affecting the north central Florida region apply to multiple strategic regional subject areas.

Recommendation:

The proposed SRPP should be amended to address the integration and linkage between the strategic regional subject areas.

NCFRPC Response. Integration and linkage between the strategic regional subject areas has been improved.

19. Finding:

Although the maps provided are at the required scale of 1:100,000, it is difficult to determine the portion of the region shown on each map overlay in relation to the overall region. This makes it difficult for the reader to adequately locate the resources identified.

Recommendation:

In order to make the NRRS maps more user friendly, **each** map overlay must identify which portion of the region is shown.

NCFRPC Response. The referenced locator map has been added to each map. A sample is attached to this response.

20. Finding:

The Introduction, on page x, refers to a *References* section that lists the data sources used in the development of the SRPP. However, no *References* section is included in the proposed SRPP.

Recommendation:

The SRPP needs to be amended to include a References section that includes a bibliography of the data sources used in the development of the SRPP.

NCFRPC Response. The SRPP discussion regarding references has been amended accordingly. All sources used in the development of the SRPP are contained in footnotes.

March 27, 1996

Mr. Charles Justice
Executive Director
North Central Florida Regional Planning Council
2009 North West 67 Place
Gainesville, Florida 32653-1603

Dear Mr. Justice:

Thank you for the opportunity to review the March 28 revised North Central Florida Regional Planning Council (NCFRPC) Strategic Regional Policy Plan (SRPP). We commend the Council staff for the progress made toward incorporating the comments contained in the February 27, 1996, *State Report of Findings and Recommendations for the North Central Florida Regional Planning Council's Strategic Regional Policy Plan (State Report of Findings and Recommendations)*. However, several issues need to be considered by the NCFRPC prior to final plan adoption or through amendments to the plan after adoption. As we discussed in our telephone conversation on March 25, the following comments are provided to further clarify some of the findings presented in the *State Report of Findings and Recommendations*.

The trends and conditions statements (TCS) continue to lack the required background *analyses* of factors that describe current conditions and *projections* needed to provide an adequate basis/background and establish the region's need for each regional goal and policy as required by Section 186.507(3), *Florida Statutes*, and Sections 27E-5.002(11) and 27E-5.004(4), *Florida Administrative Code.* Specific examples include, ***but are not limited to***, the following:

1. Policies 4.3.6., 4.4.6., 4.5.4., and 4.6.3. appear to be inconsistent with several comments contained in the associated TCS. The TCS indicates that further public land acquisition efforts would not be supported by several county governments in the north central Florida region due to the impact on the region's tax base and the large quantity of land currently in public ownership. The TCS does not provide any **discussion** and **analyses** of fee-simple acquisition or viable alternative acquisition methods such as less-than-fee simple acquisition, conservation easements, etc., in the north central Florida region. The TCS for the *Natural Resources* section must be amended to analyze the need for continued acquisition, the viability of alterative acquisition methods, and the impact upon county governments in the north central Florida region.

NCFRPC Response: Policies 4.3.6, 4.4.6, 4.5.4, and 4.6.3 have been temporarily deleted until such time as the Council is able to revise the TCS accordingly.

2. Policy 4.5.7., contained in the December 31, 1995, draft SRPP, addresses the voluntary implementation of "Green Line protection goals and objectives". These protection "goals and objectives" are not identified or analyzed in the associated TCS. The TCS must be amended to provide a basis/background for the "Green Line protection goals and objectives" and establish the need for Policy 4.5.7.

NCFRPC Response: Policy 4.5.7 has been deleted.

3. To clarify Finding 17 in the *State Report of Findings and Recommendations,* the *Affordable Housing* section in the revised SRPP documents that a high percentage of the housing stock in the north central Florida region is comprised of mobile homes and that the reliance upon mobile homes is increasing. However, the *Emergency Management* section states that, although the region currently has adequate emergency shelter capacity through 2000, the increased reliance upon mobile homes could ***dramatically increase*** the number of households in need of shelter. Additionally, the revised plan does not contain goals or policies to address this regional issue. The TCSs must be amended to describe or establish why this is not identified as a problem, need or opportunity. Further, associated goals and policies must be included in the SRPP.

NCFRPC Response: Much of the difficulties noted by EOG are the result of the timing of Council receipt of the draft Cedar Key Basin Hurricane Evacuation Study, Technical Data Report. This study will replace the Council's 1990 study. In order to eliminate inconsistencies and confusion, references to the Council's 1990 study have been deleted from the TCS.

4. The TCSs contained in the revised SRPP do not provide **analyses** and **projections** for the following issues:

* premature deterioration and demolition of residential dwelling units;
* response times of regional hazardous materials response teams; or
* Potential adverse economic development impacts resulting from a loss of rail access to north central Florida communities.

The TCSs must be amended to provide analyses and projections for the issues identified above. Additionally, goals and policies must be included in the SRPP to address these issues.

NCFRPC Response: With regards to premature deterioration and demolition of residential dwelling units, Affordable Housing Problem, Need, and Opportunity #2 as well as Regional Goal 1.2 and its associated regional indicator and policies have been temporarily deleted until such time as the Council has the resources necessary to research the housing quality/maintenance issue.

With regards to response times of regional hazardous materials response teams, language has been added to the TCS stating the response times of regional hazardous materials response teams. Projected response times are unavailable. Projections of response times will be added to the plan at a later date when sufficient time and funding are available to the Council to prepare the requested projections.

With regards to potential adverse economic development impacts resulting from a loss of rail lines, The Council has no empirical data to support its concern regarding potential adverse impacts due to a loss of rail access. Therefore, railroad right-of-way and Amtrak stations have been deleted from the SRPP as regionally significant transportation facilities. Associated discussion of rail lines and Amtrak stations has also been deleted. Regional Goal 5.4 as well as its associated regional indicators and policies have been deleted from the SRPP. The Council will conduct a study of economic impacts resulting from the loss of rail access when sufficient time and funding are available to the Council to prepare such a study. When this study is completed, rail lines and Amtrak railroad stations, as well as associated goals and policies may be added to the SRPP, depending upon the findings of the Council study.

As you requested during our March 25 telephone conversation, the following comments are provided to clarify any misinterpretations that Council staff may have had regarding some of the findings and recommendations contained in the *State Report of Findings and Recommendations*.

5. The TCS contained in the *Economic Development* section states, on Page II-54 of the revised SRPP, that private-public sector cooperation is a ***key to successful*** downtown renovation projects in several communities in the region. However, this is not identified by the revised SRPP as an opportunity for the region. The *Economic Development* TCS must be amended to describe or establish why public-private sector cooperation is not a regional opportunity.

NCFRPC Response: The Economic Development TCS sentence located on page II-54, stating that private-public sector cooperation is a key to successful downtown renovation projects in several communities in the region, has been deleted.

6. The *State Report of Findings and Recommendations* established that the indicators identified for Goal 1.1 do not provide valid or appropriate measures. Indicators related to coastal weather buoys, NOAA weather radio transmissions, and emergency warning sirens measure only emergency ***warning*** and do not adequately measure the region's overall emergency ***preparedness*** for coastal storms. The plan must be amended to include indicators such as shelter capacity and evacuation clearance times in order that the overall regional preparedness for coastal storms may be more accurately measured.

NCFRPC Response: The requested regional indicators have been added to Goal 3.1 of the Emergency Preparedness element.

7. Revised Goal 4.6 has been amended by the NCFRPC staff to address the comments contained in the *State Report of Findings and Recommendations* and is improved over the original proposed goal. However, the goal is likely to be inconsistent with the State Comprehensive Plan (SCP) and does not provide adequate guidance to the region for resource protection because the terms "minimum level [of protection] necessary" and "amount and degree of protection" are not defined or explained in the revised SRPP. Additionally, regional agencies (i.e., water management districts) are omitted from the intent of the goal.

The SRPP must be amended to "set-up" Goal 4.6. Additionally, the SRPP must be amended to define, discuss and analyze the "minimum level [of protection] necessary" and the "amount and degree of protection" needed for resource protection. Additionally, as agreed in our telephone conversation, the goal will be amended to include "regional" agencies.

NCFRPC Response: Revised Goal 4.6 and its associated policies have amended as follows:

REGIONAL GOAL 4.6. 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. ~~Recognizing their importance to the continued growth and development of the region, the quantity and quality of the region's surface water systems should be maintained for future generations.~~

Regional Indicators

1. **In 1996, 1,103,340 acres of fresh water wetland were identified as a natural resource of regional significance in the North Central Florida Strategic Regional Policy Plan.**

2. **In 1996, 9 north central Florida lakes were identified as natural resources of regional significance in the North Central Florida Strategic Regional Policy Plan.**

3. **In 1996, 11 river corridors were designated as natural resources of regional significance in the North Central Florida Strategic Regional Policy Plan.**

4. **In 1996, 210,290 acres of river corridor were designated as natural resources of regional significance in the North Central Florida Strategic Regional Policy Plan.**

5. **In 1996, 50 springs were designated as natural resources of regional significance in the North Central Florida Strategic Regional Policy Plan.**

Policy 4.6.1. ~~Encourage state and local regulatory agencies to p~~ Pursue an ~~r~~ regulatory environment consisting of the minimum regulatory burden necessary for the maintenance of the quantity and high quality of the region's surface water systems.

Policy 4.6.2. 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 4.6.3. Where appropriate, encourage the public acquisition of all or those portions of the region's surface water systems, including land areas adjacent to or impacting on the systems, where the minimum regulations necessary to maintain their quantity or high quality are so great as to constitute a taking of private property without compensation.**~~

Policy 4.6.4~~3~~. ~~Support the efforts of the Suwannee River and St. Johns River Water Management Districts to c~~ Continue the~~ir~~ mapping of river floodplains.

Policy 4.6.4. Update the regional map series delineating river floodplains as this information becomes available.

Policy 4.6.5. Work with north central Florida local governments to standardize on a common source for wetland maps contained in local government comprehensive plans.

Policy 4.6.6. ~~Support the water management district's u~~ Use ~~of~~ 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 4.6.7. 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 4.6.8. 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 4.6.9. ~~Encourage and assist the Florida Game and Fresh Water Fish Commission, the Florida Department of Environmental Protection, and local governments to e~~ Establish and enforce consistent boating safety zones along the Suwannee and Santa Fe rivers.

Policy 4.6.10. Assist local governments in establishing consistent regulations for development projects within river corridors identified as natural resources of regional significance.

~~**Policy 4.6.11. Support the coordinated review of local plan amendments and development projects within the Alapaha River Corridor, Ichetucknee River Corridor, Santa Fe River Corridor, Suwannee River Corridor, and Withlacoochee River Corridor.**~~

Policy 4.6.11. ~~Encourage the Florida Department of Environmental Protection and the local water management districts to I~~ Identify and map the capture zones of all springs identified as natural resources of regional significance. Once delineated, ~~the council will~~ provide technical assistance to local governments in implementing spring protection programs based upon capture zones.

Policy 4.6.12. Provide technical assistance to local governments in obtaining grants to establish centralized sewer systems in identified septic tank problem areas.

Policy 4.6.13. Ensure that local government comprehensive plans, DRIs, 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 4.6.14. Work with local governments, state and federal agencies, and the local water management districts in the review of local government comprehensive plans and developments of regional impact as they affect wetlands identified as natural resources of regional significance to ensure that any potential adverse impacts created by the proposed activities on ~~the natural functions of~~ wetlands are minimized to the greatest extent possible.

Policy 4.6.15. Minimize the effect of mining on the surface water quality and seasonal flows of surface waters identified as natural resources of regional significance.

~~**Policy 4.6.16. Support the coordination of land use and water resources planning for surface water systems identified 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.**~~

8. As agreed in the conference call, the qualifier "currently" will be deleted from Goal 4.5. in the revised SRPP, relating to endangered, threatened, or species of special concern.

NCFRPC Response: The word "currently" has been deleted from Regional Goal 4.5.

9. A new *Problems, Needs and Opportunities* component has been added to each section of the revised SRPP. The TCSs included in the revised SRPP do not discuss the process used by the NCFRPC to identify and address the significant problems, needs and opportunities now included in the plan. The SRPP must be revised to clearly identify how the problems, needs and opportunities are identified by the Council.

NCFRPC Response: The SRPP Introduction has been amended to address the process by which regional problems, needs, and opportunities are determined.

10. To repeat a comment in the *State Report of Findings and Recommendations*, the Council may wish to pursue implementing a SRPP amendment process that would facilitate the incorporation of meaningful regional guidance from new legislation, future revisions to the SCP, updated data and information, and the findings and recommendations of other current planning activities and programs.

NCFRPC Response: The Council will update the SRPP to reflect new legislation, future revisions to the SCP, updated data and information, and the findings and recommendations of other current planning activities and programs.

We appreciate the work that the NCFRPC staff has put into responding to the *State Report of Findings and Recommendations* and will continue to work with the NCFRPC to further improve the SRPP. We request that you provide OPB and the other reviewing agencies with a copy of future drafts and amendments to your region's revised SRPP as well as a copy of the plan at the time your notice of proposed rulemaking is published. If you have any questions regarding the *State Report of Findings and Recommendations* and/or this letter, please call me at (904) 488-7793 or S/C 278-7793.

Sincerely,

Paul A. Carlson

cc: Robert B. Bradley
Teresa Tinker
Chuck Kiester
Steve Dopp
All SRPP Reviewing Agencies

STATE REPORT OF FINDINGS AND RECOMMENDATIONS FOR THE PROPOSED AMENDMENTS TO THE NORTH CENTRAL FLORIDA STRATEGIC REGIONAL POLICY PLAN

August 22, 1997

Introduction

The Governor's Office, in coordination with various state, regional and local government entities, and the public, has completed its review of the proposed amendments to the adopted strategic regional policy plan (SRPP) for the north central Florida region in accordance with sections 186.507 and 186.508, Florida Statutes, and Rule 27E-5, Florida Administrative Code. The state's review included a substantive analysis of the proposed amendments, including their consistency with Chapter 187, Florida Statutes (State Comprehensive Plan), Chapter 186, Florida Statutes, other pertinent statutes and rules, including Rule 27E-5, Florida Administrative Code.

The following first restates and then responds to the comments and recommendations made by the Governor's Office, including comments received by the Governor's Office from other state and local agencies, and the public. In many cases, Council staff has paraphrased the referenced comment/recommendation for purposes of brevity.

Comments/Recommendations From the Executive Office of the Governor (EOG)

EOG Comment/Recommendation #1

Add a policy which directs, at a minimum, detailed surveys and/or specific site assessments for listed plant and animal species and habitat, as required by section 9J-2.041, Florida Administrative Code, for developments undergoing regional review as a Development of Regional Impact to evaluate the impacts of such developments.

NCFRPC Response

Concur. A new policy is proposed to be added to the draft SRPP amendments which reads as follows:

Policy 4.4.10. Detailed surveys and/or specific site assessments for listed plant and animal species, as well as habitat used by listed species shall be conducted in accordance with Rule 9J-2.041, Florida Administrative Code, for developments undergoing regional review as a Development of Regional Impact in order to evaluate the impacts of such developments on said species and habitats.

EOG Comment/Recommendation #2

Appendix E of the proposed amendment contains data and information regarding habitat obtained from the Florida Committee on Rare and Endangered Plants and Animals, Rare and Endangered Biota of Florida. Sources such as Guide to the Natural Communities of Florida, produced by FNAI in 1990, Closing the Gaps in Florida's Wildlife Habitat Conservation Systems, and Mapping Wetland Habitats of High Priority to Endangered and Threatened Species in Florida, both of which were produced by the Florida Game and Fresh Water Fish Commission in 1994, contain important information relating to listed species and their habitats and are available for use by the council to supplement the listed species identification and habitat descriptions contained in this amendment. we strongly encourage the RPC to include these additional data sources and publications in your library to make available to local governments and citizens in the region.

NCFRPC Response

Concur. It is proposed that the Council add these items to its library.

Comments from Florida Department of Community Affairs (DCA)

DCA Comment/Recommendation #1

Rule 9J-2.041 for DRIs states that regionally significant habitat occurs for a listed species "whenever an important area of its habitat is documented to occur." Utilization of FNAI occurrence data is a first step towards documenting and mapping habitat, particularly for areas for which no surveys or site assessments have been conducted. Therefore, it is important, at a minimum, to include a policy which specifically requires developments undergoing regional review as Developments of Regional Impact to conduct detailed surveys and/or specific site assessments of listed plant species and wildlife habitat in order to evaluate the impacts of such developments on these species and their habitat (as required by Rule 9J-2.041, F.A.C.). The SRPP should also include a policy which recognizes and incorporates into the SRPP more detailed habitat mapping as reliable listed species habitat information becomes available as the result of DRI-related surveys and/or other specific site assessments (e.g., "Describe and map in the SRPP wildlife habitat as it becomes available from site surveys and other assessments, such as those associated with DRI reviews").

NCFRPC Response

Concur. See Council response to EOG comments 1 and 2

.

DCA Comment/Recommendation #2

The list of listed species is incomplete, as it does not include several state listed plant species which are currently in the Florida Natural Areas Inventory database for this region... Include the following plant species in Table 4.4.: Green Adder's-Mouth (Malaxis unifolia), Southern Lip Fern (Cheilanthes microphylla), Sinkhole Fern (Blechnum occidentale), and Autumn Coralroot (Corallorhiza odontorhiza).

NCFRPC Response

Concur. It is proposed that these species be added to Table 4.4.

DCA Comment/Recommendation #3

The two paragraphs describing the requirements of Rule 9J-5.0-15(4) for local government comprehensive plans to identify in their Intergovernmental Coordination Elements all natural resources of regional significance listed in the relevant SRPP is outdated and not relevant. The DCA, pursuant to changes made by the Florida Legislature made to Chapter 163, F.S., as recommended by the ICE Technical Committee in their December 1995 report, will soon eliminate that section of Rule 9J-5 (s.9J-5.015(4), F.A.C.) which requires local government comprehensive plans to identify in their Intergovernmental Coordination Elements all natural resources of regional significance listed in the relevant SRPP and establish a process to determine if development proposals would have significant impacts on other local governments or state or regional resources or facilities in the applicable state or regional plan and what measures would be necessary to mitigate these impacts.

NCFRPC Response

Concur. These two paragraphs are proposed to be deleted.

DCA Comment/Recommendation #4

Habitat descriptions for the four listed species discussed in DCA Comment/Recommendation #2 should be added to appendix E.

NCFRPC Response

Concur

DCA Comment/Recommendation #5

This set of comments/recommendations consists of a series of typographical errors and minor suggestions which bear no impact on the substance of the plan.

NCFRPC Response

Concur

Comments/Recommendations From the Florida Game and Fresh Water Fish Commission (GFWFC)

GFWFC Comment/Recommendation #1

The proposed amendment is unlikely to result in protecting these listed species and habitat due to limited local government and Council staff expertise. Include Strategic Habitat Conservation Area maps as well as the Commission's wetland maps as Natural Resources of Regional Significance in the SRPP. These maps make it easy for local and regional staff to determine areas where additional information/protection measures are necessary to protect listed species and their habitats.

NCFRPC Response

Do not concur. This request is not in accordance with the recommendations of the Task Force which specifically rejected including the Strategic Habitat Conservation Area maps.

Comments From the St. Johns River Water Management District (SJRWMD)

SJRWMD Comment #1

For locating listed species habitat, the descriptions added in Appendix E are not sufficient for people who are unable to identify the various plant communities. Including habitat in the NRRS map series would make the SRPP more useful to local governments, particularly the smaller ones with limited staff capabilities, as well as citizens and other users of the plan....We recommend that a policy be included stating that GFC, FNAI, WMD, and any other best available information should be used in conjunction with the element occurrence map and the habitat descriptions in Appendix E whenever a future land use change or development order is under consideration.

NCFRPC Response

Do not concur. See response to GFWFC comment/recommendation above. Omission of habitat and other maps from the SRPP does not preclude the use of such maps in the review of impacts to listed species and their habitats by local governments in the review of specific development proposals.

Comments From the Florida Natural Areas Inventory (FNAI)

FNAI Comment/Recommendation #1

P xvii, footnote 5: Palaemontes cummngi, the Squirrel Chimney Cave shrimp is federally listed LT and not state listed. The definition of listed species should also include those that are federally listed. The same is true for P IV-1, Footnote 59.

NCFRPC Response

Concur. The definition of listed species currently included in the SRPP glossary includes both state and federally listed species.

FNAI Comment/Recommendation #2

P IV-20, Table 4.4: The title should read "State and Federally Listed Species Known to Occur in the North Central Florida Regional Planning Council Area Identified in the FNAI Element Occurrence Database." The region is identified on strictly political boundaries and the area has never been thoroughly surveyed to identify all possibly occurring species.

NCFRPC Response

Concur

FNAI Comment/Recommendation #3

The table is very poorly organized and difficult to read. Species should be grouped by class, not alphabetically by common name. At the very least, animals and plants should be grouped with each other. If the table is to be kept in this format, a heavy line should be drawn to distinguish the appropriate columns.

NCFRPC Response

Do not concur. Species are listed in alphabetical order by common name because most people using the SRPP are not trained as biologists/botanists who would be familiar with scientific names/classes. The current method of organization should make the document easier to use by the widest cross-section of citizens in the region.

FNAI Comment/Recommendation #4

Calydorea (Lillium) catesbaei, Bartram's Ixia, has recently been removed from the FNAI list since it is so common and, therefore, should not be included in this table.

NCFRPC Response

Do not concur. Bartram's Ixia is still included in the latest version of the Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida. When the specie is removed from this publication, we will propose removing the specie from Table 4.4.

FNAI Comment/Recommendation #5

Blechnum occidentale, Sinkhole Fern; *Cheilanthes micropylla*, Southern Lip Fern; *Corallorhiza odontorhiza*, Common Coralroot; and *Malaxis unfolia*, Pondspice are listed by FNAI and not included in the table.

NCFRPC Response

Concur. It is proposed that these species be added to Table 4.4.

FNAI Comment/Recommendation #6

If Pandion haliatus is only state listed in Monroe County and if the criteria is that the species should be state listed in the North Central Florida RPC area then it should not be included in this table.

NCFRPC Response

Concur

FNAI Comment/Recommendation #7

There are a number of spelling and case errors in this table which I have corrected and attached. Since this table sites FNAI, the common names used by FNAI should be followed. This should also correlate with the FCREPA common names.

NCFRPC Response

Concur. The common names listed in Table 4.4 are from the latest edition of the Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida, which differ in some cases from the common names used by FNAI and FCREPA; however, the table is proposed to be changed to provide the common names used by FNAI and FCREPA in addition to those used in the Official Lists.

FNAI Comment/Recommendation #8

Page IV-20: The various volumes of the Rare and Endangered Biota of Florida have been published at various times. The plant volume was published nearly 20 years ago. Since this information is so dated, there may be new discoveries as far as identifying different types of habitats that species may occur in. The Florida Natural Areas Inventory "Guide to the Natural Communities of Florida", 1990, has extensive descriptions of the components of each of the 81 community types. Also there are lists of species occurrences by habitat in the 1997 FNAI Statewide Matrix. This information should be incorporated into the plan or at least reference should be made to it.

NCFRPC Response

Do not concur. The Task Force specifically agreed to use the habitat descriptions contained in Rare and Endangered Biota of Florida as recommended by the GFWFC.

FNAI Comment/Recommendation #9

Page IV-22, Table 4.5: This list from the Florida Game and Fish Commission should be at least on the same page with the other species information and preferably in the same table with appropriate acknowledgments. FNAI also provided information on the seaside sparrow, manatee, and Atlantic ridley turtle although they are not included in Table 4.4.

NCFRPC Response

Concur to adding information on the Seaside Sparrow, Manatee and Atlantic Ridley Turtle. Do not concur on tables reformatting request since the source of information contained in Table 4.5 is different from that for information contained in Table 4.4.

FNAI Comment/Recommendation #10

The Wakulla seaside sparrow is no longer a taxonomic entity. It has been grouped with the Scott's seaside sparrow *Ammodramus maritimus peninsulae*.

NCFRPC Response

Do not concur. The Wakulla Seaside Sparrow is still included in the latest version of the Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida. When the specie is removed from this publication, we will propose removing the specie from Table 4.4.

FNAI Comment/Recommendation #11

Page IV-22: "Planning and Resource Management areas can more accurately be thought of as natural resource designations rather than natural resources per se." What does this mean? This is totally meaningless to me yet it sounds as though it was a significant designation. This needs to be explained so that the reader will have some idea of the meaning behind it.

NCFRPC Response

Do not concur. The regional plan draws a distinction between a resource and a resource designation. For example, the Big Bend Seagrass Bed is a resource. The Big Bend Seagrass Bed *Aquatic Preserve* is a resource designation. In another example, The Suwannee River is a resource; however, the designation of the river as a Surface Water Improvement Management water body is a resource designation, the boundaries of which may be different from that of the river per se. Planning and Resource Management Area maps delineate resource area designations which may not necessarily be the same as the underlying natural resource. Council staff believes that the concept becomes apparent when reviewing the natural resources of regional significance so identified under this category on pages IV-21 through IV-27 of the regional plan; therefore, no changes as a result of this comment are proposed at this time.

FNAI Comment/Recommendation #12

It needs to be made clear in the legend of the map depicting FNAI species occurrences that these are only occurrences that have been recorded in the FNAI database. A blank portion of this map does not indicate that there is not a species occurrence. It may be that we have no information on this area.

NCFRPC Response

Concur. It is proposed that the following sentence be added to the second paragraph on page IV-3:

> Additionally, the number and location of occurrences of listed species can change over time as new locations of listed species are discovered.

Comments/Recommendations From the Florida Forestry Association (FFA)

FFA Comment #1

Our Association has been very concerned about the implications for future forest management activities on private lands designated on RPC maps as "regionally significant wildlife habitat." We are therefore considerably more comfortable with the approach used in the proposed amendment, which is based on known *occurrences* of listed species rather than the "broad-brush" *habitat* mapping previously considered.

Council Response

None

Comments/Recommendations From the Sierra Club (SC)

SC Comment/Recommendation #1

To remove habitat from the Natural Resources of Regional Significance is inconsistent with the statement in the Trends and Conditions, page IV-1, "Both private and public lands provide important habitats for the survival of native plant and animal species."

Council Response

Do not concur. Habitat is not proposed to be removed from the plan. The currently adopted version of the North Central Florida Strategic Regional Policy Plan does not include a habitat map. The proposed amendment merely replaces the term "regionally significant habitat" with the term "Listed species and their *habitats*" in Table 4.1, adds a map of the locations of known occurrences of listed species, and also adds descriptive text of habitats used by listed species.

SC Comment/Recommendation #2

Missing from the listed species is the Sims Sink crayfish. Other listed species which have been ignored are all federally listed species in the north central Florida region. The southeastern bat has significant terrestrial caves in three counties, which also shelter many other species and are especially vulnerable to human development.

Council Response

Concur to adding the Sims Sink Crayfish. Do not concur to comment regarding all federally-listed species. The Council has not ignored all federally-listed species. Proposed Tables 4.4 and 4.5 in the amendment package include federally-listed species.

SC Comment/Recommendation #3

Although there are no identified SWIM water bodies in the region, the plan overlooks the Orange Creek Basin project which has received special attention from the Governor's office and funding from state agencies. This project, which has a special management strategy and appointed citizens and scientific committees, should be recognized for the unique watershed approach to natural resource management.

Council Response

Do not concur. All SWIM water bodies are recognized as natural resources of regional significance and are listed in Table 4.1. As noted on page IV-20 of the currently adopted regional plan, the Suwannee River Water Management District has identified 18 north central Florida water bodies as priority waters to be addressed through SWIM. On the other hand, no north central Florida water bodies are included in the St. Johns River Water Management District SWIM priority list within which district Orange Creek Basin is located. Council staff are currently attempting to obtain information on the Orange Creek Basin project as suggested.

SC Comment/Recommendation #4

The descriptions of habitat provided by the Rare and Endangered Biota of Florida are so generalized that they provide no guidance for the location of specific habitat types. Consider this generic description from the manatee habitat: "access to vascular plants, freshwater sources...Sheltered bays, coves, and canals..." A local planner will be left with two options when faced with land-use changes. The first is to consider every *freshwater source, sheltered bay or deep canal* as possible habitat and require wildlife surveys to ascertain the existence of the listed species and their habitat. The second is to throw up his hands in despair at the impossibility of determining where important habitat exists. We find it difficult to accept that local governments will require wildlife surveys on all likely habitats and consequently the proper planning to protect habitat will be abandoned.

Council Response

Do not concur. The regional plan does not limit local governments to the use of the maps supplied in the regional plan. There is nothing in the regional plan which prevents the local planner from using Strategic Habitat Conservation Area maps as published by the Florida Game and Fresh Water Fish Commission or any other information source for identifying listed species habitat.

ALACHUA COUNTY DEPARTMENT OF GROWTH MANAGEMENT
COMMENTS ON THE DRAFT EAR-BASED SRPP AMENDMENTS

February 21, 2002

Alachua County Comment/Recommendation #1

Affordable Housing Element, page I-18, Policy 1.1.8. Encouraging use of East Central Florida Housing Methodology in lieu of the adequate affordable housing standard rule 9J-2.048 for determination of affordable housing in DRIs requires further review by County staff before a decision can be made as to whether Alachua County will use this alternative methodology.

NCFRPC Response

No action recommended. The comment does not request a change to the regional plan.

Alachua County Comment/Recommendation #2

Emergency Preparedness Element, page III-3, paragraph 3, line 6 mentions 95 EM agencies. The actual number is 140 terminals statewide.

NCFRPC Response

Concur. Council staff proposes to delete the number from the text as it does not provide information necessary to understand the point of the sentence. The sentence is proposed to read as follows:

A sophisticated satellite-based communications system ~~**is**~~ **has** ~~**replacing**~~ **replaced it,** ~~**The new system will**~~ link**ing** ~~**95**~~ emergency management agencies throughout the state to provide high-speed data, facsimile, and video communications capacities.

Alachua County Comment/Recommendation #3

Emergency Preparedness Element, page III-4, paragraph 4. FYI - Paragraph speaks to storm surge. Inland flooding has killed more people than storm surge. This may be an item to address in the EAR in the future.

NCFRPC Response

No action recommended. The comment does not request a change to the regional plan.

Alachua County Comment/Recommendation #4

Emergency Preparedness Element, page III-7. Table 3.2 is incorrect. The host capacity for Alachua County is 8,897, the Risk Capacity ARC 4496 Compliant at UF is 3,057 and the Risk Capacity ARC 4496 Non-Compliant is 11,512. Our numbers were submitted to DCA prior to the published date.

NCFRPC Response

No action recommended. Council staff reviewed its source material for the table and found the numbers as presented in the table to be correct. The information was supplied to the Council by the Florida Department of Community Affairs, January 3, 2000. The regional plan seeks to use the same age of information for all north central Florida counties. This is important for monitoring change over time. We will update the table to reflect newer information during the next EAR amendment cycle.

Alachua County Comment/Recommendation #5

Page III-9, paragraph 1, line 5. The word affordable is not entirely correct. NFIP is the only flood insurance available (affordable or not).

NCFRPC Response

Concur. Council staff proposes to strike the word "affordable" from the sentence.

Alachua County Comment/Recommendation #6

Page III-10. What is a NOAA radio station? Alachua County is home to a NOAA radio Transmitter operated by the National Weather Service Office of Jacksonville. Clarify if NOAA station. The Gainesville Fire Rescue Hazardous Materials Team is a resource, not a facility. PCS, Inc., has been renamed to Clariant. Recommend adding the County Emergency Operations Centers to the list.

NCFRPC Response

No action recommended. For purposes of the North Central Florida Strategic Regional Policy Plan, a NOAA radio station is a radio-wave emitting device or structure, manned or unmanned, which broadcasts weather information from the National Weather Service. It should be noted that the NOAA, at least in one publication, has used the terms "station" and "transmitter" interchangeably. The reader is referred to http://205.156.54.206/nwr/flframes.html and http://205.156.54.206/nwr/listcov.htm.

No action recommended. For purposes of the North Central Florida Strategic Regional Policy Plan, the Gainesville Fire Rescue Hazardous Materials Team is identified as a regional facility.

No action recommended. To the best of our knowledge, the Potash Corporation of Saskatchewan (PCS) mining operation in Hamilton County has not been renamed to Clariant.

Concur. Council staff proposes to add the Alachua County Emergency Operations Center to Table 3.3, Regionally Significant Emergency Preparedness Facilities.

Alachua County Comment/Recommendation #7

Page III-11, paragraph 2. FYI - Un 1995 the LEPC was under contract to determine facilities with the potential to cause regional impact. The number 20 was a contract number. Recommend contacting the LEPC about current status.

NCFRPC Response

Concur. Council staff proposes the following changes to pages 10 through 12 of the Emergency Preparedness Element Conditions and Trends Statement:

HAZARDOUS MATERIALS RELEASES

Under contract with the Florida Department of Community Affairs, the North Central Florida Regional Planning Council serves as staff to the North Central Florida Local Emergency Planning Committee (LEPC). The LEPC was established in 1988 in response to the federal Emergency Planning and Community Right-to-Know Act (EPCRA) which requires the preparation of local emergency response plans for hazardous materials releases which, for the State of Florida, have been developed utilizing the eleven regional planning council districts.[1] The North Central Florida LEPC is composed of representatives of 17 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 of the LEPC. 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, and ~~**last updated on May 19, 1995**~~ **is updated annually**. The LEPC emergency response plan identifies locations of possible hazardous materials releases based upon known locations of hazardous materials. The plan also delineates vulnerable zones.[2]

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

[2]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.

In addition to the emergency response plan, the LEPC 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. ~~**The LEPC recently completed a study which identifies 20 facilities with the potential of causing regional impacts should a worst-case hazardous materials release occur.[3] A facility is considered regional if a release at its location could affect multiple jurisdictions or if the quantity of hazardous materials requires more resources than are locally available. After identification, the LEPC helps coordinate the development and review of response guidelines between the regional facility and responders.**~~

~~**The methodology developed by the Council in conducting the enhanced analysis could be used to update the 11 individual county emergency management plans to include all north central Florida facilities with a likelihood of causing regional impacts should a hazardous materials release occur. In addition to serving as staff to the LEPC, the Council provides technical assistance to local governments in developing county-level hazardous materials emergency response plans. Between 1989 and 1995, the Council assisted ten of the region's eleven counties in developing either their original plans or revisions to their plans. The Council continues to make this technical assistance available to requesting local governments.**~~

While the LEPC and county hazardous materials emergency response plans have a good understanding of what stationary facilities have in terms of hazardous materials, little is known about hazardous materials moving down roads and railroads in the region. **In 2002, the** ~~**The**~~ LEPC ~~**has not conducted a**~~ **will begin a** commodity flow study of the region's roads**, pipelines,** and railroads. 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.

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 two regional response teams. One of the response teams is run by the City of Gainesville Fire Department while the other is operated by PCS in Hamilton County.

The LEPC has adopted a needs assessment for additional regional response teams to assure a timely response to hazardous materials spills in the western portion of the region. For example, the LEPC has determined that the worst-case hazardous materials accident in Taylor County is the release of chlorine in the City of Perry as the result of a railroad accident. Currently, such a spill is likely to result in a telephone call to either the Tallahassee Fire Department, the PCS emergency response team, or the Gainesville Fire Department. Tallahassee is the closest response team to Taylor County. Nevertheless, the LEPC has determined that the response time of even the closest

[3]North Central Florida Regional Planning Council, Enhanced Hazards Analyses, North Central Florida Local Emergency Planning Committee, Gainesville, Fl, 1994.

emergency response unit, the Tallahassee Fire Department, is too great to adequately protect the public from the release of chlorine gas from a rail car. The LEPC needs assessment notes that response times are 60 minutes or less to hazardous materials accidents in every community within the region except for Perry, Cross City, and Greenville where response times are over one hour. The needs assessment also notes that adequate response times in metropolitan areas is generally considered to be 30 minutes. Given the high costs associated with maintaining hazardous materials response times and the rural nature of the region, the assessment establishes a goal of providing a 60 minute response to hazardous materials accidents.[4]

As noted earlier, the Council staff assists the LEPC in staging hazardous materials emergency response exercises to test the effectiveness of the plans and to provide valuable training to emergency response teams. The LEPC **~~and Madison County~~** plan**~~s were~~** **was** tested **~~on April 9, 1994~~** **during a December, 2001.** **~~with a full-scale~~** hazardous materials exercise. **~~The scenario involved a gasoline truck hitting a train hauling phosphoric acid and anhydrous ammonia.~~** Local responders gained valuable experience from the exercise. **~~The Valdosta, Georgia, Fire Department hazardous materials response team crossed the state line to participate in the exercise. Also, in 1994, 35 classes were held training 671 fire fighters, law enforcement, and medical personnel.~~** **Also, free hazardous materials emergency response training classes are sponsored by the LEPC for first responders including firefighters, law enforcement, emergency medical, and public works personnel. Over 3,700 people have been trained since 1995**. Most of the training **~~was~~** **is** at the awareness-level, in which first responders are trained to recognize, identify, and make the proper notifications for possible hazardous materials incidents.

The LEPC is actively working to reduce the risks associated with hazardous materials **~~to the community as well as to first responders~~**. To assist the regulated community, the LEPC has notified over **~~2,000~~** **2,800** facilities of their potential reporting requirements. The LEPC **~~has~~** also **~~provided~~** **provides** technical assistance to help these facilities comply with the reporting requirements of EPCRA. **~~The LEPC is also implementing a program to inform the public about its "right-to-know." It has held four "How-to-Comply" seminars. In both 1989 and 1991, seminars were conducted in Gainesville and Live Oak. Over 2,000 businesses and government agencies were invited with over 200 persons attending. The LEPC has also compiled a library of information about the program and subject facilities located in the region.~~**

[4]For more information regarding the need for an additional regional emergency response team in Perry, see North Central Florida Local Emergency Planning Committee, Needs Assessment for Additional Hazardous Materials Emergency Response Teams, Training, and Equipment in North Central Florida, North Central Florida Regional Planning Council, Gainesville, Fl, November 17, 1995.

Alachua County Comment/Recommendation #8

Page III-11, paragraph 5. PCS in Hamilton County scaled down operations approximately 6 months ago. Their response team capability is in question.

NCFRPC Response

No action recommended. The PCS, Inc., Chemical Emergency Response Team is still listed in the latest version of the North Central Florida Local Emergency Planning Committee Hazardous Materials Spill Prevention and Emergency Response Plan. While PCS has experienced significant employee layoffs, they may recover. Council staff will monitor the team and may remove it from the Table during the next EAR-based amendment cycle.

Alachua County Comment/Recommendation #9

Page III-14, paragraph 1, line 2. Delete sixteen, the actual number is seventeen. It is named Animal Services.

NCFRPC Response

Concur. Council staff proposes to change 16 to 17, and to add Animal Services to the paragraph as noted below:

> County CEMPs are no longer required to develop or maintain nuclear attack civil protection plans. Each county CEMP is required to address the following ~~**sixteen**~~ **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 CEMPs are ~~**to be**~~ submitted to the Florida Department of Community Affairs for compliance review.

Alachua County Comment/Recommendation #10

Page IV-63, item #13. Alachua County supports sustainability concept in this need statement. Requiring BMPs and or forestry certification would give additional support to (this) general statement.

NCFRPC Response

Concur. Council staff recommends amending Problems, Needs, and Opportunities item #13 as follows:

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 BMPs is important to the sustainability of forests.**

Alachua County Comment/Recommendation #11

Page IV-72, Regional Indicator #17. Include mention of 23 needed stormwater retrofit/stormwater management projects in discussion of flooding in Section III.

NCFRPC Response

No action recommended. The regional indicator identifies 23 north central Florida communities in need of stormwater retrofit projects and/or stormwater management plans. In fact, the number of needed projects and plans exceeds 23, as some jurisdictions need multiple projects. The projects strike Council staff as most appropriately addressed under surfacewater quality. Council staff refers the reader to page IV-39, paragraph 2, which discusses the regional indicator.

Alachua County Comment/Recommendation #12

The NCFRPC SRPP Evaluation and Appraisal Report (December 2000) notes that Regional Policy 4.3.1 calls for coordination between water management districts in the mapping of high aquifer recharge areas to prevent map inconsistencies near District boundaries, but this has not been implemented to date. Alachua County is bisected by the St. John's River and the Suwannee River Water Management Districts. Each district has used different methodologies and assumptions in preparing the maps of high aquifer recharge areas. The regional planning council report states that a threat of a lawsuit could result if a map beyond the jurisdictional limits of the St. Johns River Water Management District is applied county-wide. Alachua County staff have some technical concerns with the SRWMD mapping model as well. As noted by Sloan and Chandwani (ASCE, 1997, p. 12) some of the dangers in groundwater modeling include misconceptualization of the physical system, over-simplification, over-calibration, misapplication of the code, and unrealistic expectations.

NCFRPC Response

No action recommended. The comment does not request a change to the regional plan. For purposes of clarification, the North Central Florida Evaluation and Appraisal Report does not state that a lawsuit could result if a map beyond the jurisdictional limits of the St. Johns River Water Management District is applied countywide. Rather, it notes that one Alachua County municipality, which is located within the Suwannee River Water Management District, chose to include the Suwannee River Water Management District's recharge map in its local government comprehensive plan rather than the St. Johns River Water Management District recharge map due to concerns the local government had regarding the legalities of reliance on a map beyond the jurisdictional limits of the St. Johns River Water Management District. It is Council staff's understanding that the concern was theoretical in nature and that no specific entity had threatened the municipality with a lawsuit over the use of the St. Johns map.

Alachua County Comment/Recommendation #13

Page V-24, Table 5.8.5. This information is dated and doesn't account for the scheduled improvements for several of these segments which will change the operating LOS upon completion.

I-75 from SR 24 to SR 26 is at 85% capacity;
SR 26 from Newberry to SW 154th Ave (GMA) is at 32%;
SR 26A is in the City of Gainesville's jurisdiction;
SR 24 from Archer to GMA is 85%.
They are not operating below their adopted LOS.

NCFRPC Response

Partially concur. Council staff agrees that the information is dated. It is based upon the best available information available to the Council at the time of preparation (July, 2000) of that portion of the Council's evaluation and appraisal report addressing the Regional Transportation Element. The table will be updated to reflect newer information during the next EAR amendment cycle. Council staff will recommend changing the jurisdiction of SR 26A to the City of Gainesville. Further, Council staff review of the source material concurs that I-75 from SR 26 to SR 24, SR 26 from Newberry to SW 154th Ave, and SR 24 from Archer to the GMA are not operating below the minimum adopted service standard and will recommend that these segments be deleted from the table. Alachua County staff is correct in the statement that the table does not take into account scheduled improvements which will change the operating LOS for several of these road segments. This issue is addressed in Table 5.10, however.

Alachua County Comment/Recommendation #14

Page V-28, Table 5.9. SR 26 from Newberry City Limits to GMA is projected to perform at LOS A until 2015 as per the FDOT LOS Summary Report (June 2001).

NCFRPC Response

Concur. Council staff recommends this segment be struck from the table.

Alachua County Comment/Recommendation #15

Pages V-14 through V-29. Check table numbering/sequence on multiple tables.

NCFRPC Response

Concur. Council staff will renumber these tables accordingly.

Alachua County Comment/Recommendation #16

Page V-34, paragraph 3. Typographical error, date of UF campus master plan is 2001.

NCFRPC Response

No action recommended. The paragraph correctly identifies the date of the draft campus master plan as 2001.

North Central Florida Regional Planning Council

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