

# FUTURE LAND USE ELEMENT

## INTRODUCTION

As the traditional keystone of the Comprehensive Plan, the Future Land Use Element sets forth the physical plan for the future development of the County. The Future Land Use Element describes the appropriate location of future land uses and promulgates the policies regulating the location and development of all land uses. The Future Land Use Element shows density and intensity of land uses and considers other factors affecting land use development, such as current development trends, environmental setting, and timing.

While each element within the Comprehensive Plan is important, the Future Land Use Element is the most important as it must be consistent with all other Comprehensive Plan elements and articulate the Goals, Objectives and Policies of other elements in the font of specific land use policies.

The Land Use Map describes the location and distribution of land uses in Wakulla County is the focus of the Comprehensive Plan. It proposes the location and the distribution of the land uses in the year 2020. All policies contained within the plan must be consistent with the Future Land Use Map. Apparent inconsistencies among policies are resolved by the Future Land Use Element itself or at the more detailed scale of project planning and in specific development proposals. All land use development regulations in effect subsequent to the adoption of the plan must be consistent with the Future Land Use Map. The Wakulla County Land Development Code shall rely upon the map for rational basis.

This element addresses land use for all of unincorporated Wakulla County. While the element does not describe in detail the land uses within the incorporated cities of Sopchoppy and St. Marks, some land use aspects of these towns will be discussed.

The Future Land Use Element is a required element; minimum criteria for its content are established in Rule 9J-5, Florida Administrative Code (F.A.C.). This plan was formulated to be consistent with those criteria as well as relevant sections of Chapter 163, F.S., Part 2, the state Comprehensive Plan, and the Strategic Regional Policy Plan.

The following sections will describe the existing land uses and variables that have affected existing land uses which in turn will affect future land use.

### I. GENERAL SETTING

Wakulla County's jurisdictional area consists of approximately 388,288 predominately rural acres or 606.7 square miles with a population density of 48 persons per square mile.<sup>1</sup> The County is located in the northern panhandle region of the state and borders on the north with Leon

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<sup>1</sup> Bureau of Economic and Business Research. Florida Statistical Abstract 2008. Gainesville: University of Florida, 2008. (2008 BEBR)

County, on the south with the Gulf of Mexico, on the west with Franklin and Liberty Counties (Ochlockonee River), and on the east with Jefferson County. The County topography is generally very flat with very gentle slopes. Significant waterways in the County include the Ochlockonee, St. Marks, Sopchoppy, and Wakulla Rivers.

The population of the County was estimated to be 29,417 in 2007, a 28.7% increase from the year 2000 Census population estimates of 22,863 persons (BEBR 2008). The population of the County is projected to be nearly 32,500 by 2010 and 40,200 by 2020 (BEBR 2008). The largest increase in population in recent years has been from net migration replacing natural increase as the leading form of population growth. The population of Wakulla County has been erratic for the last seventy years. From 1940 to 1950 the population declined 3.8% from 5,463 to 5,258. There was little population change between 1950 and 1960. By 1970 the negative growth trend started to shift as the County experienced a 20% increase from 1960 to 1970 and by 1980 the County had increased in population by 72% from 1970.

Dwellings of the vast majority of people are generally located in a north-south corridor in the center of the County. New residential development in these areas can be found close to one of the several state and federal roads in the County. The Existing Land Use Map shows the location of this area. The majority of dwellings in the County are single family detached units. In 2007, 402 Mobile Home tags were sold, up from the 375 sold in 2006.

The County has two incorporated municipalities: Sopchoppy and St. Marks. The combined population of these two municipalities constitutes approximately 2.5% of the County's total population. The number of people employed in the County in 2006 was approximately 3,848 or 13% of the County's total population.

The County's largest employment sector is retail trade with approximately 775 people employed with Accommodation and food services along with manufacturing as the second largest employment sectors with approximately 630 people each employed.

## **II. DESCRIPTION OF LAND USES**

The following table compares the 2007 totals with the previous 2000 calculated land uses acreage totals. Based on the Wakulla County Property Appraisers parcel data, there are a total of 384,745 acres of recorded parcels in Wakulla County.<sup>2</sup> Table 1 details the current land uses as described in the Future Land Use Element in the Comp Plan. The 2007 acreage was calculated from the parcel data provided by the Wakulla County Property Appraisers consistent with the last Future Land Use Map (FLUM) update as of April 20, 2007. Differences between the methodologies used in 2000 and 2007 to calculate acreages by land use resulted in totals that were difficult to compare in some cases. Estimates impacted by the calculation variations are discussed under the following land descriptions.

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<sup>2</sup> Compared to the 2000 land use analysis, there is a reduction in 93 acres, or 0.02 percent decrease in total acreage in 2007. This loss most likely resulted from the conversion of data from one computer software program to another and is assumed that the 2007 calculations are the most accurate.

<b>Table 1</b>		
<b>Future Land Use (FLU)</b>	<b>Acreage</b>	
	<b>2000*</b>	<b>2007</b>
Conservation	<b>222,109*</b>	<b>238,943</b>
Recreation	NA*	NA
Agriculture	<b>128,810*</b>	<b>73,996</b>
Residential	<b>7,325*</b>	<b>65,763</b>
Rural 1 (Agriculture/Low Density Residential)	NA	28,873
Rural 2	NA	26,608
Rural 3 (Rural Residential)	NA	558
Urban 1 (Higher Density)	NA	8,140
Urban 2 (Urban Services)	NA	1,584
Commercial (Non-Urban)	<b>545*</b>	<b>86</b>
Industrial	<b>1,213*</b>	<b>1,827</b>
Sustainable Community	NA	<b>617</b>
Public Facilities	NA	<b>3,513</b>
Incorporated Cities	<b>2,089</b>	NA
Vacant	<b>22,747*</b>	8,690
<b>Total</b>	<b>384,838</b>	<b>384,745</b>

Source: 2000 calculations obtained from Wakulla County's 2000 Evaluation and Appraisal Report Existing Land Use Classification Table 1.0; 2007 acreage calculated using parcel data obtained from the Wakulla County Property Appraisers

\*Multiple land use types used in the calculation.

Land use adjacent to Wakulla County is predominantly conservation on the boundary of Liberty County as most of this land lies within the Apalachicola National Forest. Most of the west half of Leon County's boundary is also of predominantly conservation uses as it also lies within the Apalachicola National Forest. The eastern half of the Leon County boundary is dotted with a few residential enclaves along Highways 319, 61, and 363. In between these residential areas are mostly agricultural uses. West of Highway 363 there are conservation uses. This is also true for the Jefferson County boundary where there is mostly conservation lands of which the majority lies within the St. Marks Wildlife Refuge. Franklin County borders Wakulla County in the southeast portion of the County across the Ochlockonee River where the predominant land use is conservation. Currently there are no areas of critical state concern.

The land use data for Wakulla County follows the minimum requirements of Rule 9J-5, F.A.C., with minor deviations from the basic format of the existing land use requirements. These deviations are described below.

*Existing residential uses are divided into 3 categories, high, medium, low:*

- Low density is defined as being less than 5 units per acre,
- Medium is 5 to 8 units per acre, and
- High being over 8 units per acre.

Commercial, industrial and agricultural uses are divided into sub-categories and are shown on the Existing Land Use Map as such.

Given the rural nature of Wakulla County, with approximately 62% of the total land area belonging to the state and federal governments in the form of the Apalachicola National Forest and the St. Marks National Wildlife Refuge and with the major recreational Use in Wakulla County being its vast natural amenities, recreation and conservation uses have been totaled together to on the Existing Land Use Map and in tabular form.

Educational buildings and grounds, and other public buildings and grounds have been grouped into the public facilities category.

### III. EXISTING LAND USES

#### *A. Residential Land Use*

This category includes land used for residential purposes including: single family, duplex, multi-family structures and group quarters, mobile home parks, subdivisions and condominiums. This category does not include RV and recreational campgrounds, hotels, motels, and other transient housing nor does it include farm residents on active farms.

Residences on active farms are shown as agricultural land uses based on Department of Revenue land use codes. Hotels and motels and other transient housing are shown in commercial land uses, Campgrounds are found in recreation or commercial land use categories.

This category has been divided into three sub-classifications: high, medium and low density residential. Low density residential includes all residential densities less than 5 units per acre. Low density residential dwellings include most of the County's dwellings. A few medium density enclaves are in the Smith Creek area as well as along Ochlockonee Bay and several condominium developments on the Ochlockonee Bay are the only areas in the County of high density. Although there are few areas with medium density residential uses, there is the potential for many more areas of these densities due to the large number of undeveloped subdivisions with lot sizes less than .20 acre. Mobile homes account for about 42.5% of the County's total housing stock.

The largest residential concentration is generally located adjacent to U.S. 319 from the Leon County border south to U.S. 98 in Panacea. A map of development orders by housing type issued shows that this pattern remains. Density and rate of development has greatly increased particularly in the northern areas of the County. The 1990 US Census indicated that there were 4,500 dwelling units within the County of which 3,700 were occupied, thus an occupancy rate of 82%. Of the 4,500 dwelling units, approximately 1,700 or 37% were mobile homes. The 2000 US Census indicated that there were 9,820 total housing units within the County of which 8,450 were occupied, thus an occupancy rate of 91%. Of the 9,820 dwelling units, approximately 4,178 or 42.5% were mobile homes.

#### *B. Commercial Land Use*

As of 1992 there were 100 commercial sites in the County as defined through Department of Revenue codes. More than 80% of these were located on either state or federal systems. The total amount of acres devoted to commercial uses was approximately 600 as of 1992. The majority of

these uses are located on US 319. Most commercial uses consist of various types of retail activity. Much of this activity is in the form of limited strip development along US 319 in Crawfordville and also on US 98 in Panacea. These areas constitute a large percentage of the total amount of commercial uses in the County. It should be noted that many more commercial activities occur in the form of small part-time residential garage type activities. These generally include commercial activities such as small repair services, wood working or other small scale sales or services.

In Wakulla County, most commercial development is typified by low intensity land use. Retail stores, service stations, neighborhood convenience stores, and wholesale/retail seafood stores are typical of strip development in the County. Very little commercial development is found outside the County's central transportation corridor. The location of existing commercial uses is shown on the Existing Land Use Map.

### *C. Industrial Land Use*

As of 1992, there were only 22 industrial sites in the County. These industrial uses consist of predominantly seafood related industries which have been in decline over the last 20 years. The principal industrial activity is St. Marks Powder, which is also the largest employer in the County. St. Marks Powder is a munitions plant that employs approximately 400. The majority of lighter industrial uses are located in the Panacea area. Heavier industrial uses are located in or adjacent to St. Marks. The County currently has no designated or approved industrial parks.

### *D. Agricultural Land Use*

This category includes land used for the production of food and fiber crops and supportive uses: farms; sales outlets such as farmers markets; silviculture production and harvesting; and land lying fallow which is part of a parcel that is currently or has previously been agriculturally productive. It also includes single-family residential units that have been developed on the agricultural land.

Agricultural land uses accounts for approximately 129,000 acres or 34% of the total land area in the County. Of the 129,000 acres, 8,800 acres are devoted to cropland or 7% of all agricultural lands. Pasture lands account for 7,200 acres or 6% of all agricultural lands and silviculture accounts for the largest amount devoted to agricultural lands with 112,710 or 88% of all agricultural lands in the County. Silviculture is by far the most lucrative use of agricultural land in the County. With rapid residential development and platting of subdivisions, these lands are quickly decreasing.

### *E. Recreational land Use*

This category includes land used for neighborhood and community parks, spectator sports facilities, and the many square miles of conservation areas in federal and state lands and in other wilderness areas within the County. As shown in the Recreation Element, Wakulla County enjoys many natural amenities in the form of the state and federal parks and forests; therefore, less emphasis has been placed on manmade facilities than usually occurs in more urban, developed counties. This is due to high recreational value of conservation land in the County. Conservation and recreational uses have been grouped into one category in tabular form on Maps

37-39 and recreational sites that are other than uses found within the national forest or state parks will be delineated by a star on the Existing land Use Map.

The location of developed parks and facilities are of more immediate importance to the patterns of residential development. Playing fields and parks act as buffers between dissimilar land uses and are themselves attractors for residential development.

#### *F. Conservation Land Use*

Areas designated as conservation land use are predominantly state and federal owned parks or wildlife preservation areas. This land use classification includes many areas designated as pastoral open space in the Recreation and open Space Element. The Conservation land use category, of which only a small portion of this category is privately owned land, is the largest land use category in terms of acreage in the County with approximately 238,943 acres (there are relatively few and small parcels of activity based recreational land uses).

The major areas of conservation land use are the Apalachicola National Forest, the St. Marks Wildlife Refuge, the Wakulla Springs State Park and the Ochlockonee River State Park.

Areas inventoried as conservation land uses are, for the most part, devoid of structural development. Existing single-family residences can be found in some areas of conservation lands (such as the Wakulla Beach area).

#### *C. Public Facilities Land Use*

This category includes: all County owned lands, buildings, and rights-of-way; churches; public clubs; health centers; nursing homes; and any other public facilities with the exception of those lands that have been deemed strictly recreational in nature. Public facilities occupy approximately 3,513 acres in the unincorporated County.

#### *H. Transportation Facilities Land Use*

This category includes only the 20 acre airport facility at Panacea. This facility is to be used predominantly by small aircraft. The airport grounds will be marginally expanded by pending the Airport Master Plan which should be implemented by 1994.

#### *I. Historic Land Use*

This land use category includes historic buildings or sites and prehistoric sites which have been listed in the National Register of Historic Places and Florida Department of State, Historical Resources Division, Master Site File. Table 2 shows names and locations of the sites in the National Register.

Site Name	Location	Record Number
Bird Hammock	Wakulla Beach Vicinity	155,136
Fort San Marcos de Apalache	St. Marks	139,468
Old Wakulla County Courthouse	Crawfordville	203,579
Old Sopchoppy High School Gymnasium	Sopchoppy	196,840
Sopchoppy School	Sopchoppy	135,700
St. Marks Lighthouse	St. Marks National Wildlife Refuge	151,135
Wakulla Springs Archeological and Historic District	Wakulla Springs Vicinity	201,713

*J. Vacant and Undeveloped Land Use*

This land use category is only used on the Existing Land Use Map and in tabular form representing the existing land use figures. This category includes vacant undeveloped land and underdeveloped acreage. Most of the land in this category consists of lands platted in subdivisions but not fully developed, land which formerly contained structures but now has no active use, and some agricultural lands lying fallow.

Due mainly to the high amount of undeveloped subdivision lots, nearly 6% of the total land area in the County is in the vacant land use category. Much of the vacant lands are in areas of rapid development in the form of developing subdivision lots. See the Existing Land Use Map.

**IV. NATURAL RESOURCES**

The presence of natural resources in Wakulla County greatly affects the pattern of land use. Forestry-related industries and silvicultural are major components of land use and economics for the County. Minerals, described in the Conservation Element, do not play an economic role but may do so in the future. Natural amenities such as rivers, the Apalachicola National Forest and the St. Marks National Wildlife Refuge are major recreational resources that attract many tourists and visitors. Soil is the major resource for agriculture. Soil types are generally poor for growing crops in the County and only represent a small percent of land used for agriculture. Surface waters, minerals and forest resources are discussed in detail in the Conservation Element. Recreation resources are discussed in detail in the Recreation and Open Space Element.

*A. Topography and Geology*

The range of elevations runs from approximately 0 feet at sea level to nearly 100 feet above sea level in the northwest corner of the County. The topography of the County is typified by very level terrain in which no areas have severe slope limitations to development. A karst, sponge-like topography has developed in the north-central section of the County due to percolation of acidic runoff through the sand into the underlying limestone. The acidic groundwater causes dissolution of the bedrock and the formation of caves in the limestone. The resulting structural deficiencies lead to the eventual collapse of the cave roofs causing sinkholes.

Wakulla County lies entirely within the Gulf Coastal Lowlands physiographic province. This province is characterized by flat, sandy terrain and extends from the coast inland to approximately the 100 foot contour line. In the panhandle of Florida the east-west trending Cody Scarp forms the boundary between the Gulf Coastal Lowlands and the topographically higher Tallahassee Hills to the north.

In Wakulla County, the Gulf Coastal Lowlands include the poorly drained Pine Flatwoods, swamps and the river basins that extend from the Gulf north to Leon County. Surface slope averages about four feet per mile. A series of Pleistocene marine terrace zones based on elevation punctuate the surface of the Gulf Coastal Lowlands. In addition, the Gulf Coastal Lowlands are locally divided into a series of geomorphic subzones.

### *B. Hydrology and Hydrogeology*

These topics are presented in the “Groundwater” section of the Conservation Element.

### *C. Soils*

Soils are one of the most important factors affecting development potential of land. Structures cannot be built on soils with poor load-bearing capacity unless costly methods are employed to overcome the problem.

Soils are also the main criterion when determining the value of cropland. Soils rich in nutrients make good farmland. Very good farmland, rated as unique or prime by the United States Soil Conservation Service (SCS), is composed of soils which produce the highest yields of food crops. Only a limited amount of acreage in the County can be farmed without extensive fertilization and other treatment of the soil due to the sandy and acidic nature of most soils within the County.

Soil type also determines the applicability of septic tank usage for a given area. Soils with appropriate percolation characteristics not classified as hydric soils can often support septic tanks that wet soils cannot. The presence of wet soils is also indicative of wetland vegetative communities. These important wetland communities are discussed in the Conservation Element. The SCS in its Soil Survey of Wakulla County, Florida, March 1991, classified the soils in Wakulla County into 12 major categories. These soils are categorized by the following classifications:

Soils of the Sand Ridges:

- LAKELAND-ORTEGA-ALPIN

Soils of the Low Upland:

- RIDGEWOOD-OTELA-LUTTERLOR
- MORIAH-RIDGEWOOD-ORTEGA
- OTELA-ORTEGA-SHADEVILLE
- OTELA-ALPIN-SHADEVILLE
- RIDGEWOOD-ORTEGA-RUTLEGE

Soils in the Coastal Marshes:

- BAYVI—ISLES—ESTERO
- TOOLES-NUTALL
- CROATAN-DOROVAN
- MEGGETT-CROATAN

Soils of the Flatwoods:  
TOOLES-NUTALL--CHAIRES  
LEON-SCRANTON-RUTLEGE  
Source: U.S. Department of Agriculture

#### *D. Wetlands*

Wetlands were once regarded only as a hindrance to development and throughout Florida were routinely destroyed to make room for development. Wakulla County, however, has been fortunate in this respect. Its population, far less than most counties in Florida, has not exerted the same development pressure on wetlands as has occurred elsewhere in the state. Two-thirds or about 260,000 acres of Wakulla County are covered by varying amounts of wetlands or associated vegetation of which the vast majority is found in the Apalachicola National Forest and the St. Marks Wildlife Refuge. Most vacant land that can be developed lies in the central section of the County where wetlands are much less prevalent. Being in predominantly conservation lands, these wetlands are not directly experiencing the stress of development; although often development surrounding wetlands affects the hydrologic regime. Filling and berming may divert runoff away from the wetlands starving the system of much needed water. Development directly within the wetland can often drive out many species of animal wildlife since much of their protective cover is lost. Removal of a key vegetative species can produce some of the same drastic consequences as diverting water away from the wetland.

Other important and critical functions that wetlands perform include serving as natural water retention systems; regulating the flow of water; protecting otherwise dry upland areas from inundation, and providing the main habitat for many species in the food chain. Wetlands also serve the purpose of flushing by removing excess nutrients and particulates. When the weather is wet or the area is flooded, wetlands accept excess water. When drought conditions exist the wetlands keep the surrounding area from becoming parched.

#### *E. Extractable Minerals*

Wakulla County has several extractable minerals including sand, clay, limestone, and phosphate. Of these minerals only sand is currently being mined. Clay, limestone and phosphate do not meet federal standards for extraction and are not currently economically feasible to mine.

#### *F. Timberlands*

Timberlands are addressed in the Conservation and Agriculture Elements.

#### *G. Flooding*

Wakulla County is subject to flooding due to storm surge from hurricanes. This is delineated on the Federal Emergency Management Administration and Flood Insurance Rate Maps (FEMA/FIRM) 100 Year Floodprone Map Series. These areas include nearly the entire western half of the County. This area is in the Ochlockonee River drainage basin and is characterized by highly impervious soils. Other areas subject to flooding are lands adjacent to the St. Marks River which can experience some flooding during high river stages. Low lying areas throughout the County are susceptible to ponding during periods of high rainfall. The communities of Panacea and Crawfordville experience ponding of low lying areas and the problem is worsened by the

ever increasing amount of impervious surfaces that are added to these communities in the form of parking lots and paved roadways.

### *1. Development Based upon Flood Hazard Suitability*

Wakulla County is subject to periodic flooding due to storm surge from hurricanes originating in the Gulf of Mexico. High water marks for storms occurring in 1966, 1970, 1972, 1975 and 1985 range between 5.0 and 5.9 feet above NGVD respectively. In 2005, Hurricane Dennis impacted Wakulla County and the Florida panhandle. Storm tides of 8 to 10 feet were estimated to have flooded the coastal areas of Wakulla County. The impact of Hurricane Dennis was comparable to the impact of Hurricane Kate (1985) and Agnes (1972). (FDEP, Hurricane Dennis Beach and Dune Erosion and Structural Damage Assessment and Post-Storm Recovery Recommendations for the Panhandle Coast of Florida)

The floodplains of the Ochlockonee and the St. Marks Rivers are subject to flood damage during high river stages. Other low lying areas throughout the County are subject to rainfall ponding during periods of high rainfall.

Proposed development is mostly located in those areas that are designated as Zone B by FEMA/FIRM and are described as areas that are subject to 100 year flooding where depths are less than 1.0 foot or areas subject to 100 year flooding from sources with drainage basins less than 1 square mile.

Wakulla County has enacted an ordinance which prohibits new buildings with first floor elevations less than 4 feet NGVD and less than 18 inches above any adjacent road. More site-specific building codes exist that are designed to limit new construction to minimum heights above sea level in accordance with the FEMA/FIRM flood hazard predictions.

### *2. Development in Flood Prone Areas*

The majority of the floodplain is located in the western half of the County where little development is present. Although the floodplain is mostly located in the western half of the County, much of the County is located within the floodplain. Major areas within the floodplain include Panacea, St. Marks, Shell Point/Spring Creek. The predominant use within these areas is residential uses of various densities and some commercial and industrial uses that are related to the seafood industry. At this time it is estimated that almost 50% of all homes in the County are located within the floodplain. This translates into approximately 2,250 homes. Many homes do not meet current FEMA standards for minimum elevation because they were built prior to those requirements. It is estimated that this could translated into as much as \$112,000,000 worth of property. The damage potential of all structures could be approximately \$196,000,000. This scenario would only be possible in the extreme conditions of a Class 5 hurricane.

## ANALYSIS

### I. FUTURE LAND USE: POTENTIAL FOR GROWTH

This section of the Future Land Use Element summarizes existing conditions and potential development trends and problems. Approaches to managing the expected growth and development of Wakulla County will be based on the analysis.

The conditions to be examined are grouped into two categories: natural conditions and manmade conditions. Included in the first category are factors such as soil suitability for development, topography and the presence of natural resources which may act as impediments or stimuli to growth. The second category is comprised of factors such as availability of potable water, availability of urban services including sewage, solid waste disposal, and transportation facilities.

#### A. Population

The population of Wakulla County, which actually lost population in the 1950's, began to increase in population in the 1960's. From 1970 to 1980 the population started to increase rapidly with 88% more residents than the previous decade. The great increase was almost exclusively due to new migration. Over the past fifteen (15) years, Wakulla County's population growth rate has been one of the highest in the State of Florida, representing the second highest growth rate among the nine surrounding counties. Between 2000 and 2005, the State of Florida grew by approximately 12.1 percent. During the same time period, the unincorporated area of Wakulla County grew at a rate of 17.9 percent based on the population estimates from the University of Florida's Bureau of Economic and Business Research (BEBR). There is not any significant trend of where the new residents come from although many move from Tallahassee to Wakulla County for the country atmosphere and commute to work in Tallahassee. Table X shows the population projections.

Census	BEBR Estimates					Percentage Change 2000-2007
	2003	2004	2005	2006	2007	
2000	24,938	25,505	26,867	28,393	29,417	28.7%

Source: Florida Statistical Abstract, BEBR 2008

There is currently no significant seasonal population in the County. During the year, only a few summertime events would constitute being attractors of out of County population. These events include the Panacea Blue Crab Festival, the 5K run at St. Marks, and the sailboat regatta at Shell Point. These events attract people predominantly from Leon and Wakulla counties with the vast majority of attendance returning to their homes in Wakulla and Leon Counties. One other attractor of out-of-county population is Wakulla Springs. The unique nature of the springs draws people from all around the country although never in large numbers. The lodge, located at the springs, is the largest generator of hotel/motel commerce in the County. The Wakulla Springs Lodge does not experience any seasonal influx of tourist but does consistently receive a year

round occupancy rate of approximately 80% of its 27 units or a year round daily average of 60 tenants. With the exception of Wakulla Springs Lodge, rarely do any of the 11 hotel/motel facilities in Wakulla County reach capacity. If the County did reach 100% capacity, it would account for 375 people (134 units X 2.8 person per unit) not including the small number of people that would stay at one of the various campgrounds or at friends' dwellings. This represents the capacity of a possible seasonal population even though at no time during the year do the existing hotel/motel and camping facilities reach capacity. During what would be considered the peak season, it is estimated that the average hotel occupancy rate is 50% (this percent is actually near the yearly average) and is expected to slowly increase to the year 2000.

### *B. Economy*

Wakulla County's economic base is concentrated in trade, manufacturing and government (*state* and local). These sectors account for approximately 80% of all jobs within the County. The once thriving seafood industry is in decline forcing commercial fishermen into other employment sectors. This is due to: increased competition in commercial fishing, proximity to major markets, pollution of shellfish harvesting areas and catch limitation changes. The large number of workers employed in manufacturing is largely due to St. Marks Powder which employs over 350 workers. St. Marks Powder is the largest employer in the County. Wakulla County does not have any other large industries but the County has the possibility of attracting hi-tech industries due to an increasing highly educated workforce (many people in Wakulla County attend or have graduated from nearby Florida State University and Florida A&M University), location to airport facilities and lowland value in non-coastal areas. Table 5 shows employment by sector. Wakulla County does not have a well defined economic base since over 61% of the County's work force commutes to work in Tallahassee. According to the Enterprise Florida county profile for Wakulla County, the County's unemployment rate is 4.4%.

Table 4	
Average Monthly Private Employment (2007)	
All Industries	3,959
Agriculture forestry fishing and hunting	24
Mining	(NA)
Utilities	24
Construction	552
Manufacturing	638
Wholesale trade	54
Retail trade	775
Transportation and warehousing	67
Information	23
Finance and insurance	(NA)
Real estate and rental and leasing	38
Professional scientific and technical services	311
Management companies and enterprises	(NA)
Administration and Support	86
Educational Services	(NA)
Health Care and Social Assistance	307
Arts Entertainment and Recreation	72
Accomodation and Food Service	627
Other Services	114
Unclassified	(NA)

Note: Average monthly private employment covered by unemployment compensation law by major industry group

Source: BEBR 2008

### C. Residential Disbursement: the Settlement Pattern

The settlement pattern of Wakulla County is generally determined by the location of federal and state owned lands or by large silviculture interests. Nearly the entire western half of the County lies in either the Apalachicola National Forest or the St. Marks National Wildlife Refuge. The eastern fifth of the County lies in silviculture interests or the St. Marks National Wildlife Refuge. Over 80% of coastal areas also lie in conservation land. This leaves a central corridor where the majority of development occurs. Map 7 shows the location of conservation lands in the National *Forest* and Refuge. Current growth patterns show several general trends. These include low density development in and adjacent to Crawfordville and Panacea. Other areas of clustering of low density development include Medart and Newport. The communities of Shell Point and Spring Creek have higher densities than the aforementioned communities, but are in much smaller geographic areas. One of the fastest areas of growth is north of Highway 267. This area is growing duo to the increasing population of commuters that work in Tallahassee and want to live in a country environment without having to travel far to work. These fast developing areas north of Highway 267 are of special concern due to:

1. the vast majority of new residential development not receiving water from public or private water systems and the lack of public wastewater facilities;
2. closeness of these areas to the Floridian Aquifer which is at or near ground level in most of these areas; and

### 3. abundant karst topology.

See the Conservation Element for details of environmental constraints in these areas. Another problem related to the spatial distribution of residential populations of the above mentioned communities in the northern section of the central corridor region of the County (excluding Crawfordville) is the residential subdividing of land in a random fashion. These subdivisions are often located away from populated areas and often include lot sizes of a half acre or less. The subdividing of rural areas may only result in insufficient County services when future buildout occurs. Boundaries should be set to include populated areas adjacent to Crawfordville leading to the formation of an urban service area with outlying rural areas subject to strict subdivision regulations that allow low density subdivisions that promote more efficient use of County services.

## **II. ANALYSIS OF NATURAL CONDITIONS AFFECTING DEVELOPMENT**

No other factor is as influential to development potential as the natural condition of a site. Large buildings cannot be constructed on soils unable to bear the load of the structure; wells for domestic water use cannot be placed in areas of known groundwater contamination; and a roadway cannot be constructed over forming sinkholes. Yet, at different times and places this has occurred. Although not always foreseeable, such mishaps can usually be prevented through proper and relatively inexpensive planning or relatively expensive site modification.

To rely primarily on site modification rather than proper planning is a mistake. Many problems result from modification of extreme constraints. Adverse impacts to the environment, prohibitive to development costs and unattractive sites are often the result of excessive modification. Subsequently, the Wakulla County Planning Department produced a “natural limitation to development map”. This is delineated by limitation to development due to high aquifer recharge and depth to the potentiometric surface of 25’ or less and soil limitations to community development. Development will be directed away from areas that are shown to have the most limitations when possible.

## **III. VACANT LAND ANALYSIS**

This land use category is shown in tabular form in the existing land use acreage figures and it includes vacant and undeveloped acreage. Most of the lands in this category, 6Th, consist of lands that are in subdivisions which are platted but not fully developed or are not developed at all. Also included is lands which formerly contained structures that are now inactive and agricultural land which is lying fallow.

22,700 acres (6.93%) of land area within unincorporated Wakulla County is classified within the vacant land category. Most of this acreage consists of land adjacent to U.S. 319 from the Leon County boundary south through U.S. 98 to Panacea. Also much of the vacant acreage consists of land adjacent to the Wakulla River from Crawfordville and east to Highway 363. This area contains the largest amount of vacant acreage consisting of predominantly vacant subdivision lots and some fallow agricultural lands. Although vacant lands in Wakulla County make up a relatively small portion of County’s total acreage, vacant lands account for 61% of all potential development parcels in the County.

#### A. Soil Suitability for Development

A principal factor that determines whether a particular site is developable is the soil types. Suitability for septic tank usage and for structural support and stability are important properties of soil. For Wakulla County, in areas where most vacant parcels are available for development, soils are generally good. In the north two thirds of the Hartsfield Survey north to the boundary of Leon County where most of the vacant parcels are located the soils generally range from the Lakeland-Ortega-Alpin to the Otela-Alpin-Shadeville, both of which are well drained and would provide adequate percolation for septic tanks usage. Although these soils are suitable for structural development, some severe groundwater related limitations may exist. A high dome of the aquifer in this area results in a high recharge rate with a high potential for contamination of the aquifer and potable water as the residents of this area predominantly use private wells. One other area of noticeable vacant acreage with large numbers of vacant parcels is adjacent to U.S. 98 south of Crawfordville through Panacea to Highway 372. The soils in this area are predominantly Ridgewood-Ortega-Rutlege soils which may be poorly drained. Generally, this area of vacant land is suitable for structural support but may not support septic tank usage.

#### B. Topography and Slope

The vast majority of vacant lands are located in the central portion of the County. The topography there is one of gentle relief with a slope of less than eight degrees. The only area in the County which has a high contour gradient is in the extreme northwest. Elevations there exceed 100 feet and slowly decline to the southeast to sea level. This limited area of highly elevated land is mostly contained in the Apalachicola National Forest with a few very small enclaves of residential use in which runoff should not be a significant problem since the amount of vacant land in that area that can be developed is insignificant. The County as a whole is not experiencing problems from runoff due to the predominance of flat topography, most developed land being in areas of well drained soils, and the lack of intense development.

#### C. Natural Resources

The presence of natural resources in Wakulla County affects the land use pattern. The combination of agricultural and conservation land use designation accounts for 92% of Wakulla County's total land area. This fact indicates the importance of natural resources for the County. Agriculture includes 34% of all the land use in Wakulla County of which forestry is the predominant use. Natural amenities such as the Apalachicola National Forest, Wakulla Springs, and the Gulf coastal areas are major recreational areas that attract tourists and visitors. Mineral deposits do not play an important role as a natural resource in Wakulla County. A more in-depth discussion of natural resources can be found in the Conservation Element and in the Recreation Element.

#### D. Wetlands

Development pressure on wetlands in areas is unfortunately inevitable to some extent in Wakulla County. These areas are adjacent to the banks of the Wakulla, Sopchoppy, Ochlockonee Rivers, and other areas.

#### E. Groundwater Resources

A large area of vacant land in Wakulla County is of an upland type located south of the Leon

County border adjacent to Highway 267 near Highway 363 and south through the Hartsfield Survey to U.S. 98. However, the average depth to groundwater is 5 to 25 feet with a correspondingly high groundwater recharge potential. Approximately 35% of the County residents receive their potable water from private well sources. Improper design of future residential sewage systems may present a pollution hazard to the water supply. Existing sewage systems, as well as other point sources such as agricultural and industrial land uses, may cause significant deterioration of groundwater quality. This concern of protection for the groundwater resources is addressed by planning for the proper placement and density of development. Nap 10 shows altitude to the top of the Floridan Aquifer. If contamination reaches the aquifer, potable water sources could be threatened for the entire region down gradient. Groundwater pollution is extremely expensive and difficult to clean *up*. For these reasons many agencies have developed policies and regulations to deal with this problem in areas of proposed redevelopment or new development. The concern for groundwater protection in this element is noted by recommending preclusion of improper or intense development in aquifer recharge areas. The general location of the recharge areas is shown on Map 11. Map 12 shows the potentiometric surface of the Floridan Aquifer or the depth at which water from the aquifer will rise in an encased well.

#### F. River Resources

Much of our past development is along either the Ochlockonee, Sopchoppy, Wakulla or the St. Marks Rivers. The Ochlockonee River has experienced sprawling residential development, albeit in very small geographic locations. Most developed areas are served by private wells and septic systems and may experience groundwater contamination along with surface water contamination to the Ochlockonee River. There are only a few areas of remaining vacant land along the Ochlockonee that could be developed since most of the remaining land lies in the Apalachicola National Forest.

Like the Ochlockonee, much of the Sopchoppy River lies in the Apalachicola National Forest. North of the City of Sopchoppy where development has occurred, it is served by septic tank and private wells. Fortunately the density in these areas has been low average lots sizes of approximately 1.00 acre. There are five subdivisions in the area with a combination total of about 150 lots. Of that, approximately seventy five have been developed. Also north of the Sopchoppy River is approximately 2,000 acres of agricultural land. This land should remain as agricultural use due to the increased pressure that would be placed on the river from residential uses without supporting central sewer service and other infrastructure needs.

The Wakulla River lies within the central development corridor of the County and *has* several developed subdivisions on either side of the river from Highway 365 to the City of St. Marks. Average lots sizes in these subdivisions are over 1 acre and are served by small private wastewater plants. The other areas along the river are either agricultural or conservation. Agricultural land adjacent to the river should not be subdivided into lots of less than 10 acres within a 1/4 mile of the river. Policies to address these issues are found in the Goals, Objectives and Policies section of this element.

The St. Marks River enters Wakulla County from Leon County where there are several development parcels abutting the river. All other sections of the river lie in either conservation areas or land owned by St. Joe Paper Company which uses the land for silviculture purposes. That use continues south along the river until it reaches the City of St. Marks where there are mixed uses including industrial and commercial.

**G. Geological Impediments to Development — Karst Geology and Sinkhole Development**  
As discussed previously in this element, a significant portion of Wakulla County is located within the Woodville Karst topographical region; more particularly in the central and northeastern areas of the County. This type of underlying geology is prone to sinkhole formation. It is often difficult to predict the time and exact location of a developing sinkhole but the area prone to sinkhole formation is indicated on Map 13. This map is generalized and development in these areas should not necessarily be highly restricted.

#### **H. Historic Resources**

Currently there is only one historic site in the County that is on land not in conservation. This is the Old County Courthouse in Crawfordville. Policies addressing conservation of federal, state, and locally significant historic sites will be included in the Goals, Objectives and Policies section of this element.

### **IV. AN ANALYSIS OF MANMADE CONDITIONS AFFECTING DEVELOPMENT AND REDEVELOPMENT**

Manmade conditions, like natural conditions, affect the development potential of an area. People can provide services and infrastructure, which make a place attractive to live in, but they can also degrade an area to the extent that it is no longer safe for habitation. This section discusses blighted areas, areas served by central water, central sewer and other services as well as areas contaminated by pollution.

Blighted areas are considered to be areas where sound growth is substantially impaired by unsanitary or unsafe conditions, faulty lot layouts, inadequate infrastructure or services, inadequate parking facilities, or any conflict between incompatible land uses. Blighted areas are economic and social liabilities to a community. Structures are often left unmaintained and deteriorate as redevelopment does not occur. The area becomes useless for most land uses and remains a burden to the community. There are several blighted areas within Wakulla County (Panacea and Buckhorn). The blighted conditions of these areas are similar in that they have, in very localized areas, many dilapidated or substandard housing predominately in the form of mobile homes. Panacea has additional blighted conditions in the form of dilapidated seafood processing buildings that were abandoned as the seafood market became more depressed. Redevelopment of these areas should be encouraged through incentives to the private sector. The County should also seek grants through federal and state sources. The redevelopment of these areas will be addressed in The Goals, Objectives and Policies section of this element. To ensure that there will not be future blighted areas, no development should be permitted to occur in these areas without appropriate services and supporting infrastructure. Land use conflicts should be minimized through the separation and buffering of incompatible uses and development shall be properly timed to occur as services and infrastructure become available. The Goals, Objectives and Policies section of the element and the Housing Element provide implementing policies designed to prevent blighting in Wakulla County.

#### **A. Availability of Services**

The service areas map has been designated by the County as the location of intensive future development. Growth will be directed to these areas of urban services where central sewage, central water and other services that should be concentrated for more efficient delivery will be

provided. To provide alternatives to the negative impacts associated with sprawl and random growth without adequate facilities, the location of urban service areas were selected for the following reasons: the existence of concentrations of development or high concentration of existing subdivided land; efficiency of service delivery; avoidance of prime agricultural lands, and minimal impact on the environment.

All new commercial, industrial, and residential development will be directed to urbanizing service areas. Central sewer and water, drainage facilities, electrical utilities, telephone lines, roadway capacity, and schools will be logically extended to new development in these areas by merely extending existing utilities and facilities (with the exception of the future Crawfordville Sewer System). These measures are necessary to halt random development, leapfrogging, and sprawl. Through infill practices in the urbanizing service areas, Wakulla County can protect the new growth potential of the County and provide residents with a full range of services in an efficient and economical manner, without the generation of deleterious environment or infrastructure effects.

*The Costs of Sprawl*, a publication funded by the Federal Council on Environmental Quality, the Department of Housing and Urban Development, and the Environmental Protection Agency, was prepared by the Real Estate Research Corporation to reveal:

1. total capital costs likely to be borne by local government (and ultimately the taxpayers) are reduced as much as 62% in planned developments because of the lower *costs* of roads and public facilities;
2. savings between planned and sprawl development in operating costs borne by government are five to six percent of total costs;
3. planned development shows significant environmental advantages over sprawl including a 20 to 30 percent reduction in air pollution, conservation of farmland and an overall lessening of noise;
4. energy consumption, because of reduced automobile travel, will be from 8 to 14 percent less in planned development than in unplanned development; and
5. various personal costs such as time spent in travel, traffic accidents, and various other costs are likely to be less in planned development than in sprawl.

A detailed discussion of the facilities planned by the County can be found in the Infrastructure and Capital Improvements Elements.

## **B. Access/Transportation**

Perhaps the most important factor affecting the location of a development is access. Residential areas are often located with easy access to the major employment centers of Wakulla as well as Leon County minimizing the journey to work. Central water, central sewer, underground cables, and underground gas mains are often extended along transportation corridors. Without easy access to supplier and consumer markets, commercial and industrial enterprises may not survive.

Wakulla County is fortunate that many federal and state roads establish an abundance of routes that can be taken for various traveling opportunities. Major transportation routes can be found in

the Transportation Element of this Comprehensive Plan.

Most residential development has occurred along one of the state or federal roads, particularly on Highways 365, 363, and U.S. 98 and 319, in a random fashion. U.S. 319 is the main transportation route for residents commuting from Wakulla and Franklin Counties to Tallahassee. Other major commuter routes include Highways 61 and 363. Access to these roads is good. Unfortunately, these roads are also used for local traffic since most neighborhood roads are unpaved and maintenance difficult. The County needs additional road paving projects for the projected service area to take pressure off of the main commuter roads.

### **C. Historic Resources**

The Old County Courthouse is currently the only historic site on the national register that is in a developed area. All other sites are located in conservation areas. There are other sites that are currently being considered to be listed in the National Register. These other sites are discussed in the Housing Element. The Goals, Objectives and Policies section will address proper buffering of new development to allow the site and future sites to retain their integrity.

### **D. An Analysis of Land Use Problems and Potential Land Use Problems**

There are several existing and potential land use problems in Wakulla County. Several examples are discussed below.

1. Development in Flood prone Areas - Development in flood prone areas produces many problems: safety and well-being are threatened by floodwaters, property damage can be extensive, development costs are higher, degradation of the environment often occurs, and in some cases, urban services and facilities cannot be extended to these areas.

Hundreds of units have been built in flood prone areas in the coastal communities of Shell Point, Spring Creek, Panacea, the Ochlockonee Bay area, and along the four major rivers in the County (Ochlockonee, Sopchoppy, Wakulla and the St. Marks Rivers). In most of these areas, even a minimal hurricane could cause major property damage. With the implementation of the Wakulla County Building Code, Water Management District Rules, and the Federal Emergency Management Agency Flood Insurance Program, the amount of potential property damage has been reduced. However, there is still potential for great loss to property and life. Future development in floodprone areas will be carefully managed. The floodprone areas along rivers will be limited to low density residential development and existing non-conforming uses can be brought into conformance over a period of time. Development in these areas will be allowed only after all required permits are obtained from the appropriate agencies.

2. Random development and development in areas without adequate infrastructure - Another problem is development without a geographic pattern. This explains the number of platted subdivisions in the County. There are approximately 16,000 subdivision lots that are geographically throughout the central development area of the County. Many are located in areas without adequate public infrastructure such as paved roads, potable water, or central sewer systems. Intense development in areas not served by central water or sewer often results in the degradation of the environment. The County will only allow only low density development in platted subdivisions outside designated service areas. The urbanizing services areas are delineated on the Future Land Use Map as areas of highest density and intensity. The two areas are generally located in Panacea and Spring Creek/Shell Point/Live Oak Island. Existing random

development has caused many incompatible land uses. An example is Panacea, where residential uses are adjacent to heavy industrial uses including several seafood processing plants and a concrete mixing facility. Future industrial and heavy commercial facilities will not be located in that area or other areas of existing residential density. New industrial or commercial developments will be buffered from existing residential uses to reduce incompatible land uses. The decline of water quality in many lakes, rivers and wetlands is often a direct result of septic tank inadequacy in treating effluent. Perhaps more important, especially with the increase in population, is the potential danger to public health caused by the contamination of potable water from septic tank leachate. Leachate problems can be abated through the prohibition of land uses producing hazardous or toxic run-off or “nonpoint-source” pollution in environmentally sensitive areas; the restriction of residential development to very low densities in such areas; and, the direction of growth to areas that are or will be served by central sewer and water facilities.

3. Strip commercial uses - The existing commercial shopping areas in Wakulla County have sprawled along arterial roadways, particularly on Highway 319 in the unincorporated community of Crawfordville. These areas were developed in a linear strip pattern to utilize the advantages of high traffic volumes and open access. With a small rural population and the location of a major commuter highway, such as 319, this sprawling pattern achieved the desired end results. Unfortunately, with many curb-cuts, unlimited access, no frontage roads, and high peak traffic volumes, strip commercial areas become unsightly developments with poor access often leaving some retailers virtually unrecognizable to the motoring consumer. Highway safety problems are increased by high peak-hour traffic volumes and the difficulty of entering and exiting the arterial, often generating the need for expensive improvements. As the population increases, development along arterials will be restricted to promote development near commercial nodes or intersections of arterials and collectors. That locational pattern is far more advantageous to commercial development as concurrent infrastructure can be provided with easy access by service roads connected directly to arterial roads.

## **V. ANALYSIS OF THE AVAILABILITY OF FACILITIES**

### **A. Sanitary Sewer Systems**

Wakulla County currently has three significant sewer systems serving localized residential and commercial uses, several small wastewater treatment systems and one regional system. The small systems provide service for small institutional uses and one industrial use but do not serve the residential population. All the significant sewer systems, which serve predominantly residential and commercial uses are located at the Shell Point/Spring Creek area, and the Panacea and Ochlockonee Bay areas. At present, these systems serve less than 10% of the County’s total residential population with the remainder using septic systems. The Oyster Bay Sewer System, located in Section 121 of the Hartsfield Survey, is currently the second largest system with a total capacity of 60,000 gallons per day (GPD). The Oyster Bay system’s demand currently is 8,000 or 13% of total capacity. With the projected growth of the area taken from population projections and building permit data, this system adequately serves the existing uses and will be able to serve projected growth of the Oyster Bay area through the year 2000 (1). The third largest system in the County is Talquin system at Paradise Village. This system currently has a capacity of 30,000 GPD with a demand of 13,000 or 43% of capacity and is able to serve existing uses

and projected uses through the year 2000 (1). The last significant existing sewer treatment system is the Shell Point facility which serves Shell Point. This system has a capacity of 24,000 GPD and a current demand of 19,200 or 80% of capacity. This system sufficiently serves the existing and projected demand through the year 2000 although present development in the area of the Shell Point will slowly increase demand (2).

Due to high measures of fecal coliform caused from septic tank leakage in turn causing pollution of shellfishing waters off the southern end of the County, the largest wastewater collection and treatment system has been constructed to serve unincorporated communities of Panacea down to the Ochlockonee River including areas running east to west along the river. It is estimated, utilizing an average daily per capita flow of 100 gallons per day with a total capacity of 200,000 GPD, that the sewer system will be able to serve the current population (approximately 1700-1800) in this region of the County. As the plant nears capacity, it will be necessary to expand the capacity of the plant to adequately serve the growing population. More on this regional plant can be found in the Infrastructure Element and the Capital Improvements Element. (4)

Currently where the majority of development orders have been and are being issued, there are no supporting sewer systems other than several very small package systems that serve small isolated subdivisions. Most new development is generally from U.S. 319 west to Highway 363 and north from U.S. 98 to the Leon County boundary. This area will be served by septic systems with extreme modifications due to the nature of the soils being well to excessively drained and the high aquifer recharge. Modifications include building elevated septic systems, excavating different soils as a base and elevating the system, or the use of aerobic systems. All of these above mentioned modifications are currently being used and will be used in the future to protect groundwater quality. (4)

**SOURCE:**

- (1) Talquin Electric Cooperative
- (2) Florida Department of Environmental Protection (FDEP)
- (3) Post, Buckley, Schuh & Jernigan
- (4) Florida Department of Health

**B. Solid Waste**

There is only one solid waste disposal site in use. This facility is known as the Lower Bridge Landfill. It is currently at 80% of capacity and with the current rate of development in the County, may reach capacity by 1995. At present, this site sufficiently serves Wakulla County. With knowledge of the need for a new land fill, the County is reviewing possible sites that will provide adequate service for Wakulla County after 1992. Regional solid waste disposal sites outside of Wakulla County are also being considered. In addition to the landfill, there are 13 solid waste transfer disposal facilities and will be able to provide an adequate level of service to areas where development has occurred.

**C. Potable Water**

Potable water systems adequately provide water to areas they serve, which is approximately 50% of the County's existing population. All systems in Wakulla County are running at 40% of capacity or less and will serve the future development through the year 2000 based on building

permit data and reports from the various water companies that serve Wakulla County. For locations on U.S. 319 just north of Crawfordville to the Leon County boundary and west along Highway 267 to Leon County, a majority of this area currently does not receive potable water from any of the water systems in the County and must rely on private wells. The water quality of samples taken from private wells in this area has been good; however, just north in Leon County where samples were taken many were rated as poor (Lake Munson, Munson slough and Eight Mile Lake). This suggests a potential problem for ground and surface water in various areas in the northern area of Wakulla County. This area is not expected to receive any new water systems or lines to provide potable water service for its existing and future development until the mid-1990's, and must depend upon private wells. One other area in which many development orders have been issued is Wakulla Gardens located east of Crawfordville on Highway 365. This developing area is served by water lines existing prior to development of the area occurred and existing capacity can accommodate projected growth with an adequate level of service. See Infrastructure Element for more detail on the water systems and wells.

#### Sources

- (1) Wakulla County Solid Waste Department
- (2) Wakulla County Planning Department

#### **D. Traffic Analysis**

Presently the Wakulla County road system has no turnpikes, interstates or freeways. Major roadways in the County can be classified as major/minor arterials or collectors. At peak traffic hours these roadways serve a commuter population generally traveling to Tallahassee. The Florida Department of Transportation (FDOT) performs annual traffic counts collected from 20 segments of the County's major collectors and minor arterials

#### **E. Drainage Systems**

Currently, there are no countywide stormwater management systems. With accelerated growth in the County, it will be necessary to implement these systems through provisions in the land development codes to address stormwater requirements of Chapter 17—25 of the F.A.C. and through Section 7—45 of the Wakulla County Land Development Code. Wakulla County is facing some aspects of rapid development and is starting to feel the effects of urbanization by increased demand for services such as roads, sewer *systems*, and other necessary *services*. With development of the County, the needs for most of these services are overt in nature but the necessity of those services have not been realized. This is most evident when discussing the need for stormwater management.

Increased stormwater generated by the clearing of land and creation of impervious surfaces associated with the growth in Wakulla County and urban sprawl has resulted in the beginning of water quality degradation. In Florida, stormwater runoff is the largest contributor of pollutants to lakes, streams and estuaries. Storm— water is responsible for nine times the loading of oxygen demanding substances When compared to loads from point sources. Unless properly abated these loads lead to fish kills, especially in the summer when hot temperatures and frequent rains combine to lower oxygen levels. Storm— water is also responsible for nutrient loads comparable to those of from wastewater discharges. As a result, many waters, especially lakes, are inundated by algae blooms and other undesirable plants. Stormwater is also responsible for SO to 95% of

the heavy metals entering surface and ground waters. Lead, zinc, copper, cadmium and chromium are deposited on highways and parking areas along with oils and greases. The County should, at the least, conduct studies to investigate stormwater drainage needs in the populated areas of Panacea and Crawfordville to evaluate measures necessary to prevent pollutant loading of surface and groundwater.

With this knowledge of the possible flooding hazards related to stormwater runoff, in addition to state regulations in Rule 17-25, F.A.C., the County has adopted section 7-45 in the Land Use Development Code that states: “The stormwater management or drainage system for any subdivision shall provide for drainage of lots, streets, roads and other public areas within the subdivisions as well as containing runoff from adjacent areas that naturally flows into the subject area. Runoff coefficients shall be based on completed projects. All culverts, pipes, bridges installed shall have headwalls on both sides or ends of reinforced concrete or riprap 5:1 ratio in bags meeting Florida DOT standards for riprap”. More detail on stormwater management can be found in the Drainage Sub—Element of the Infrastructure Element.

## **THE PLAN**

This portion of the Future Land Use Element discusses the plan for locating future land uses in Wakulla County. Aspects such as timing of development and provision of services will also be addressed. The key component of this portion of the *Future* Land Use Element is the Future Land Use Map which graphically depicts the locations of future land uses within the County. Listed below are individual sections of the plan describing the various land uses and applicable growth management strategies.

### **I. THE GUIDING GROWTH MANAGEMENT STRATEGY**

Wakulla County has predominantly unspoiled natural resources but is growing very rapidly. With the increased growth of the County it is necessary to plan to manage this growth for increased efficiency in supply of services, protection of the environment with preservation of its natural setting and economic independence for the people and government of Wakulla County. The sprawling development patterns of the past and the existence of abutting incompatible land uses are not acceptable for the future as these are costly and inefficient. The County has numerous natural assets and is certain to attract development, but this growth must be managed properly. These attractors form the basis of the following growth principles and strategies.

1. New service areas provided with infrastructure, services and amenities to make them attractive growth areas are planned for Crawfordville, Panacea, Shell Point and Spring Creek which will be delineated on the Future Land Use Map as potential areas of higher density residential and commercial use.
2. Delineation of future industrial areas.
3. Residential areas of the County will increase, not-in sprawl patterns, but rather in concentrations within urbanizing service areas.
4. Development in the floodplains especially fronting on rivers will be restricted.
5. Tourist facilities and activities promoted by the private sector will be allowed to increase and the necessary support facilities and services will be required.
6. Public access to rivers and beaches will be increased.

7. Open space corridors and trails will be encouraged.
8. The natural resources of the County will be protected and appropriately used.
9. Strip development along the highways will be discouraged. The highways will be treated as corridors of open space and those areas existing within urbanizing service *areas* will be landscaped to maintain and enhance their aesthetic, environmental qualities and public safety.
10. Designated areas of blight will be the targets of economic redevelopment and nuisance code enforcement.

<b>Table 5</b>			
<b>Future Residential Land Use Needs Thru Year 2000</b>			
<b>Year</b>	<b>1992</b>	<b>1995</b>	<b>2000</b>
New Residents	1,995	3,902	5,361
Persons Per Dwelling Unit	2.62	2.52	2.5
Dwelling Units Needed	761	1,548	2,114

<b>Percent and Type of Future Dwelling Units</b>			
SF	27%	27%	2%
MF	5%	5%	5%
MH	68%	68%	68%

	<b>Low Agricultural/Rural</b>	<b>Medium and High Urbanizing Service Areas</b>
<b>Density of Residential Land</b>	0.48%	0.52%

SF — Single Family

MF - Multi Family

MR - Mobile Homes

Source: Wakulla County Building Permit Date, 1990 Future Land Use Map, 1992, Residential Designations

## **II. FUTURE RESIDENTIAL LAND USE**

The Future Land Use Map contains densities that somewhat track existing densities. For purposes of estimating the amount of land necessary for future residential uses, two density categories were selected. High, which includes, areas in the County that are urban, urbanizing or areas of existing communities. The high density category is broken into 3 categories with the highest urban category being up to 10 units per acre for multi-family housing; the next category being 5 to 10 units per acre and the last urban/urbanizing category being up to 2 units per acre. For reasons of estimating the amount of acreage needed for future residential lands uses, it is estimated that the average lot size in the rural residential category is 5 acres. Low density residential land use or agriculture land use is one unit to 2 acres.

<b>Table 6 Future Residential Acreage Needs</b>			
<b>TYPE OF D.U.*</b>	<b># OF UNITS</b>	<b>AVERAGE DENSITY</b>	<b>ACRES NEEDED</b>
<b>YEAR 1992</b>			
SF	205	6 UNIT/ 1 ACRE	18
MF	38	6 UNIT/ 1 ACRE	3
MH	517	6 UNIT/ 1 ACRE	45
<b>TOTAL</b>	<b>761</b>	<b>6 UNIT/ 1 ACRE</b>	<b>66</b>
SF	205	1 UNIT/2 ACRES	197
MF	38	1 UNIT/2 ACRES	36
MH	517	1 UNIT/2 ACRES	496
<b>TOTAL</b>	<b>761</b>	<b>1 UNIT/2 ACRES</b>	<b>731</b>
<b>TOTAL ESTIMATED ACRES</b>			<b>797</b>
<b>YEAR 1995</b>			
SF	418	6 UNIT/ 1 ACRE	36
MF	77	6 UNIT/ 1 ACRE	7
MH	1,053	6 UNIT/ 1 ACRE	91
<b>TOTAL</b>	<b>1,548</b>	<b>6 UNIT/ 1 ACRE</b>	<b>134</b>
SF	418	1 UNIT/2 ACRES	401
MF	77	1 UNIT/2 ACRES	74
MR	1,053	1 UNIT/2 ACRES	1,011
<b>TOTAL</b>	<b>1,548</b>	<b>1 UNIT/2 ACRES</b>	<b>1,486</b>
<b>TOTAL ESTIMATED ACRES</b>			<b>1,620</b>
<b>YEAR 2000</b>			
SF	579	6 UNIT/ 1 ACRE	50
MF	107	6 UNIT/ 1 ACRE	9
MH	1,458	6 UNIT/ 1 ACRE	126
<b>TOTAL</b>	<b>2,144</b>	<b>6 UNIT/ 1 ACRE</b>	<b>186</b>
SF	579	1 UNIT/2 ACRES	566
MF	107	1 UNIT/2 ACRES	103
MR	1,458	1 UNIT/2 ACRES	1,400
<b>TOTAL</b>	<b>2,144</b>	<b>1 UNIT/2 ACRES</b>	<b>2,058</b>
<b>TOTAL ESTIMATED ACRES</b>			<b>2,244</b>

\* - Based on average density of high residential density areas (Urbanizing service areas) -

A Based on average density of low residential areas (rural).

— assumes 48% dwellings will locate in rural residential areas and 52% will locate within urbanizing service areas as shown on the service areas map.

By 2000, the estimate of the residential acreage needed for future growth is 2,244 acres, Currently there is enough acreage in vacant subdivision lots (nearly 5,000 acres) to fill this need.

### III. FUTURE COMMERCIAL LAND USE

Wakulla County has 100 commercial establishments serving a population of 14,444 people or 1 establishment per 145 people. The average acreage for each commercial use is 6.44. Given the amount of growth, 3,902 new residents in 1995 and 5361 for the year 2000, the amount of land needed to accommodate future commercial needs for 1995 and 2000 is 155 and 219,

respectively. The additional acres have been added to the existing acreage as there is no loss of acreage expected in this category.

<b>Table 7</b>			
	<b>Average Size Commercial Establishment</b>	<b>Est. # of New Establishments</b>	<b>Acres Necessary</b>
Existing	6.44*	12	77
1995	6.44*	24	155
2000	6.44*	34	219
	<b>Existing Acres</b>	<b>Acres Needed</b>	<b>Total For Year 2000</b>
	545	219	764

\* assuming a constant average size per commercial establishment  
 Source: Wakulla County Planning Department, 1992.

The number of acres designated on the Future Land Use Flap is much greater than the estimates for acreage needed. This is due to the County’s push for economic development with ongoing studies to determine the need for land being designated for office use.

#### **IV. FUTURE INDUSTRIAL LAND USE**

Currently there are 22 industrial uses in Wakulla County. The majority of the acreage belongs to the Olin Corporation. Land belonging to the Olin Corporation is adjacent to St. Marks’ northeastern city limits and is the largest area of industrial activity in the County. It is expected that there is going to very little conversion of industrial land to other land use categories through the year 2000. The economic base of the County lacks industrial development and the County is promoting clean industrial development. Estimates of acreage needed to supply industrial uses through the year 2000 are not complete although expansion of the Olin Corporation’s facilities to the year 2000 is expected to be near 200 acres. The land adjacent to existing Olin facilities will be used for the expansion. There are no other proposed or planned industrial developments at this time.

<b>Table 8</b>		
<b>Future Industrial Land Use</b>		
<b>Existing Acres</b>	<b>Acres Needed</b>	<b>Total For the Year 2000</b>
213	200*	413

\* projected minimum acres not accounting for any extra industrial development that may occur.

<b>Table 9</b>			
<b>Future Public Land Use Year 1995</b>			
	<b>Existing Acres</b>	<b>Acres Needed</b>	<b>Total For the Year 2000</b>
Phase 1	2,089	180	2,269
Phase 2	2,269	80	2,349

### **Year 1995**

1. Jail Facility 40 Acres
2. Elementary School Medart 40 Acres (Phase 1)
3. Crawfordville Service Area Sewer System 100 Acres (Phase 1)

### **Year 2000**

1. Elementary School Crawfordville 40 Acres (Phase 2)
2. Crawfordville Service Area Sewer System 40 Acres (Phase 2)

Public buildings and grounds, educational facilities, and *other* public grounds are all grouped as public grounds on the Existing *Land Use Map*. Currently there are approximately 2,100 acres of public land in Wakulla County. With the expected growth of the County, an additional sewer system will be placed in the Crawfordville area. The sewage treatment facility will be constructed on approximately 40 acres. In 1992, the County added a new jail facility located on 90 acres in the community of Crawfordville.

Another addition to the public use acreage is a proposed elementary school to be located in Crawfordville. The school will be built on 80 acres before the year 2000.

## **V. FUTURE RECREATION LAND USE**

Currently additional public recreational land is to be added in the next planning period. The amount is based on a per capita/acreage ratio identified in the Goals, Objectives and Policies of the Recreation and Open Space Element.

## **VI. FUTURE HISTORIC RESOURCE LAND USE**

There are several sites which will be added to the existing inventory of locally significant historic sites. They include the Adams Plantation House, Walker House and, what is now the Harvey-Young Funeral Home. These sites are on approximately 5 acres of land.

## **VII. FUTURE AGRICULTURAL LAND USE**

Future agricultural land is expected to decline as well as the land in the vacant category. The acreage in these categories will be reduced through land converted to commercial, industrial, residential and public buildings and grounds. Much of the reduction of agricultural land is in the form of timberland converted to the above mentioned uses.

Very low density land uses will be permitted in this category of not more than 1 unit per five acres.

## **VIII. FUTURE CONSERVATION LAND USE**

Future conservation land uses may be divided into the sub classifications of preservation and conservation. Preservation lands are defined as lands owned or leased by the federal, state or local government which are managed for wildlife protection and not for development. Development within these areas shall only be approved if it is consistent with the management plan adopted by the entity managing the land. Any lands transferred to private ownership shall become conservation.

Conservation lands are defined as lands owned by public or private persons which are wholly or partially within sensitive environmental areas including: freshwater, estuarine and coastal wetlands, the 100 year floodplains of the Ochlockonee, Sopchoppy, Wakulla and St. Marks Rivers; beaches and primary dunes; coastal high hazard areas; and other areas identified in the Conservation Element, Coastal Management Element, or the Future Land Use Element.

Within these areas development shall be approved only if it complies with the performance standards designed to assure the protection of water quality, natural water flow patterns, and continuation of the vitality of the plant and animal communities. Residential development will be limited to one unit to twenty acres.

<b>Table 10</b>		
<b>Total Estimated Additional Acres Needed</b>		
	1995	2000
Commercial	219	250
Industrial	200	200
Public	180	80
Recreation/Conservation	0	0
Historic	5	0
<b>Total</b>	<b>599</b>	<b>80</b>

<b>Residential</b>	
1995	258 acres to 3,096
2000	358 acres to 4,288 acres