Columbia County Growth Management Plan Update

Community Assessment

2005

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Community Assessment

Columbia County completed a thorough growth management plan in the year 2000, called "Forward 2020." The 2000 growth management plan created a vision for the future of the county and outlined key policy objectives related to how the county should develop. The state of Georgia requires local governments to update their plan every 5 years and Columbia County has taken this opportunity for a growth management plan update to incorporate the latest planning standards from the state which includes three components: the preparation a Community Participation Program, a Community Assessment, and a Community Agenda. This document presents the community assessment of the Growth Management Plan Update and provides an analysis of existing conditions and potential opportunities and well as issues that will be further defined and addressed as part of the Community Agenda – the final component of the plan update.

1.0 Population

Introduction

An understanding of a community's past, present, and projected population characteristics serves as the basis of any comprehensive planning effort. This chapter provides an overview of Columbia County's residents and households, including past trends, the population's current characteristics, and forecasts of the future. The data in this chapter provides a basis for all other elements of the Growth Management Plan. Future population and housing data, along with future employment forecasts, help determine housing demand and employment opportunities, the need for infrastructure improvements, and future land use. This information in turn can help shape land development patterns that are consistent with the goals and policies established in the other elements of this Plan.

In all cases, the most recent data available is presented in this chapter, even though that data may be several years old or even no more recent than the last census, taken in 2000. The primary sources for population data include the US Census and the Georgia Department of Community Affairs.

The Planning Area

Columbia County is one of five counties that comprise the Augusta-Aiken Metropolitan Statistical Area (MSA). The MSA includes Richmond and McDuffie Counties in Georgia and, in South Carolina, Aiken and Edgefield Counties, all of which are organized socially and economically around the MSA's central city, Augusta. On the Georgia side of the Savannah River, Columbia County is a member of the Central Savannah River Regional Development Center (RDC), which is also centered on Augusta. In examining statistical comparisons to Columbia County's geographic area,

data is often presented in this chapter for McDuffie and Richmond County as Columbia's closest and most relevant neighbors. In some cases, where relevant, comparisons to the other counties in the MSA and the metro area itself are given, as well as comparisons to Georgia as a whole.

Technically, Columbia County's Growth Management Plan only covers the unincorporated portion of the county, particularly for land use. The county's two cities—Harlem and Grovetown—have their own planning programs. However, to understand demographic trends, it is best to consider the county as a whole and not isolate the smaller but growing communities of Harlem and Grovetown.

Population Trends

According to the 2000 Census, about 42 percent of the people in the MSA live in Augusta-Richmond County, while Columbia County is home to 19 percent. Including McDuffie County, two-thirds of the MSA's 477,000 people are located in Georgia.

The Augusta region has experienced steady population growth over the last twenty years, and Columbia County has outpaced the rest of the region in population growth. Columbia County has accommodated approximately 2,500 additional people every year for the past twenty years. Columbia County's population growth in the 1990s was slightly less than population growth in the 1980s, but still fast-paced. The current population is estimated at just over 100,000 people, and population growth in Columbia County is expected to continue at a similar rate for the next twenty years.

Five County MSA		
	Year	
	1990	2000
Total population	415,184	477,441
Population Increase		62,257

Source: US Census Bureau, SF1, 2000.

Regional Distribution of Population by County, 2000		
	Population	Percent
Richmond County, Georgia	199,775	41.8%
Aiken County, South Carolina	142,552	29.9%
Columbia County, Georgia	89,288	18.7%
Edgefield County, South Carolina	24,595	5.2%
McDuffie County, Georgia	21,231	4.4%
Five County Region Totals	477,441	100.0%

The two major causes of population growth are new births and migration. Net migration rates into Columbia County are estimated to be significant. In the five year period from 1995-2000, approximately 24,300 people migrated into Columbia County, while approximately 14,000 people migrated out of the county, resulting in a net in-migration of over 10,000 people. About half of these in-migrants came from elsewhere in Georgia, while about half came from other states.

Columbia County: Migration Patterns		
Location in 1995	Columbia County, Georgia	Percent
Total	83,135	
Same house in 1995	44,323	53%
Different house in 1995	38,812	47%
Same County	12,593	15%
Different County	24,385	29%
Same state	11,997	14%
Different state	12,388	15%
Foreign country or at sea	1,792	2%

Source: US Census Bureau, SF1, 2000.

Population Composition

As the population of Columbia County grows, its composition also changes. Probably the most significant compositional change of the population in the county is age distribution. All age segments have increased in size, but the distribution of population among the different age groups has changed. The adult population between 35 and 55 has grown most rapidly between 1980 and 2000. Meanwhile, the adult population between 21 and 34 has grown very little, especially in the decade from 1990-2000. The five-County region has shown some similar trends, losing population in the 25-34 year old category between 1990 and 2000. A second important trend is the growth in the population 65 and older, which is expected to continue. This growth in the over 65 population is also happening in the larger Augusta region.

Columbia County: Population by Sex			
	Year		
	1980	1990	2000
Total population	40,118	66,031	89,288
Male population	NA	32,917	43,630
Female population	NA	33,114	45,658
Population Increase		25,913	23,257

Columbia County: Population by Age					
Age	1980	1990	change in %, 1980-1990	2000	change in %, 1990-2000
0 – 4 Years Old	3,547	5,404	-0.5%	6,198	-1.2%
5 – 13 Years Old	6,715	11,593	1.1%	15,498	-0.1%
14 – 17 Years Old	3,272	3,147	-3.1%	4,734	0.6%
18 – 20 Years Old	2,042	2,789	-0.8%	3,283	-0.5%
21 – 24 Years Old	2,692	3,099	-1.8%	3,221	-1.0%
25 – 34 Years Old	7,704	11,880	-0.8%	11,104	-5.3%
35 – 44 Years Old	5,578	12,713	5.4%	16,575	-0.5%
45 – 54 Years Old	3,902	7,295	1.5%	14,128	4.8%
55 – 64 Years Old	2,644	4,239	0.0%	7,417	1.9%
65 and over	2,022	3,872	0.9%	7,130	2.1%
Total	42,098	68,021		91,288	

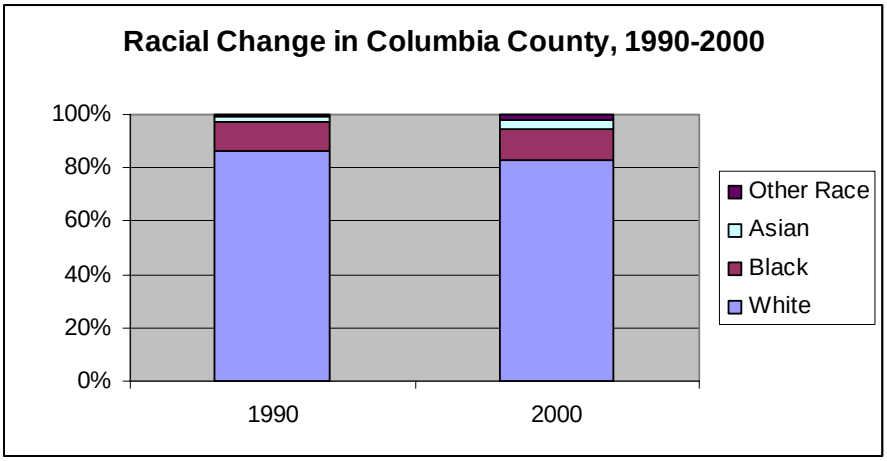
Source: US Census Bureau, SF1, 2000.

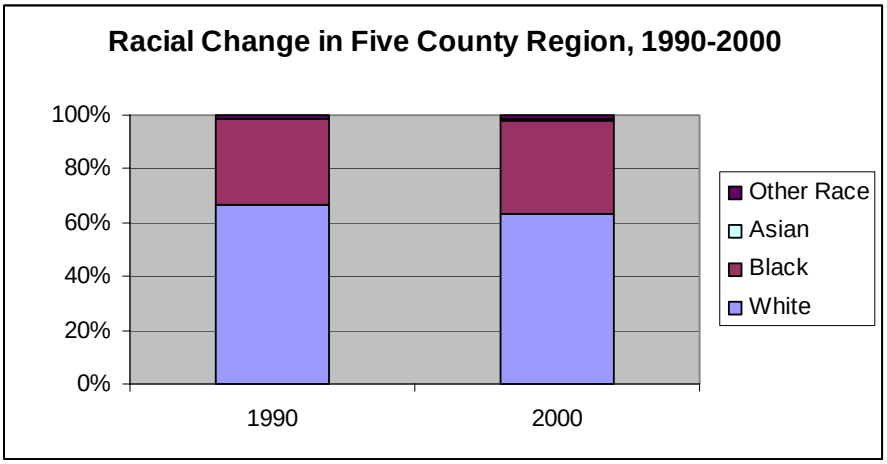
Another population change for the county is the composition of race and ethnicity. Columbia County has remained predominantly white since 1980, with around 80-85 percent of the population being white. The proportion of the population which is black has declined slightly from around 15 percent to around 11 percent between 1980 and 2000. The greatest change in racial composition is the rapid growth of Asian and other races in the county, from below two percent in 1980 to almost six percent today.

Columbia County: Racial Composition			
Race or Ethnicity	Year		
	1980	1990	2000
White alone	83.5%	86.0%	82.7%
Black or African American alone	14.7%	11.0%	11.2%
Asian or Pacific Islander	1.0%	2.3%	3.4%
other race	0.7%	0.4%	2.4%

Source: US Census Bureau, SF1, 2000.

The five county region has attracted a growing black population over the decade from 1990-2000. Columbia County, however, has experienced a trend counter to the region. Even though Columbia County's black population was below average for the region in 1990, the percent of black population in the county continued to decline throughout the decade from 1990 to 2000.





Income and Educational Attainment

Columbia County has the highest average household income in the three-County region. The median household income in Columbia County is $55,682, which is 30 percent higher than the state of Georgia median income of $42,433. Both Richmond County and McDuffie County have median household incomes below the state of Georgia's median. This high median income demonstrates that Columbia County has in many ways achieved its goal of being the community of choice for professional households in the region.

Looking at income distribution, there are households with all ranges of income living in Columbia County. The largest grouping of household income occurs in the $40,000-$100,000 range. But as of the 2000 Census, there were also almost 6,000 'workforce' households, in the $15,000-$35,000 range.

Of Columbia County's 25,453 families in 1999, about 4.2% of these families, or 1,069 families, had incomes below the poverty level. Most of these families below the poverty level had children under 18 years of age.

Columbia County residents have the highest level of education in the three-County region. Columbia County has a higher percent of college graduates

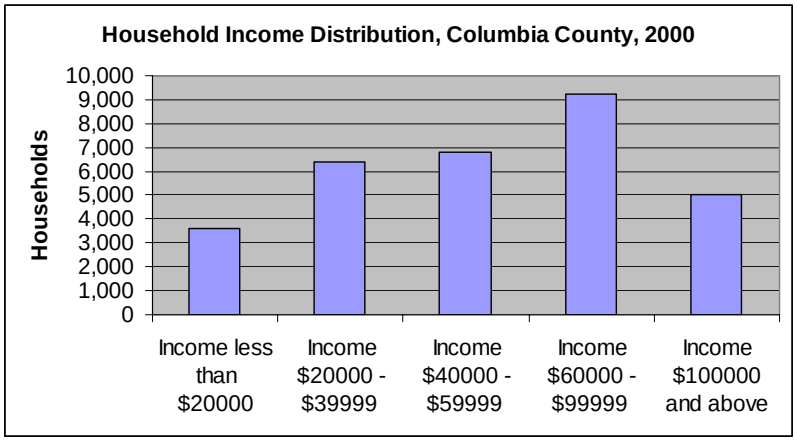
than the rest of the region, with 32 percent of adults having a college degree. This compares with 19 percent of Richmond County residents and 12 percent of McDuffie County residents. Also, Columbia County has the fewest percent of adults who did not complete a high school education, at 12 percent of the population.

Median Household Income	
	2000 ($)
Columbia County	55,682
State of Georgia	42,433
Richmond County	33,086
McDuffie County	31,920

Source: US Census Bureau, SF3, 2000.

Columbia County: Household Income Distribution	
	2000
Total Number of Households	31,112
Income less than $9,999	1,332
Income $10,000 - $14,999	1,173
Income $15,000 - $19,999	1,121
Income $20,000 - $29,999	3,119
Income $30,000 - $34,999	1,588
Income $35,000 - $39,999	1,710
Income $40,000 - $49,999	3,372
Income $50,000 - $5,9999	3,450
Income $60,000 - $74,999	4,466
Income $75,000 - $99,999	4,769
Income $100,000 - $124,999	2,222
Income $12,5000 - $149,999	1,184
Income $150,000 and above	1,606

Source: US Census Bureau, SF3, 2000.

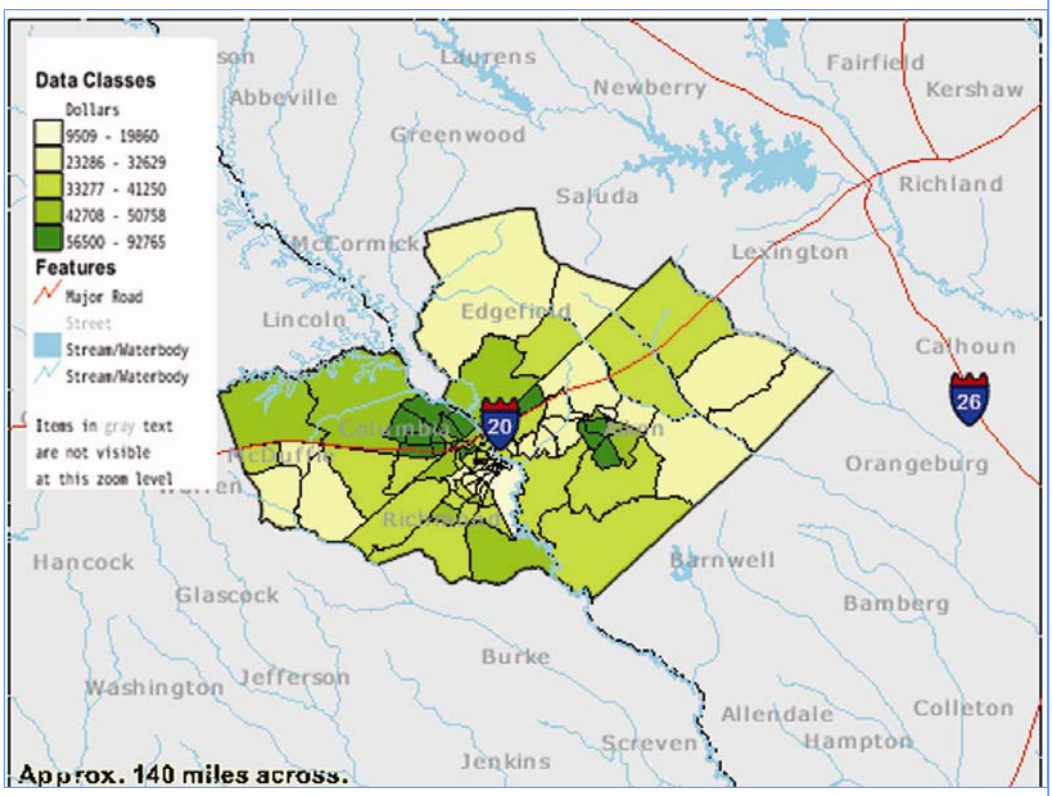


Educational Attainment, 2000				
	Columbia	McDuffie	Richmond	Georgia
Less than 9th Grade	4%	11%	7%	8%
9th to 12th Grade (No Diploma)	8%	22%	15%	14%
High School Graduate (Includes Equivalency)	26%	35%	30%	29%
Some College (No Degree)	22%	17%	23%	20%
Associate Degree	8%	3%	6%	5%
Bachelor's Degree	20%	8%	12%	16%
Graduate or Professional Degree	12%	4%	7%	8%

Source: US Census Bureau, SF3, 2000.

Columbia County Tomorrow

Social scientists who study the growth of cities have noticed certain patterns in urban development referred to as 'models'. One of the patterns, called the Hoyt Model of City Growth, is the development of a high-income quadrant for a city. Columbia County fits into this development pattern. If Columbia County follows in the mold of other high-income quadrants, continued residential growth and expanded commercial and employment growth are likely to occur in Columbia County. Cities tend to expand the furthest in the direction of the high-income quadrant, so the pressures for sprawling development patterns may accelerate.



Graphic of Median Household Income by Census Tract, US Census 2000

Similar to the Hoyt Model, growth in Columbia County is dependent on the growth for the entire Augusta region. Should the region experience a population decline, or conversely, a population explosion, Columbia County's growth will result in new development of all kinds – residential development as well as continued commercial development and employment-based or office development.

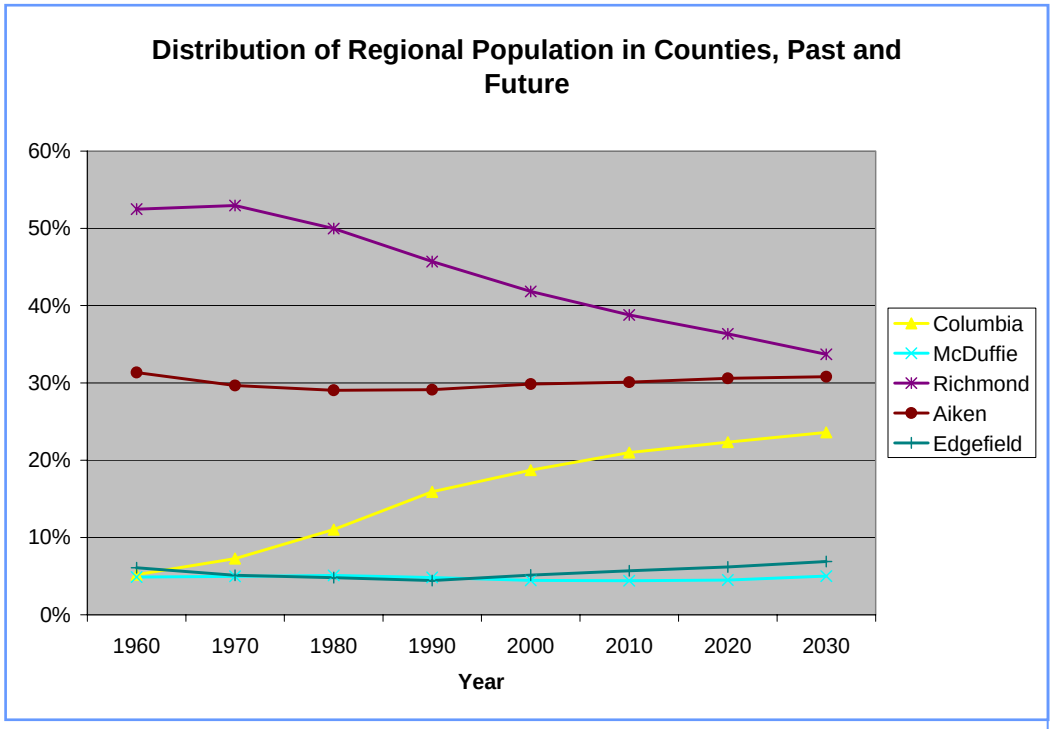
The following table of projected population growth for Columbia County is based on the assumption that Columbia County will continue to increase its portion of the Augusta region's population growth over the next 25 years. Also, it is assumed that regional growth will continue at about its current pace. By 2030, it is projected that Columbia County will comprise 24 percent of the region's population, up from approximately 20 percent today.

Columbia County: Population Projections				
	2000	2010	2020	2030
Total Population	89,288	112,155	133,874	155,461
Decade Population Increase		22,867	21,719	21,587
Decade Percent Increase		26%	19%	16%

Source: Columbia County Staff, 2005

Augusta Region: Population Projections				
	2000	2010	2020	2030
Total Population	477,441	535,000	599,000	659,000
Decade Population Increase		57,599	64,000	60,000
Decade Percent Increase		12%	12%	10%

Source: Columbia County Staff, 2005.



The age distribution for the county will have the most significant impact on future development patterns. The lack of robust growth in the 24-35 year range will affect the county's ability to attract and maintain a healthy economic balance. Also, as the over-65 population continues to grow, it will become increasingly important for both the public and private sectors to orient their services to address the needs of the growing senior population.

2.0 Housing

Introduction

The housing stock of a county is an important indicator of its social and economic health. Home ownership is one of the most important ways that households build wealth. Diversity of housing stock provides accommodations for a diverse work force and a varied population. Deficiencies in the quality or affordability of housing stock may be a sign that new governmental policies are needed to support high-quality, affordable housing for county residents.

Residential Growth in Columbia County

The first permanent residents in Columbia County came from the Virginias and Carolinas in the 1700s. Columbia County was a rural settlement based on cotton production and commerce centered on the Augusta Canal and new rail lines built to serve the southeast.

Until about 30 years ago, Columbia County was primarily rural in character, with a few concentrated settlements, large land holdings and farms. Because of its proximity to Augusta, Columbia County has seen a transformation from a rural county to a bedroom community of Augusta, Georgia. The predominant land use is Columbia County is residential.

Over the last 30 years the county has been urbanizing rapidly, with a large portion of that growth over the last 20 years. To support this growth the county has become increasingly urbanized with population growth concentrated in the Martinez-Evans area and in the cities of Harlem and Grovetown.

Current Housing Stock

Over the last twenty years, the number of housing units has increased 140 percent from 14,069 units in 1980 to 31,120 housing units in 2000. The dominant housing type is single family housing, which comprised 77 percent of the housing stock in the county in 2000. The second largest type of housing is manufactured homes, which comprised 13.6 percent of the housing stock in the county in 2000. Townhomes and duplexes made up 4.2 percent of the housing stock and multifamily types made up 4.9 percent of the housing stock in 2000. During the decade from 1990 to 2000, about 7,500 single family homes, 1,000 manufactured homes, 430 attached single family homes, and 400 multifamily units were added to Columbia County's housing supply.

Columbia County: Types of Housing Units			
	1980	1990	2000
TOTAL Housing Units	14,069	23,745	33,321
Single Units (detached)	11,142	18,120	25,762
Single Units (attached)	172	414	845
Double Units	117	477	556
3 to 9 Units	339	826	896
10 to 19 Units	86	189	198
20 to 49 Units	8	22	131
50 or more Units	0	0	399
Manufactured Home or Trailer	2,205	3,546	4,519
All Other	0	151	15

Source: US Census Bureau, SF3, 2000.

Columbia County: Types of Housing			
	1980	1990	2000
TOTAL Housing Units	100%	100%	100%
Single Units (detached)	79.2%	76.3%	77.3%
Single Units (attached)	1.2%	1.7%	2.5%
Double Units	0.8%	2.0%	1.7%
3 to 9 Units	2.4%	3.5%	2.7%
10 to 19 Units	0.6%	0.8%	0.6%
20 to 49 Units	0.1%	0.1%	0.4%
50 or more Units	0.0%	0.0%	1.2%
Manufactured Home or Trailer	15.7%	14.9%	13.6%
All Other	0.0%	0.6%	0.0%

Source: US Census Bureau, SF3, 2000.

Single family detached housing dominates the housing stock of Columbia County. Over 90 percent of the housing stock is single family detached or manufactured homes. A slight decline occurred in the percentage of single family detached housing from 1980 to 1990, but levels remained about the same during the decade from 1990 to 2000.

About one-sixth of the single family detached housing supply in Columbia County is manufactured homes. The number of manufactured homes has increased from 1980 to 2000, but as a percentage, manufactured homes compose a diminishing share of the housing stock.

Of the remaining housing stock, about four percent is attached housing and another five percent is multi-family housing. The greatest growth among these types of housing development from 1990 to 2000 was in single family attached housing.

Age of Housing Stock

Since Columbia County is a relatively 'young' county with most development occurring in the past 30 years, age of the housing stock is not an issue. Only 1,602 units were built before 1960, and trends indicate that most of these are being replaced. By far the majority of the housing stock was constructed over the last 30 years.

Columbia County Age of Housing				
	1990	1990 (Percent)	2000	2000 (Percent)
Built 1970 - 1979	7,171	30%	6,439	19%
Built 1960 - 1969	2,730	11%	2,646	8%
Built 1950 - 1959	1,302	5%	961	3%
Built 1940 - 1949	307	1%	268	1%
Built 1939 or earlier	403	2%	373	1%

Source: US Census Bureau, SF3, 2000.

Housing Growth

Housing growth is driven by growth in new households. Net migration and young people starting their own households are the primary sources of household growth. Household growth has been steady, largely following population growth. The number of households increased from 21,841 in 1990 to 31,120 in 2000. The number of households is expected to continue to grow to approximately 61,000 by 2030. Household sizes are steadily shrinking in Columbia County, following a nation-wide trend of smaller household sizes. However, Columbia County household sizes are larger than the rest of the region. This is one of the indicators that Columbia County has a higher proportion of families with children than other parts of the Augusta region.

Columbia County Number of Households			
	1980	1990	2000
Total households	12,834	21,841	31,120

Columbia County Average Household Size			
	1980	1990	2000
Persons per household	3.12	2.97	2.85

Source: US Census Bureau, SF3, 2000.

Household Type

A large majority, 82 percent of the Columbia County population, lives in family households, with 18 percent of the population living in non-family households. This compares with 71 percent of the Augusta's regions

households residing in family households. Most of the family households are two, three, or four persons in size, but there are some larger households. Most of the non-family households are one or two persons in size. The household type and size distribution of Columbia County is another indication that there are a high proportion of families with children in Columbia County.

Household Type	Columbia County	Percent of Households
Total:	31,112	
Family households:	25,453	82%
2-person household	9,171	29%
3-person household	6,523	21%
4-person household	6,233	20%
5-person household	2,569	8%
6-person household	712	2%
7-or-more-person household	245	1%
Nonfamily households:	5,659	18%
1-person household	4,793	15%
2-person household	680	2%
3-person household	145	0%
4-person household	41	0%
5-person household	0	0%
6-person household	0	0%
7-or-more-person household	0	0%

Source: US Census Bureau, SF1, 2000.

The following table represents a broad analysis of the suitability of housing type distribution to household type distribution. Families with children (three persons plus) are likely to want a detached single family home. Two person families (young couples and empty nesters) may want a detached single family home, an attached single family home as a first home, or a townhome to reduce their level of home maintenance work. Non-family households are much less likely to be home owners and will often seek multifamily housing. Individual preferences may vary. However, this chart indicates that the distribution of housing unit types may not be meeting the needs of the diverse household types in Columbia County. This lack of diverse housing types may be one of the causes of the lagging growth of the number of young adults in the county.

Household Suitability	
Household Types	Percent
Families 3+ people	52%
2 person Families	29%
Non-family households	18%

Housing Types	Percent
Single Family Detached	91%
Townhomes and Duplexes	4%
Multifamily Housing	5%

Source: EDAW Analysis of US Census Bureau data, SF1 2000.

Housing Cost

Columbia County housing costs are by far the most expensive in the three-county Augusta region. The median cost of a home in 2000 was $118,000 in Columbia County, comparing with $76,800 in Richmond County and $74,600 in McDuffie County. Housing prices rose 42 percent over the decade from 1990 to 2000. However, Columbia County median incomes rose 39 percent during the same period, so the growth in housing costs does not appear to be significantly outpacing income growth. Columbia County housing prices rose less quickly than in the state of Georgia, which saw a 57 percent increase in the price of housing from 1990 to 2000.

Likewise the cost of rental housing in Columbia County is higher than in Richmond and McDuffee counties. The median rent in 2000 in Columbia County was $620 per unit, comparing with $505 in Richmond County and $389 in McDuffie County.

There were 5,710 cost burdened households in Columbia County in the year 2000. A cost-burdened household is defined as a household that is spending more than 30 percent of its income on housing. About 2,000 of these cost-burdened households were spending even more – over 50 percent - of their income on housing. Approximately 18 percent of Columbia County households were cost-burdened by high housing costs. This compares with a rate of 27 percent in Richmond County and 18 percent in McDuffie County. So although Columbia County's costs are high, the rate of cost-burdened households is similar to other areas of the Augusta region.

Housing Costs	County		
	Columbia	Richmond	McDuffie
Median property value	$118,000	$76,800	$74,600
Median rent	$620	$505	$389

Source: US Census Bureau, SF3, 2000.

Burdened Households	County		
	Columbia	Richmond	McDuffie
Cost Burdened Households	18%	27%	18%

Source: US Census Bureau, SF3, 2000.

Housing costs are high in Columbia County because the county has earned a reputation as a quality place to live. Columbia County offers a high

quality of life and a strong educational system. In addition, many developers are building high-end housing with luxury amenities. This package of high-amenity housing and quality public services at a low tax rate is attracting many professionals and executives to Columbia County. This high demand for housing drives up the housing costs.

Other causes for high cost housing may be regulatory. High housing cost is caused by government regulations that restrict the development of multifamily housing and mandate minimum lot sizes for housing. These regulations can result in a reduced housing supply which in turn drives up housing costs.

Housing Trends

Recent housing developments are concentrated along the sewer lines. Single-family detached housing makes up the great majority of new housing construction.

Some areas in the county that are seeing rapid, high-end single family home development include along the Euchee Creek sewer collector and Columbia Road and Chamblin Road and Hardy McManus road. Less expensive single family housing development is concentrated in the Grovetown area.

Townhomes and attached single-family units represent an increasing portion of new housing construction. All of these new townhome developments are below the median housing cost. Most of these townhome developments have been of single-story attached units with two-car parking pads rather than enclosed garages. The rising demand for townhomes may be a result of the lack of other affordable housing alternatives in the county.

Two recent planned unit developments have included proposals for more traditional townhomes, with at least two stories and two car garages. These units will be marketed to higher-income households with average sale prices above the median housing cost.

Housing Stock and School Age Population

The Atlanta Regional Commission estimates student generation rates for new housing as follows. These estimates are based on research conducted by the Atlanta Regional Commission:

Student Generation	
Housing Unit	**Students Per Unit**
Single Family House	0.725
Apartment/Condominium	0.287
Manufactured Home	0.042

Source: Atlanta Regional Commission, *Linking School Sighting to Land Use Planning*, 2005.

In short, it typically takes three apartment dwelling units to generate as much demand on a school system as a one single family home.

Housing Forecast

It is estimated that to accommodate a year 2030 population of 155,000 people, the county will require 61,000 housing units or an additional 24,800 housing units. Although the primary housing type within Columbia County will continue to be a single family dwelling, it is expected that future housing units will provide a diversity of types to accommodate Columbia County's projected smaller household size and aging population.

Population growth will drive new household formation and new housing construction. Average household sizes are expected to continue to decrease, a pattern that is occurring nation-wide.

Columbia County: Household Projections				
	2000	2010	2020	2030
Total Households	31,120	40,855	50,519	60,694
Decade Increase in Households		9,525	9,665	10,445
Estimated Household Size	2.85	2.75	2.65	2.55

Source: Columbia County Staff, EDAW projections, 2005.

Summary and Needs Assessment

A greater diversity of housing types would address many of Columbia County's housing issues. Different housing types would help to meet the county's need for affordable housing by providing housing of a variety of price ranges, both for sale and for rent. Workforce housing is needed to house the moderate income households in the county. A greater variety of housing types would be more compatible with the variety of household types already found in the county, including a significant portion of non-family households. Although single family housing will be the dominant housing type for the foreseeable future, Columbia County needs a growing supply of affordable and diverse housing choices.

One special focus for housing choices will be a growing need for senior-oriented housing. Seniors will be one of the fastest growing segments of the population, and they have unique housing needs. Seniors need housing choices in convenient locations, with minimal maintenance and universal design features that minimize physical obstacles. The county will need a growing supply of senior housing in the next 20 years.

3.0 Economic Development

Introduction

This economic development chapter provides an inventory and assessment of the economic engine driving the Augusta Region and Columbia County's economic relationship to the region. This chapter takes a close look at the region's economic base, occupational trends, labor force and local and regional opportunities. Much of the analysis for this chapter is focused on the five County region, including the counties of Columbia, Richmond, McDuffie in Georgia and Edgewood and Aiken in South Carolina. Generally economic growth and development are regionally driven, because businesses draw on regional resources such as labor force and transportation facilities for their growth and development. In combination with information from other chapters of this Growth Management Plan, this examination will provide a base for economic development planning and policymaking within the county.

Although Columbia County is a growing community economically, it remains primarily a bedroom community. As part of the Augusta-Aiken MSA (Columbia, Richmond and McDuffie Counties in Georgia and Aiken and Edgefield Counties in South Carolina), Columbia County residents enjoy cultural and employment benefits of being part of a metropolitan area that is approaching an overall population of a half a million people. Although home to several large corporations and company headquarters, the majority of businesses located in Columbia County are retail and service oriented, and their function is primarily to meet the immediate needs of its residential population.

Columbia County's location in the Augusta-Aiken MSA area presents many regional opportunities. Excellent transportation infrastructure helps to make the Augusta Region a center for economic activity in the upper Savannah region. The Augusta region is the largest population and employment center between Atlanta and Columbia, South Carolina, and serves as a hub for many services for the population in this area.

The main future economic development goal for the county is to encourage economic growth and nonresidential development in appropriate locations. The county would like to expand the tax base by creating opportunities for sustainable development, including targeting clean industry and tourism opportunities. The county is striving for an appropriate balance between residential quality of life and the need to provide employment opportunities and necessary services for its residents.

Setting – The Region

Transportation accessibility is the engine that drives economic growth and change in the Augusta region now, just as it has in the past. The region's location on I-20 midway between two state capitals, and connections to Interstates 75 and 85 in Atlanta, Charlotte, Raleigh and other large cities via Interstates 26, 77 and 95 allow businesses and residents convenient

and efficient transportation connections. In addition, Bush Field Airport offers direct flights to Hartsfield International Airport. Other transportation related opportunities include 48 trucking terminals within the Augusta regional area, rail service provided through CSX, and access to the international ports of Charleston and Savannah two and half-hours away.

Columbia County must be viewed within the regional context. During the past decade, the Augusta Region has experienced mediocre job growth. Employment in manufacturing and government sectors, the former drivers of the Augusta Regional economy, is not growing. Meanwhile, job growth in the services sector is increasing, providing jobs but generally at a lower pay rate. The Augusta region has seen per-capita income growth lag behind the state of Georgia over the decade from 1990-2000.

Government is the leading employer in the region, followed by retail, administrative and waste services, and manufacturing. The area has two natural assets—wood and kaolin. The area is one of the world's largest suppliers of kaolin for ceramics and fillers. Forestry companies make wood products ranging from paper and pulpwood to fine furniture and flooring. Textile firms across the area manufacture apparel of all types. Medical supplies, services and technology are also very important to the area. Medical companies turn out pharmaceuticals, medical supplies and diagnostic equipment. Firms in emerging technologies, such as telecommunications and environmental remediation, are offered support through the Augusta Technical College - Augusta-Richmond County Small Business Incubator.

Setting - The County

For Columbia County, rapid population growth is the driver of employment growth. As discussed in the population chapter, Columbia County is now in its fourth decade of rapid population growth. The county continues to attract such growth due to its low cost of living, high quality of life, superb schools, relatively easy market access for products, low labor costs, cooperative local government, accelerated permit process, available sites, warm climate, and low taxes. As the population grows, Columbia County is attracting more commercial enterprises that serve this large residential base.

One of the biggest draws in Columbia County is its primary school system and educated workforce. The Columbia County School System, the seventeenth largest system in the State, has established a pattern of consistent excellence and achievement making it one of the premier school systems in the state of Georgia. Columbia County students at the elementary and secondary school level consistently excel at a level greater than their peers at both the state and national level in the areas of academic achievement.

Other major attractions are the Savannah River and Lake Thurmond (Clarks Hill Lake) which both provide recreation opportunities year round.

With more than 1,200 miles of shoreline, Lake Thurmond is the largest man-made lake east of the Mississippi. The lake and the river provide opportunities for fishing, water skiing, boating and swimming.

Along with population growth, several economic indicators, such as educational attainment, mean income and mean housing value have shown increasing affluence in the county. Because of its location in the Augusta region, excellent transportation access, affordable land prices, natural beauty, executive housing and amenities, Columbia County is an attractive community for executives and professionals.

Economic Base Inventory

One of the key aspects of any economic analysis is investigating the economic base of a region. Every region has an economic "base" – a set of products or services it exports outside the region in order to finance the broader regional economy and help it grow. Generally a region can only grow economically if its economic base grows, or if it expands its economic base.

Analysis indicates that the number one economic base for the Augusta region is government employment, particularly military, federal, and state government. The income from federal and state government programs drives much of the economy of the region. Government employment constitutes 14.0 percent of regional employment. A second economic base is manufacturing, which composes 9.5 percent of regional employment. A third economic base can be found in Administrative and Waste Services – generally services relating to business services. Administrative and Waste Services constitutes 5.7 percent of regional employment. These are the three main components of the Augusta region's economic base.

Employment Sector	Five County Employees, 2000	Percent of Regional Employment	**Location Quotient	Columbia County
* Military	11,600	4.4%	3.79	0.7%
*State government	15,444	5.9%	1.95	0.6%
*Administrative and waste services	26,972	10.3%	1.80	7.1%
*Federal, civilian	7,016	2.7%	1.64	0.3%
Construction	18,921	7.2%	1.23	11.1%
State and local	34,434	13.2%	1.18	9.8%
Retail trade	30,629	11.7%	1.06	13.6%
*Manufacturing	26,248	10.0%	1.06	8.9%

Source: Bureau of Economic Analysis, CA25N – Total full-time and part-time employment by industry, 2002.
**Part of the region's economic base*
***A location quotient above 1.00 is often an indicator of a region's economic base.*

One trend of concern in the regional economy is the steady shrinkage of the region's main economic bases. Both government employment and manufacturing have shown a steady pattern of reduced share of regional employment over the 1980-2000 period. Manufacturing has gone from 24

percent of the region's economy in 1980 to 12 percent in 2000, while government employment has declined from 28 percent of regional employment to 20 percent. In the meantime, service has gone from 15 percent of the economy to 27 percent. The trend away from manufacturing and towards services is a nation-wide trend, but for services to be part of an economic base, they must be export-oriented, in other words, services that the Augusta region can sell to the larger US or world economy.

Other major components of regional employment include retail at 11.4 percent, health care at 8.7 percent, and construction at 6.7 percent of employment. These employment categories, while significant, are not likely to constitute the economic base of the region because they are rarely exports.

Columbia County Employment Trends

Columbia County employment is largely population serving and is not export oriented; and its residents are generally employed elsewhere in the region. Therefore Columbia County does not have its own economic base. The largest employment sectors in Columbia County are retail trade, construction, local government (including schools), and manufacturing. Except for manufacturing, these other kinds of employment serve the local population. As population serving types of employment, these employment categories tend to grow as population grows.

One notable feature of Columbia County employment is the high number of self-employed people in the county. About 29 percent of employed people are self-employed, as compared with only 10 percent in the region as a whole. This may indicate a highly-educated and highly entrepreneurial work force, often working for individual 1 or 2 person firms.

Employment Sector	Number of Jobs	Percent of Employment
Retail trade	4,620	13.6%
Construction	3,764	11.1%
Local government	3,123	9.2%
Manufacturing	3,031	8.9%
Other services, except public administration	2,584	7.6%
Health care and social assistance	2,485	7.3%
Administrative and waste services	2,414	7.1%
Accommodation and food services	2,196	6.5%

Source: Bureau of Economic Analysis, CA25N – Total full-time and part-time employment by industry, 2002.

Major Development Trends and Unique Economic Opportunities

Below is a more detailed description of economic development opportunities by sector within Columbia County and the metropolitan area.

Retail Trade and Services

As a proportion of total employment, retail employment has increased slightly from 1990 to 2000. In 1990 retail trade comprised 15.9 percent of employment and by 2000 it constituted 21 percent of employment in the county. Service employment experienced even more dramatic growth, from 14.5 percent of employment to 30.9 percent of County employment. The term "services"; however, includes both personal and business services, therefore it is difficult to tell how much of this growth is population-oriented, personal service growth and how much is export-oriented business growth.

The majority of commercial activity is concentrated along Washington Road in Evans and Columbia Road and Bobby Jones Expressway in Martinez. Small scale and neighborhood commercial is located at major intersections, such as Pollards Corner in Appling. Because of the county's proximity to two major regional shopping areas, retail establishments found in the county are primarily intended to serve the residential population. Big box type commercial centers have started to come to Columbia County with a new Wal-Mart and Target arriving in recent years. The largest concentrations in the retail establishments are restaurants and food stores. In the future it is expected that retail and service centers will continue to concentrate in established commercial corridors in Martinez and Evans, in addition to newly created commercial nodes.

Medical Industry and Health Services

The Augusta MSA has over 25,000 health care employees, including 1,625 doctors and 219 dentists, and seven major hospitals. Georgia's Health Sciences University, The Medical College of Georgia, is a 540-bed teaching hospital with approximately 2,115 residents and students and 646 full time faculty employees. Approximately $76.6 million was awarded to the Medical College of Georgia for research in fiscal year 2004. Columbia County's proximity to the Augusta medical industry concentration will continue to attract spin off from this industry. (Source: Medical College of Georgia Institutional Research Information System, http://www.iris.mcg.edu/default.asp)

Tourism

Metro Augusta is a growing second-tier destination for mini-vacations, conventions and seminars. Area attractions include the Augusta Invitational Rowing Regatta, the National Barrel Horse Association World Championships, the Augusta Cutting Horse Futurity, Southern National Drag-Boat Racing and the crown jewel event, the week long Masters Tournament. Hospitality amenities within the county include the mild weather that makes golf essentially a year-round option, the Clarks Hill Recreation area and the Savannah Rapids Pavilion. A growing number of hotels and related facilities are being developed to take advantage of these opportunities. In addition to taking advantage of festivals and events located in the area (such as Masters' Week), several new golf clubs and recreational facilities are proposed.

Columbia County held the Citgo Bassmaster Tour for the first time in 2005. Wildwood Park was able to play host to this event due to recent facility improvements, including the addition of six ramps and boat and trailer parking to accommodate 191 anglers. The Bassmaster Tour event involved 153 competitors and about 14,000 spectators. Economic impacts include tourism revenues from hotels, restaurants, and retail, positive media exposure for Columbia County, vendor and promotional opportunities for local businesses, and a raised profile of Wildwood Park as a tourism destination. Hotel revenues were estimated at over $1 million. It should be noted that the successful organization of the 2005 Bassmaster Tour event required the coordinated efforts of volunteers and county staff, as well as a host fee from the county. The Bassmaster Tour staff has produced a report for the county recommending future improvements for the event.

Construction

Construction employment has remained a significant employer in Columbia County over the past 20 years. Construction employment has been consistently about 11 percent of employment in the county. The relatively large amount of construction employment is also related to Columbia County's rapid population growth and the corresponding rapid housing and commercial development in the county.

Manufacturing and Wholesale Trade

Manufacturing employment in Columbia County has grown from 2,700 in 1990 to 3,333 in 2000. However manufacturing employment growth has lagged population and employment growth in the county, as manufacturing has declined from 14.3 to 10.3 percent of Columbia County employment. Infrastructure improvements meeting specific needs (rail sidings, water pressure, utilities) and readily available industrial zoned land have made Columbia County attractive for clean industrial use. Small and medium firms manufacturing a variety of products represent the manufacturing sector in Columbia County within industrial parks, such as the Columbia County Industrial Park in Evans and Horizon South Industrial Park near Grovetown (one mile south of I-20 at Exit 190). Key manufacturers in Columbia County include:

- John Deere Georgia
- Iron Works
- Club Car/Ingersoll
- Rand Augusta Sportswear
- Greenfield Industries, Inc.
- Southern Beverage ADP
- Intertape Augusta
- Graphixs Source
- Pollard Lumber Co., Inc.
- Ownes & Minor United Medical Enterprises
- Tracy-Luckey Co.
- Martin Marietta CSR Aggregates

Fort Gordon

Fort Gordon is the home of the U.S. Army Signal Corps, the largest communications/electronics training center in the world. As of December 2004, Fort Gordon employed more than 2,000 civilians and more than 12,000 military personnel. In addition, Fort Gordon serves a retirement community of 27,000 military retirees. Fort Gordon's economic impact, including pay, contracts, purchases and federal school aid, totals more than $1 billion. In order to enhance its support for military intelligence operations, a $230 million expansion of the Gordon Regional Security Operations Center was approved by Congress and should be complete by 2012. Fort Gordon is a model corporate neighbor and citizen, making valuable contributions to the community by supporting civic endeavors such as scouting, Adopt-a-School and D.A.R.E, among others. (Source: The Augusta Chronicle, December 24, 2004).

Currently Fort Gordon is undergoing a Joint Land Use Study to insure the continued integrity of its military operations and to discourage development from encroaching on its borders.

Fort Gordon did not appear on the 2005 Base Relocation and Closure list put out by the Pentagon on May 13, 2005, so Fort Gordon is likely to remain operational for the foreseeable future.

Per Capita Income

Income has a number of sources, including wages, investments, and government transfers. Per capita income, the amount of income per resident, is a benchmark for measuring the wealth of an area in comparison with other areas. Changes in per capita income over time are a measure of economic growth for an area.

From 1980-1990, the State of Georgia, the Augusta Region, and Columbia County had approximately equivalent per capita incomes. However since 1990, the Augusta region has had slower per capita income growth than the state, while Columbia County has had faster per capita income growth than the state. This reveals two important trends. First, for the Augusta region, the eroding economic base is making it more difficult for residents of the region to improve their personal incomes. Second, for Columbia County, the county is increasingly home to the high-income elite of the region. So even though the region did not excel economically in the period between 1990-2002, the county faired well as an increasing share of the high-income earners moved into the county.

Income per Sector

In addition to looking at employment growth, it is important to look at the quality of the employment in growing sectors. The economic development goal of most regions is not just to recruit additional jobs, but to seek out higher wage jobs if possible. Higher wage jobs raise the quality of life of

residents and provide residents with additional disposable income, boosting the economy region-wide.

The following table shows what sectors provide good-paying jobs in the Augusta region. If the ratio is at or above 1.0, the job pays better than average; if the ratio is below 1.0, the job pays worse than average. The best paying sectors in the Augusta region are in management, utilities, and manufacturing. This illustrates the importance of the Augusta region continuing to seek manufacturing employment growth. Some of the fastest growing sectors, particularly in Columbia County, provide relatively low wages. Retail trade ranks only a 0.61, while personal services rank 0.54. Growth in these sectors will not tend to provide enough income for a primary income earner in a typical Columbia County household. Therefore as these job categories grow, they will predominantly go to residents outside of Columbia County, unless Columbia County provides appropriate housing types for this workforce.

Wage per Sector		
Industry Code Description	**Income Per Employee**	**Ratio to Average Wage**
Management of companies & enterprises	$50,547	1.68
Utilities	$48,301	1.61
Manufacturing	$45,529	1.52
Professional, scientific & technical services	$44,162	1.47
Auxiliaries (exc corporate, subsidiary & regional mgt)	$39,145	1.30
Mining	$37,665	1.25
Health care and social assistance	$35,228	1.17
Wholesale trade	$34,629	1.15
Forestry, fishing, hunting, and agriculture support	$32,516	1.08
Transportation & warehousing	$31,701	1.06
Information	$31,376	1.05
Finance & insurance	$31,306	1.04
Total	$30,023	1.00
Construction	$25,044	0.83
Real estate & rental & leasing	$23,349	0.78
Admin, support, waste mgt, remediation services	$20,078	0.67
Retail trade	$18,372	0.61
Unclassified establishments	$17,629	0.59
Other services (except public administration)	$16,226	0.54
Educational services	$16,171	0.54
Arts, entertainment & recreation	$15,344	0.51
Accommodation & food services	$9,412	0.31

US Economic Census, 2002 MSA Business Patterns (NAICS).

Inventory of Major County Level Economic Activities

The Columbia County area has seen steady growth in economic activity in the last few years. Columbia County's transportation infrastructure and proximity to Interstate 20, excellent schools, weather, executive housing and suburban living so close to the hubbub of Augusta are some of the main attractions of the county. The county has been proactive in the areas of planning and providing the necessary infrastructure to attract and sustain growth.

Because of its location in the Augusta metropolitan area and because of its transportation infrastructure, Columbia County is a natural location for warehouse/distribution and clean industrial activities. Several large industrial and business parks are located in and adjacent to its borders. While the county has experienced tremendous growth both in its residential population and employment opportunities, the county is challenged to provide an attractive business environment, while at the same time maintain a high quality living environment for its residents.

A new Columbia County campus of Augusta Technical College has recently been approved and funded by state government. This new campus will be located in the Horizon South Industrial Park, and will help promote workforce development in the county. This new location for a satellite campus was coordinated by the Columbia County Development Authority. Classes will be tailored to meet industry needs (Source: Columbia County News Times).

Labor Force Participation and Employment

The labor force of Columbia County has grown from 34,784 in 1990 to 45,831 in 2000. The labor force participation rate has decreased slightly, from 72.3 percent to 69.6 percent, reflecting a growing retiree population in the county. Unemployment in the county has remained low, and as of 2003 the county's unemployment rate was 2.9 percent, significantly lower than the Augusta MSA's at 5.0 percent or the state of Georgia's unemployment rate of 4.7 percent. Generally unemployment in Columbia County has remained low and lower than the region's unemployment throughout past economic turns.

Commuting Patterns

Generally the trend for Columbia County has been an increasing number of commuters, but that trend seems to have leveled off in recent years. During the period from 1990 to 2000, the percent of labor force that worked inside Columbia County increased from 26.4 percent to 32.7 percent. This means that Columbia County residents are increasingly seeking work inside the county. The percent of people working outside of Columbia County but in the State of Georgia declined, from 62.3 percent to 56.5 percent, while the percent of people working in South Carolina basically remained the same at about 11 percent. As traffic becomes greater and as

employment growth spreads to Columbia County, more and more residents may choose to seek employment inside their home county.

Local and Regional Economic Development Resources

Economic Development Agencies

Effective economic development programs require a collaborative effort, involving not only local government and staff but also the cooperation of and resources available from other potential partners that have programs underway at various levels.

The Central Savannah River Area Regional Development Center (CSRA RDC)

The Central Savannah River Area Regional Development Center has been designated by the U.S. Department of Commerce's Economic Development Administration as the region's economic development district. The RDC provides economic development support to its 13 county and 41 city member jurisdictions.

Economic development activities include, but are not limited to, assistance with:

- Site Selection and Initial Consultations
- Prospect Development Initiatives
- Project Management
- Business Retention Activities

Additionally, the Economic Development Staff can assist local jurisdictions and local Development Authorities with grant development and administration.

CSRA RDC is also the parent company of CSRA Business Lending. CSRA Business Lending makes loans to small and start-up businesses for the purposes of creating jobs and economic development opportunities within the CSRA area. CSRA Business Lending partners with local banks and federal agencies, such as the Small Business Administration, to enhance a borrower's financing ability.

The CSRA RDC also partners with private-sector industries and businesses to provide planning, management and information services.

Augusta Metro Chamber of Commerce

The Augusta Metro Chamber of Commerce is a combined endeavor of Augusta-Richmond County, Columbia County and Burke County, Georgia. The Chamber's main focus is to promote a positive business environment among the businesses within the borders of Metro Augusta. Established in 1905, the Chamber's mission is to enhance the economic prosperity of Richmond, Columbia and Burke counties by promoting the location, development and expansion of new and existing businesses.

Education and Training Opportunities

The mission of Augusta Technical College is to promote the educational, economic, and community development of the Central Savannah River Area. Augusta Technical College was originally established as the Augusta Area Vocational-Technical School in 1961. The college provides training in a number of medical-related and technology fields. Currently campuses exist in Richmond, Burke, and McDuffie counties, and a new campus is planned for Columbia County as well.

The Center for Advanced Technology (CADTEC) at Augusta Technical College was founded in 1983 for the purpose of delivering innovative technologies to area industry. CADTEC has evolved into an award-winning technology transfer center, which presents industry with the potential to be on the cutting edge of technological progress. CADTEC offers a wide variety of customized training for business and industry using state-of-the-art training devices and techniques. Customized training can be arranged depending upon specific business needs.

Augusta Technical College also provides the Quick Start training program. Quick Start is the Georgia Department of Technical and Adult Education's statewide training arm for new and expanding industries in Georgia. Developed as an incentive for companies to locate in Georgia, the Quick Start program is state funded. All training services are available at no cost to client companies. Quick Start provides job-specific training for Georgians to enter the workforce in the state's new and expanding industries.

Georgia Power Company, Economic Development Division

Georgia Power is the oldest economic developer in Georgia, and has an Economic Development Division whose primary role is to attract businesses to the state. Georgia Power's main emphasis is heavy marketing of Georgia in general and responding to clients' site needs by maintaining a current site inventory database. Georgia Power will provide communities with technical advice on how to make changes necessary to attract business. Georgia Power's Community Development Department also serves as a clearinghouse for communities to identify matching grants and other programs to plant trees, add fire hydrants or upgrade the water and sewer infrastructure.

Georgia Department of Economic Development

As Georgia's lead sales and marketing arm, the Georgia Department of Economic Development (GDEcD) recruits businesses, trade partners, and tourists to Georgia. Led by a board of experienced business people including executives from corporations such as Southern Company, Mindspring, and Synovus Financial, GDEcD's continuing goal is to extend the prosperity of Georgia.

Working in collaboration with other state and federal programs, GDEcD maintains a worldwide marketing campaign targeting more than 15,000 companies with the potential to expand or relocate in Georgia. Examples of

recent recruitment successes include the recent relocation of Pirelli Tires in Rome with 305 new jobs and an investment of $141 million, BellSouth Telecommunications' new customer service center in Eastman with 100 new jobs and a $2.1 million investment, and Power Interactive Media's location, which brings a $10 million investment and 300 new jobs to Macon.

GDEcD also helps Georgia companies to market internationally. In the past year, projected sales from the Trade Division's efforts are close to $100 million. GDEcD's efforts include facilitating participation in trade shows, providing contacts and consultants in international markets, and supplying extensive training resources.

In 2002, GDEcD helped Columbia County to attract an $35 million expansion of Quebecor World Inc., the world's largest commercial printer.

4.0 Historic Resources

Historic Overview

The history of Columbia County dates back to the year 2,750 B.C. when the area's first residents settled on Stalling's Island, located in the eastern corner of the county. These early settlers were a group of shell-mound builders and the area they settled is listed on the National Register due to its archaeological significance. The first European settlers to arrive in Columbia County during Colonial times were a small group of Quakers who came from the Carolinas. They purchased land from the Uchee Indians in 1751, but remained in the area for only a short time. During the 18th century, that area of the county was within the territory known as St. Paul's Parish. In 1790, Columbia County was officially created from a part of Richmond County. It was named in honor of Christopher Columbus.

Most settlers arriving in the area during the late 1700s hailed from the Virginias and Carolinas. Cotton reigned supreme as the chief crop in the area and afforded local settlers much prosperity. The Civil War significantly impacted the area and contributed to the loss of many of Columbia County's finest citizens, much of its wealth, and the majority of its national political power. In the years that followed, the county focused on expansion of the Augusta Canal and new rail lines to serve the southeast as it tried to rebuild in the aftermath of the war.

During the 20th century, one of the most significant impacts on the county was the establishment in 1941 of the Camp Gordon military base (now Fort Gordon) in the southeastern portion of the county. As a result of the military presence in the area, no longer was farming the primary occupation in the county. Many residents retained their farms but pursued public jobs during World War II. Similarly, many of the men and boys who went off to war returned home to seek occupations other than farming. The construction of the Clark's Hill Dam in 1946, and subsequent construction of the Atomic Energy Commission's Savannah River nuclear plant in nearby Aiken County, also fueled new job growth in the area. Throughout the 1950s-1960s Columbia County became an ever-expanding bedroom community; and with the new residents came national retail chains and modern shopping centers, particularly in the Martinez area.

The Columbia County Historical Society, once active in promoting awareness of the county's historic, is now largely defunct. The City of Grovetown operates the Grovetown Museum which opened in 2000. The Grovetown Museum presents exhibits and orchestrates displays on Grovetown's history. The City of Harlem operates the Laurel and Hardy Museum of Harlem Georgia because Oliver Hardy was born in Harlem. The museum contains movies, exhibits, and memorabilia associated with Laurel and Hardy and their comedic work. Responding to current growth pressures in the area, County residents have expressed interest in an intensified approach to preservation, but current efforts remain on a case-by-case basis.

The City of Harlem initiated a Historic Resources Survey in 2003. As a result of this survey the City has created a locally designated historic district surrounding North Louisville Street downtown, including both commercial and industrial properties. The City of Harlem also has a historic preservation ordinance that aims to preserve the community's identity and historic character. The Historic Preservation Ordinance established the Harlem Historic Preservation Commission, which oversees the design review process for the historic district. In conjunction with its historic preservation efforts, the City of Harlem has developed design guidelines for new development or renovation within the historic district.

Inventory of Historic Resources

The county's rich history is made evident by the numerous historic buildings dispersed throughout the area. In 1990, the Columbia County Board of Commissioners conducted a survey of all historic resources in the county built prior to 1940. As a result of these efforts, approximately 95 percent of the county was surveyed, with the exception of properties that either were inaccessible to the surveyor or that the surveyor felt had lost all integrity and could not be restored to their original historic appearance. Of the 377 properties surveyed a list of 28 possible National Register Historic Sites was compiled. However, the Survey Coordinator at the Georgia Department of Natural Resources Historic Preservation Division is strongly encouraging a new historic resource survey to replace the 1990 effort. A copy of the former survey is available from the Survey Coordinator.

In the written survey prepared by the surveyor, it was stated that numerous important historic sites were being neglected as a result of rapid development and increasing property values.

Possible National Register Sites in Columbia County

1. "The Cedars," c. 1885
2. Macedonia Baptist Church, c. 1880
3. Evans School Dormitory, c. 1900, corner of Belair and Washington roads
4. Evans School Arch and Columns, c. 1925, corner of Belair and Washington roads
5. G.B. Lamkin House, c. 1925, west side of Belair Road, 2nd building south of Peachtree
6. "Cedar Hill." c. 1820
7. Old Washington Road
8. Damascus Baptist Church, c. 1900, north side of Ridge Road, 1 mile east of Washington Road
9. Dunns' Chapel, c. 1890, northwest corner of GA 47 and Ridge Road
10. Winfield Area, c. 1840
11. Sharon Church, 1869, south side of GA 150 across from intersection of Winfield Road
12. William Few house site, c. 1930
13. Shiloh Church, c. 1857, east side of GA 150, 1.5 mile southwest of Winfield Road

14. Cedar Dale, c. 1858, east side of GA 150, 2 miles north of Cobbham Crossroads.
15. Woodville, c. 1814
16. Old Kiokee Church, c. 1804, west side of GA 47, ¼ mile north of US 221
17. Appling Community (multiple sites, c. 1850-1925)
18. Shucraft Road House, c. 1890
19. Columbia Road at Hereford Farm Road, c. 1870
20. Plantation House on Columbia Road, c. 1830
21. Columbia Road, c. 1790
22. Otts House, c. 1865, south side of Wrightsboro Road, ¾ mile west of US 221
23. Wrightsboro Road, c. 1815
24. Magruder Home, c. 1810
25. Grovetown (multiple sites along Robinson Avenue)
26. The Dodge House, c. 1910
27. Campania
28. Harlem (multiple sites, c. 1850)

[Source: Columbia County Historic Resource Survey Report, Griffith Lamkin Polatty, December 5, 1990; Georgia Department of Natural Resources, Historic Preservation Division]

Assessment of Historic Preservation Needs

The rapid growth and urbanization occurring in Columbia County necessitates a more rigorous approach to preservation in order to save remaining resources. Historic preservation needs to be coordinated by a staff historic preservation planner for the county. A historic preservation planner could help to mobilize the resources to protect the county's deteriorating historic resources. Also a historic preservation planner could better document the scope of historic resources that are extant in the county, including a possible designation of Appling as a Historical Township. This designation would enhance Appling's status as the symbolic County seat, promote its distinct community identity, and preserve its traditional character.

5.0 Natural Resources and Greenspace

Introduction

An important element of land use planning is the assessment of how natural resources are responsibly used, managed, developed and preserved within a community. This chapter provides an inventory and assessment of locally significant and unique natural resources and presents a determination of their vulnerability to the impact of growth and development.

Natural resources provide opportunities and constraints on the way land is developed. These resources include floodplains and topography; aquifers, water recharge areas, watersheds and wetlands; soils, prime agricultural and forested lands; scenic views and sites. Strategies for managing these important natural resources in accordance with citizen preferences and desires are presented throughout this chapter, as well as in the Implementation Chapter of this Growth Management Plan.

As Columbia County continues to develop, more and more effort is being put into finding a balance between environmental needs of clean air and water, the availability of water, retaining areas of natural significance for animal and plant habitats, and those of development and growing population. Increased education of the general public and developers with regard to environmental issues will bring about increased awareness of the importance of maintaining a proper balance between people and their environment.

The Natural Environment of Columbia County

Columbia County is situated on the Savannah River in eastern Georgia. Columbia County neighbors Augusta, and is 2 ½ hours from the beaches of the Atlantic and the Southern Appalachian Mountains. Columbia County occupies a land area of 185,922 acres, or 307.8 square miles, plus 10,049 acres of water area. Columbia County straddles the “fall line,” a geologic boundary following the Appalachian Mountain range from New York to Alabama. In Georgia and South Carolina the fall line separates the Piedmont from the Coastal Plain. The northern three-fourths of the county is located in the Southern Piedmont, while the southern one-forth is in the Carolina and Georgia Sandhills land resource areas. Drainage is provided principally by the Savannah River and its tributaries.

Climate

Columbia County’s long hot summers and year round high humidity are a result of moist tropical air from the Gulf of Mexico, which persistently covers the area. Winters are short and pleasantly cool, with relatively brief cold waves occasionally occurring in one or two-day periods. Although once rare, droughts are becoming more and more common. The average temperature in the winter is 47 degrees Fahrenheit, and 79 degrees in the

summer. The heat in summer makes it particularly important that pleasant pedestrian environments be provided with shade, either through the use of mature trees or through arcades and awnings.

Topography and Steep Slopes

Columbia County is within the Southern Piedmont and the Georgia Sandhills Land Resource Area of Georgia. The Southern Piedmont Area topography consists mostly of broad to narrow, gently sloping ridge tops and moderately steep hillsides adjacent to drainage ways. In most places, the soils are low in silt and mica content. The area is primarily a gently sloping plain dissected by streams in small, shallow valleys. The ridge tops are wider and the drainage ways are fewer in the southern part of the county. Nearly level flood plains are located along the Savannah River and its tributaries. In some places the floodplains are adjacent to moderately steep hillsides.

Average elevation is 300 feet above sea level. As part of the Piedmont region, the majority of slopes in the county range from two to ten percent. Steeper slopes of up to 25 percent are found along the Savannah River and the Kiokee, Little Kiokee and Uchee Creeks. The area is decorated with a lush blanket of pine, oak and hickory forests. The topography in Columbia County poses few development constraints; however, during the land development process, the county requires the notation of steep slopes on all site plans. There are a few areas of the county where the slope of the land is steep enough to warrant special management practices, and the majority of these areas is within floodplains and is already regulated by ordinance.

Protected Mountains

There are no mountains that fall within the Department of Natural Resources “protected mountains” criteria in Columbia County

Soils

Five major soil associations are present in Columbia County. Due to soil types, septic tank usage is fairly restricted within the county. A little over 20 percent of the soils within Columbia County, including Georgeville-Wedowee in the northern part of the county, Wedowee-Cecil in the central part of the county, and Chewacla-Toccoa-Wehadkee are in flood plains and are unable to support septic tanks and certain other types of uses; and, therefore, currently present limitations for use. The Cecil-Appling-Wedowee makes up approximately 53 percent of the county, while the Wagram-Troup-Norfolk, makes up another 17 percent. These soils have a fair or good potential for urban use, with some limitations on septic tank placement. The county has adopted standards that restrict uses on sensitive soils and limit the use of septic tanks in all but very low-density development areas. New policies include the approval for septic tank use on lots that do not have sewer access and are smaller than 2.5 acres.

The following list describes the general soil associations and development potential of these soil types.

Soils on hillsides of the Piedmont Upland: well-drained soils on sloping and moderately steep hillsides. Slopes range from ten to 25 percent. The soils have reddish or brownish, loamy surface layer and a reddish or brownish, clayey or sandy subsoil.

Georgeville-Wedowee—Sloping and moderately steep, well drained soils that have a loamy or sandy surface layer and clayey subsoil; the silt content is medium or low. These soils make up about one percent of soils in the northern part of the county. The areas are currently woodlands of Loblolly and Virginia Pine, and have poor potential for farming. Development potential is limited on this soil due to slope and poor septic tank absorption fields.

Wedowee-Cecil—Sloping and moderately steep, well drained soils that have a sandy or loamy surface layer and clayey subsoil; This soil type is predominately in the central part of the county and makes up about 18 percent of soils in the county. These soils are mostly in woodland use, with a small portion used for pasture and row crops. Development potential is limited on this soil due to slope, soil strength and poor septic tank absorption fields.

Soils on ridge tops and hillsides of the Piedmont Upland: well-drained soils on very gently sloping ridge tops and hillsides. Slopes range from two to ten percent. These soils have a mainly brownish, loamy surface layer and mainly reddish or yellowish, clayey subsoil.

Cecil-Appling-Wedowee—This soil type is located on very gently sloping ridge tops and hillsides throughout the county except in the extreme northern and extreme southern parts of the county. This soil type makes up about 53 percent of the county. These soils are mainly used for row crops, with some pasture and woodland. The potential for woodland and urban uses is fair. The clayey subsoil is a limitation to use of the soils for sanitary facilities.

Soils on ridge tops and hillsides of the Carolina and Georgia Sandhills: Well-drained soils that are smooth and convex on very gently sloping ridge tops and hillsides. Slopes range from two to ten percent. The soils have a brownish, sandy surface layer and a predominately brownish or yellowish, loamy subsoil.

Wagram-Troup-Norfolk—This soil type makes up approximately 17 percent of soils mainly in the southeastern part of the county. This soil is good for urban types of development, although soils that have a thick sandy surface and subsurface have limited sanitary facility usage as well as limitation to recreation development.

Soils on Floodplains: poorly drained to well-drained soils that are nearly level. Soils have a brownish loamy surface layer and a predominately brownish, loamy underlying layer that has gray mottles.

Chewacla-Toccoa-Wehadkee—These soils are located in flood plains of the Savannah River and Kiokee, Little Kiokee, and Uchee Creeks. This soil type makes up approximately two percent of the county soils. Primarily wooded, the association is flooded in most places roughly once in five years. These areas that are very susceptible to flooding are ideal habitats for plant and animal life, and are not recommended for development of any kind. The county requires site-specific soil studies to be conducted and submitted as part of the site hydrology and grading plan. In addition, the Department of Natural Resources Minimum Lot Size Tables govern specific soil groupings.

Prime Agricultural and Forest Land

The number of farms in Columbia County was 196 farms in 2002, down from 229 farms in 1997. Total farm acreage was 23,296 acres in 2002, down from 33,721 in 1997. This is a reduction of 31 percent. The average size of a farm in Columbia County in 2002 was 119 acres (2002, US Census of Agriculture, US Department of Agriculture).

Crops include corn, soybeans and wheat. Commodities include forestry, dairy, beef cows and greenhouse production. Hogs and chickens are not raised commercially in the county. Both harvested cropland and livestock production have been steadily decreasing. In 1992, the county reported 3,046 acres of harvested cropland. In 1997, harvested cropland declined to 2,292 acres. The same is true for cattle production; in 1992, 5,400 cattle heads were reported, and in 1997, only 4,600 heads were reported. As the county continues to develop, it is anticipated that farm and livestock production will continue to decrease as agricultural uses are converted into residential and commercial uses.

Currently, 52,098 acres in Columbia County are categorized as ‘undeveloped,’ and most of these acres are covered by forests. Approximately 6,562 acres of forest is managed by timber industry in the county.

The approximate make-up of tree specifications is as follows: Loblolly short-leaf pine 58.2 acres; oak-pine 21.1 acres; oak-hickory 22.3 acres; oak-gum-cypress 15.8 acres.

As Columbia County continues to grow, more and more farmland will be converted into urban uses. However, soil restrictions on septic tank development and the lack of sanitary sewer to the north and west of the county will preserve the rural character of the county for the medium range. Over the long term, a majority of the county is likely to be subject to development pressures.

New development must follow the county's requirements for densities, landscape requirements and minimum requirements for tree protection as set forth in the development regulations and Columbia County Zoning Ordinance.

Without new policies to protect the county's forest cover and promote forestry as an active economic use, the forests of Columbia County could diminish significantly over the next 20 years.

Columbia County has a strong tree protection ordinance, approved in 2003, that strives to protect tree cover and natural topography for land undergoing development. The tree protection ordinance requires all development to show development site plans before approval. These development site plans must indicate significant existing trees and whether or not the developer plans to preserve or remove those trees. In subdivision development, developers are only allowed to clear trees that are located in sites for roads or utilities. Also, the tree protection ordinance requires a certain amount of trees per acre in different districts. The most tree cover is required in multifamily districts, then commercial districts, and the least amount of tree cover is required in industrial districts. Also, additional tree cover is required in the Evans Town Center Overlay District.

Major Parks, Recreation and Conservation Areas

Columbia County is fortunate to have many conservation, recreation and natural areas. Additional information on recreational areas in the county can be found in the Community Facilities Chapter. Following is a brief description of the key natural attractions within the county.

1. Thurmond Hill Lake

Thurmond Lake, also known as Clarks Hill Lake, is the largest U.S. Army Corps of Engineers project east of the Mississippi River. Built between 1946 and 1954 as part of a comprehensive plan of development for the Savannah River Basin, the lake covers 70,000 acres and has nearly 1,200 miles of shoreline, of which 120 miles are in Columbia County. The lake is located on the Savannah River, 22 miles above Augusta, Georgia. Thurmond Dam impounds a lake that stretches nearly 40 miles up the Savannah River and 26 miles up the Little River from Georgia into South Carolina. Thurmond Dam was completed in July 1954, at a cost of $79 million. Thurmond Lake functions as a wildlife refuge, a tremendous source of recreational opportunities, a source of drinking water, and flood prevention.

Mixed stands of pine trees and hardwoods cover the lake's irregular 1,200-mile shoreline. More than 100 islands, created when the lake was filled, jut above its surface. A diversity of plant, fish and animal types, including some endangered species, are found on project lands. The most notable endangered species is the red-cockaded woodpecker. The lake features white, striped and hybrid bass and a good population of largemouth bass. Crappie, bluegill and sauger round out the major species of game fish.

In addition to the 41,500 acres managed by the Corps' Wildlife Biologist, 29,500 acres of project land have been leased to Georgia and South Carolina for wildlife management. Deer, turkey, quail, dove and other small game are abundant. Two resident flocks of Canadian geese have been established on the lake. The Corps also maintains a large number of nest boxes for wood ducks and bluebirds throughout the area.

The Corps estimates that through 1990 the project prevented $25.8 million in flood damage along the Savannah River. Thurmond Dam is also credited with reducing the amount of sediment carried by the river into Savannah Harbor by 22 percent, thus significantly reducing the harbor's maintenance costs.

Eleven water quality-monitoring stations are maintained around the lake to ensure the highest possible water quality for public recreation and for resident wildlife. Water quality is monitored further by an electrical system that continuously checks water releases downstream from the dam.

A large variety of passive and active recreational opportunities are available at Thurmond Lake. An excellent network of county, state and federal highways provides easy access to the lake. Thurmond Lake is well marked with navigation aids, making it easy for boaters to find their way around. Recreational activities include overnight camping at state and private campgrounds, boat ramps and marinas, with convenient access for swimming, fishing and hunting. Abundant wildlife populations make quality hunting and wildlife observation opportunities possible. Deer, turkey, quail, dove and other small game are all located in the area.

The Thurmond Visitor Center is located at the South Carolina end of the dam just off Highway 221. This visitor's center contains numerous exhibits about the lake, plant, fish and animal species, and surrounding area.

2. Savannah Rapids Parks/ Canal Headgates Area

The Augusta Canal Headgates were built in 1845 as a source of waterpower to attract manufacturing to the South. In its heyday an estimated 25,000 bales of cotton a year moved along the canal banks. This site currently serves as multiple functions providing recreational opportunities, an events and conference venue, an historic site, a visitor's center, and a place to get close to the natural environment of the Savannah River.

The site of Savannah Rapids Park is the entrance to the August Canal National Heritage Area

Facilities include the Savannah Rapid Pavilions, the Savannah Rapids Visitor Center, walking and biking trails and a canoe launch. These facilities are discussed further in the Community Facilities chapter.

3. Mistletoe State Park

Mistletoe is a State operated park located in Columbia County. Located on 72,000-acre Thurmond Lake near Augusta, this park is known as one of the

finest bass fishing spots in the nation. During the summer, guests can cool down at the beach or on miles of shaded nature trails. Canoes and fishing boats are available for rent, and a wildlife observation area is available.

The park has ten fully equipped cottages on the lake, five of which are log cabins. The campground is situated on a peninsula, offering spectacular views over the open water. A one-room camper cabin faces the lake, offering a porch with rocking chairs, electricity, four bed platforms, a grill, picnic table and water spigot. Other facilities include 92 campsites, four picnic shelters, a year-round group shelter, a pioneer area for group camping, canoe and boat rentals, three boat ramps and a swimming area.

5. Heggie's Rock
A spectacular outcropping of granite in Appling, located off of Old Louisville Road, Heggie's Rock is one of Georgia's twelve natural landmarks. Heggie's Rock spreads over 101 acres, rises 70 feet high, and is home to many endangered plant and animal species. Heggie's Rock is a private nature preserve owned and run by the Nature Conservancy, and is available for tours by appointment. Recently the Columbia County greenspace program acquired a 140-acre tract adjacent to Heggie's Rock Preserve to increase the protection for this fragile area.

6. Stallings Island
Stallings Island in the Savannah River is thought to be the earliest Native American Indian settlement in the county and is known to have the earliest dated pottery documented. Named after a local plantation owner, James Stallings, the Island is owned by the Archeological Conservancy, and is one of five Columbia County sites listed in the National Register of Historic Places.

Environmentally Sensitive and Ecologically Significant Areas

Plant and Animal Habitats
Columbia County is home to several species of plants and animals that are classified as endangered, threatened, or rare. State and Federal legislation relating to endangered plants and animals include the Endangered Species Act of 1973, the State Wildflower Preservation Act of 1973, and the Endangered Wildlife Act of 1973. The following list includes all plant and animal species that have been found in Columbia County, which are classified as protected by the State of Georgia and/or the Federal Government.

Species which are listed as endangered or threatened by the Federal Government and/or by the state:

Endangered or Threatened Animals		
Species Name	Common Name	Habitats
Cyprinella caerulea	Blue Shiner	Flowing runs and pools in streams with cool water and firm substrates
Haliaeetus leucocephalus	Bald Eagle	Edges of lakes & large rivers; seacoasts

Source: Georgia Department of Natural Resources Website, Georgia Rare Species Information, Plants, 2005.

Species Name	Common Name	Primary Habitat
Trillium reliquum	Relict Trillium	Mesic hardwood forests; limesink forests; usually with Fagus and Tilia
Isoetes tegetiformans	Mat-forming Quillwort	Vernal pools on granite outcrops
Draba aprica	Open-ground Whitlow-grass	Granite and amphibolite outcrops, usually in redcedar litter
Hymenocallis coronaria	Shoals Spiderlily	Rocky shoals of broad, open rivers
Amphianthus pusillus	Pool Sprite	Vernal pools on granite outcrops
Elliottia racemosa	Georgia Plume	Scrub forests; Altamaha Grit outcrops; open forests over ultramafic rock
Scutellaria ocmulgee	Ocmulgee Skullcap	Mesic hardwood forests; bluff forests
Sedum pusillum	Granite Stonecrop	Granite outcrops, often in mats of Hedwigia moss under Juniperus virginiana

Source: Georgia Department of Natural Resources Website, Georgia Rare Species Information, Plants, 2005.

Species which are listed as rare by the Federal Government and/or listed as imperiled by the state, but not currently listed as endangered or threatened:

Animals – None

Plants		
Species Name	Common Name	Primary Habitat
Aster georgianus	Georgia Aster	Upland oak-hickory-pine forests and openings; sometimes with Echinacea laevigata or over amphibolite
Marshallia ramosa	Pineland Barbara Buttons	Altamaha Grit outcrops; open forests over ultramafic rock
Amorpha georgiana var. georgiana	Georgia Indigo-bush	River terraces; floodplain woods; Flint Kaolin outcrops; mesic habitats with wiregrass,longleaf pine, mixed oaks
Anemone berlandieri	Glade Windflower	Granite outcrop ecotones; openings over basic rock
Arabis missouriensis	Missouri Rockcress	Granite and amphibolite outcrops
Bouteloua curtipendula	Side-oats Grama	Limestone glades and barrens
Clematis ochroleuca	Curly-heads	Dry woods in circumneutral soil

Dryopteris celsa	Log Fern	Floodplain forests; lower slopes of rocky woods
Paronychia virginica	Yellow Nailwort	Serpentine outcrops
Pediomelum sp. 2	Dixie Mountain Breadroot	Shallow soils over mafic (serpentine) rock, upland longleaf pine-mixed oak savanna and powerline rights-of-way
Portulaca umbraticola ssp. Coronata	Wingpod Purslane	Granite outcrops; Altamaha Grit outcrops

Source: Georgia Department of Natural Resources Website, Georgia Rare Species Information, Plants, 2005.

Rare Habitats Columbia County (listed by the state)	
Species Name	**Habitats**
Bare Rock/Lichen	Granite Outcrop
Herbaceous Vegetation	Granite Outcrop
Xeric Broadleaf Deciduous	Needleleaf Evergreen Forest
Shrub/Scrub Vegetation	Granite Outcrop

Source: Georgia Department of Natural Resources Website, Georgia Rare Species Information, 2005.

Properties using federal funds, applying for federal permits or State public agencies using federal funds must survey their properties for endangered species and prepare plans to reduce or avoid impact.

Air Quality

Air quality has a direct and far reaching impact on public health and well-being. Young children, the elderly, and people with asthma and other respiratory ailments are especially vulnerable to polluted air conditions. Air quality is affected by a number of factors including dust, pollen, temperature, humidity, smoke and chemical emissions. Natural sources of air pollution, such as weather conditions and seasonal changes (pollen) are difficult to control. However, the greatest amount of polluting emissions released into the atmosphere comes from man-made sources.

Currently the Augusta area meets all of the Environmental Protection Agencies' National Ambient Air Quality Standards (NAAQS). In 2004, the Richmond and Columbia Counties and the Georgia Department of Natural Resource entered into an Early Action Compact with the Environmental Protection Agency to ensure that the Augusta area remains in compliance with the NAAQS. Early Action Compacts involve a comprehensive air quality plan tailored to local needs to ensure continued air quality. The purpose of these compacts is to make state and local governments aware of the possible threats to air quality and to take proactive measures to prevent future failure to meet NAAQS.

Ground level ozone is the most serious threat to ambient air quality in Columbia County. Ground level ozone is the principal component of smog, which is a major irritant to the mucous membranes and causes burning and irritation of the eyes, nose and throat. As much as half of the ground level ozone found in urban areas can be traced to mobile sources of air pollution, such as automobiles, trucks and buses.

Another important air pollutant is carbon monoxide (CO), an odorless and colorless gas that in high enough concentrations can cause brain damage. Approximately 90 percent of carbon monoxide emissions in the atmosphere come from motor vehicle exhaust. Columbia County is part of the Augusta metro area's urban air quality basin.

Water Resources

Columbia County is characterized by a series of broad to narrow, gently sloping ridge tops and moderately steep hillsides adjacent to numerous, small drainage ways that dissect the areas. The ridges of this district guide the course of several creeks, including Clarks Hill, Loyd, Kiokee, Little Kiokee, Uchee Creek, Betty's Branch, Jones Creek, Reed Creek, Sandy Run, and Boggy Gut. The Savannah River is the boundary separating Columbia County from South Carolina, and provides the primary drainage for the county. The Kiokee, Little Kiokee and Uchee Creeks are tributaries to the Savannah River. Boggy Gut is a tributary to Brier Creek in Richmond County. The Little River and the Savannah River form a part of the Clark Hill Reservoir. The Savannah River provides primary drainage for the central part of the county. Brier Creek in Warran County drains the southern tip of the county. The Little River and its tributaries drain the northern parts of the county. Drainage basins include Kiokee Creek, Little Kiokee Creek, Euchee Creek, Betty's Branch, Crawford Creek, Jones Creek and Reed Creek.

Availability of water and water quality are major issues for the Columbia County area. Water quality is a public health issue for all Columbia County residents. Land-disturbing activities associated with development can increase erosion and sedimentation; storm water runoff and industrial uses that involve manufacture, use, transport and storage of hazardous or toxic waste materials pose a potential risk of contamination of nearby public drinking water supplies. It is essential that the quality of public drinking water is ensured, and for this reason it is necessary to protect the water resources that Columbia County and the surrounding communities rely on as sources of public water.

Quality water is also fundamental for supporting natural habitat and wildlife. All wildlife species are dependent on quality water. Columbia County enjoys excellent fishing opportunities, and these in particular are dependent on the protection of high quality waters for the propagation and survival of fish populations.

The county has taken several steps to protect its water resources:

- The development of the Greenspace Plan. In conjunction with State funding, the county aims to set aside 20 percent of its land mass in permanent open space. A large percentage of open space will be along floodplains in order to promote higher water quality standards.
- Land uses and land development strategies have been instituted through ordinance, such as reduction of densities within the Clarks' Hill Lake Area, the encouragement of conservation subdivisions, and a strong flood development ordinance.
- Septic tanks are restricted to areas of low density.
- The county has adopted a River Corridor Protection Plan for the Savannah River Corridor that meets the requirements of the Mountain and River Corridor Protection Act of 1991.

As part of the requirements of the Georgia Department of Community Affairs' Minimum Planning Standards, communities must comply with minimum standards established by the Department of Natural Resources (DNR) with respect to land and water resources. Commonly known as "Part 5 Minimum Environmental Planning Standards," these statewide standards were developed by DNR pursuant to Code Section 12-2-8 and are covered in Chapter 391-3-16. These rules address three basic concerns:

- Aquifers and groundwater recharge areas;
- Water supply watersheds; and
- Wetlands

To comply with the Part 5 Standards for each category of resources, communities must:

- Identify and inventory any occurrences of these resources within the community's jurisdiction;
- Determine whether the community has appropriate protective regulations that are at least as stringent as those imposed by DNR; and
- Determine whether additional regulations are needed to meet or exceed the minimum standards imposed by DNR.

Aquifers and Groundwater Recharge Areas

Recharge areas are portions of the earth's surface where water infiltrates the ground to replenish an aquifer, which is any stratum or zone of rock beneath the surface of the earth capable of containing or producing water from a well. In order to avoid toxic and hazardous waste contamination to drinking water supplies, groundwater recharge areas must be protected. While recharge takes place throughout practically all of Georgia's land area, the rate or amount of recharge reaching underground aquifers varies from place to place depending on geologic conditions.

According to data provided by the Georgia Department of Natural Resources on the Ground-Water Pollution Susceptibility Map of Georgia, Hydrologic Atlas 20, Columbia County contains several significant groundwater recharge areas. Recharge areas range from lower susceptibility areas in the upper northwest section of the county adjacent to

Mistletoe State Park and Thurmond Lake, to average and higher susceptibility areas in the lower west portion of the county that borders McDuffie and the southern portion of the county that borders Richmond County.

Both the state and federal government regulate groundwater recharge areas.

Requirements from the Environmental Protection Division (EPD) include restrictions and regulations on sanitary landfills, land disposal of hazardous wastes, spray irrigation of wastewater and wastewater treatment basins.

Water Supply Watersheds

A water supply watershed is the area of land upstream of a public drinking water intake. Protection of water supply watersheds helps keep drinking water free of contamination. By limiting the amount of pollution that gets into the water supply, governments can reduce the cost of purification and improve public health. Georgia Department of Natural Resources criteria help protect water supplies by establishing buffer zones around streams and by specifying allowable impervious surface densities within such watersheds. Since large drainage basins are less vulnerable to contamination by land development than small basins, more stringent watershed protection criteria are applied to water supply watersheds less than 100 square miles in size.

Columbia County contains 3 watersheds: the Little River Watershed in the northwest portion of the county, the Brier Creek Watershed at the southern part, and the remainder and majority of the county within the Middle Savannah Watershed. All three watersheds are classified as large drainage basins, and therefore are governed by DNR's "large watershed criteria."

The county currently has several programs and policies to help reduce pollution sources affecting its water supply watersheds. As an element of the land disturbance permitting process, the county has adopted a Soil Erosion and Sedimentation Control Ordinance requiring that sediment be retained on site. This is accomplished by means of silt fencing, sediment basins, rip-rap, and other erosion and sedimentation control measures.

The three watersheds within Columbia County are recognized as large water supply watersheds, having 100 square miles or more of drainage area above the water supply intakes. The Middle Savannah watershed qualifies further for environmental protection because the drainage area supplies water to the Thurmond Lake and the Stevens Creek Impoundment reservoirs.

Wetlands

Wetlands serve as important fish and wildlife habitats and breeding ground, and are an integral factor in food chain production. Numerous plant and

animal species have adapted to the special conditions of freshwater wetlands and cannot survive elsewhere. Wetlands serve as storage areas for flood protection/control, erosion control, water quality maintenance, groundwater recharge/supply and supply and recreation opportunities. Wetlands generally include swamps, marshes, bogs and similar areas. In Columbia County, wetlands are adjacent to Thurmond Lake, the Savannah River and along the creeks that run throughout the county.

Wetlands are threatened by a number of human and natural actions. Some of these are direct human threats such as drainage of the wetlands for land reclamation, construction of dikes, dams and levees which alter wetlands, and discharge of toxic materials such as oils, pesticides or other pollutants which destroy plants and wildlife within the wetlands. Other human threats are indirect such as sediment diversion by dams and channels, and subsidence due to extraction of groundwater, oil and other minerals. Finally, some other threats are natural such as storms, droughts, and destruction by animals.

The Environmental Protection Agency (EPA) is responsible for restoring and maintaining the environmental integrity of the nation's wetland resources. The major federal regulatory tool for achieving this is Section 404 of the Clean Water Act which establishes a permit program to regulate the discharge of dredge or fill material into waters of the United States, including most wetlands. To protect these environmentally sensitive areas, the EPA's goal is to allow no long-term degradation and no net loss of wetlands. A 404 permit may be required for any discharge of dredge or fill material in wetlands of over 0.1 acre in size; penalties for beginning work without a permit are severe. The Clean Water Act requires that a determination of jurisdiction for any work that would result in altering over one-acre wetlands.

In 1995 the county amended its Zoning Ordinance to clearly require Section 404 review by the Corps of Engineers of any land disturbance proposed in a wetland area. Hazardous or toxic waste receiving, treatment or disposal facilities and sanitary landfills are prohibited within wetland areas. Utilizing the Georgia Planning Act of 1990 criteria for wetlands protection, land uses that are deemed acceptable within wetland and flood prone areas include: (1) Timber production and harvesting, (2) Wildlife and fisheries management, (3) Wastewater treatment, (4) Camping, hiking, hunting and fishing recreation activities, (5) Natural water quality treatment and purification, (6) Other uses permitted under Section 404 of the Clean Water Act. In addition, as outlined elsewhere in this chapter, the county is working towards developing a greenway system to further protect sensitive areas.

Floodplains

In the majority of the county, floodplains tend to be narrow, except in the southern part of the county where they are moderately wide. The upland soils are generally well drained. The bottomland waterways drain off slowly and remain wet for long periods. Flood prone areas encompass about 17 percent of the acreage in Colombia County's total 196,823 acres. Much of

this area is contained in the floodplain, and is usable to some extent for non-intensive uses such as agriculture, recreation, and other non-intensive uses. Floodplain management is required under the National Flood Insurance Act of 1963 and the Flood Disaster Protection Act of 1973. The county has adopted a Flood Damage Prevention Ordinance, which sets forth guidelines and standards for development within the floodplain. Additional restrictions regarding lots containing floodplain areas and site plans are also outlined in the Zoning Ordinance Use Provisions.

Protected River Corridor

The Savannah River forms the eastern boundary of Columbia County. The Savannah River Corridor is an important resource in terms of its unique habitat for wildlife, a site for recreation, and a source of drinking water and energy. In addition to various types of animals and birds, species that appear on the State of Georgia Endangered Species list have been observed in the river and canal area. The county has adopted a River Corridor Protection Plan for the Savannah River Corridor that meets the requirements of the Mountain and River Corridor Protection Act of 1991.

The area along the Savannah River is mainly undeveloped with limited single-family residential development. Stevens Creek Dam which generates hydropower and energy is located just northwest of Stallings Island. Existing power line corridors from the Stevens Creek Dam power plant cross the river at Stallings Island and head downstream towards Augusta. Farther down stream abutting the Savannah Rapids Pavilion, are the Canal Locks and Dam Area and the canal head gates. South and east is Martin-Marietta quarry and stone crushing facility that extends up to the high water mark of the canal. The protection plan includes the implementation of a 100-foot natural vegetative buffer on the Georgia side of the banks, and list of permitted land uses. Permitted land uses include low density residential (subject to local zoning and Health Department regulations), road and utility crossings, timber production and harvesting, wildlife and fisheries management, recreational uses and facilities consistent with the natural buffer and/or river-dependent recreation activities, agricultural production and management.

Stormwater Utility

A Stormwater Utility was establish in 2000 and has collected fees over the past 4-½ years. These funds have been primarily used towards drainage improvement and maintenance projects. These projects involved the re-construction of failing infrastructure, detention and retention pond improvements and maintenance, maintenance of existing stormwater structures (drainage ditches, stormwater catch basins, etc), preventive maintenance on infrastructure to prevent flooding problems that may arise from blocked storm drains, improvements to the existing drainage systems to relieve recurring flooding problems, and stream bank stabilization projects. In addition, the fee has been used to fund programs that are intended to improve overall stormwater quality.

A list of major capital improvement projects has been developed, with a total estimated funding requirement of $8,000,000. Based on a preliminary budget and revenue analysis, these projects are projected to be completed by fiscal year 2011. This projection does not include or account for future drainage inadequacies that may arise. The current list of projects have been prioritized by several factors, including the impact of the problem to the community as a whole, health and safety factors, number of people who are directly affected by the problem, and environmental impact.

Since the Utility has started, it has shifted its focus from being a largely reactive program to becoming a proactive program. The program will continue to dedicate a significant amount of funding towards improving the drainage system infrastructure where maintenance or improvement is needed. The future will focus on implementing a holistic approach to storm water management that will be consistent with the growth trends this County has seen. In addition, the county will advance towards improving water quality through the development of ordinances that will allow enforcement.

Scenic Views and Sites

The Savannah River has been identified as a scenic view area. The majority of the riverbanks along the Savannah River remain heavily wooded and undeveloped, with limited single-family residential development. The River provides natural habitat for deer, raccoon, beaver, mink, muskrat, wild turkey, raptors, wading birds, as well as a variety of reptiles and amphibian species. Stallings Island National Historic Landmark is located in the River. Other significant land uses include the Augusta Canal Lock and Dam, the Savannah Rapids Pavilion, Stevens Creek Dam and the Martin-Marietta quarry. Based on limited availability of water and sewer and the River Corridor Protection Act, intense development is not expected to occur along the river, which should help protect this area and its historic significance, vistas, and the natural habitat it affords. In addition, the county is currently looking at ways to increase public access to the River.

Columbia County Greenspace Program

The mission of the Columbia County Greenspace Program is to maintain a proper balance between people and their environment by conserving the abundant precious natural resources of the county for future generations, and to enhance the quality of life for all County residents.

The goal of the program is to permanently protect 20 percent of the county's land, or a total of 36,889 acres. As of June 2005, the program has protected 10,015 acres.

The Greenspace Program serves multiple objectives. The program seeks to develop a system of connected greenways and open spaces to improve access to greenspace from living and working areas throughout the county. Also, the program seeks to preserve scenic corridors and sensitive natural resources. A priority is made on protecting wetlands and river corridors, such as areas around the Kiokee Creek and Euchee Creek.

Five focus areas guide the greenspace program. The table below lists these priority areas and the acres preserved in each one to date.

Land Type	Acres Acquired to Date
Savannah River Conservation Area and Greenway	5,471
Floodplain Greenways	155
Martinez-Evans Open Space	198
Northwest Conservation Area	0
Historic/Natural Resources	4,148
Total	10,015

Columbia County Greenspace Program, June 2005

1. Savannah River Conservation Area and Greenway

A 200-foot wide corridor is proposed running along the southern banks of the Savannah River. This would protect public access to the river, provide a vegetative buffer for the river, and create a greenway with access all the way to Clark Hills Lake.

2. Floodplain Greenways

Columbia County has a number of creeks including Kiokee, Little Kiokee, Euchee, Betty's Branch, Jones, and Reed. Lands would be acquired in 100-foot corridors creating a system of linking greenways while protecting the river's natural habitats and wetlands.

3. Martinez-Evans Open Space

The most urbanized area of the county needs open space, and this is a priority of the county's greenspace program. The goal is to create small-scale pocket parks and passive open space in this area within walking distance of established neighborhoods and commercial businesses.

4. Northwest Conservation Area

In the northwest part of the county there is a significant groundwater recharge area. Protecting this area from development will help to maintain high standards for water quality.

5. Historic and Natural Resources

In the central part of the county there is a spectacular granite outcropping known as Heggie's Rock. While Heggie's Rock is already protected as a private nature preserve owned and run by the Nature Conservancy, it is surrounded by wetland areas that are proposed for acquisition to buffer this important natural resource. Other areas under consideration include Gross Place Road and Burke Mountain.

Funding for greenspace acquisition comes from multiple sources, including county, state grants, and private donations. Columbia County received nearly $1,200,000 in state funding in years 2001-2002 from the Department of Natural Resources. Columbia County set aside $1,580,000 from its year 2000 SPLOST referendum. Also, private developers have donated almost $500,000 worth of land to the program. Lands are protected through a

variety of acquisition channels including conservation easements, fee simple purchases and other conservation donations.

Summary and Needs Assessment

Columbia County has an abundance of natural resources that warrant attention because of their sensitive nature and unique value. The county has taken several specific steps for the protection of water resources and conservation of the natural environment. In addition to direct protection of the natural environment, the county will continue to educate its citizens about the interdependence of the human population and the natural environment. One example of this educational effort is the new Reed Creek Wetlands Interpretive Park, opened on April 19, 2005.

Responsibility for the protection of the natural environment is regulated under several agencies and regulations. Key County regulations include:

- Savannah River Development Regulations
- Tree Protection Ordinance
- Soil Erosion Ordinance
- Flood Protection Ordinance
- General land use and land development regulations
- Site plan and engineering review
- Land disturbance and building permits
- Construction permits

The Georgia DNR also oversees environmental protection functions through water resource and soil erosion regulations and inspections. The federal government oversees environmental protection functions and the US EPA/Corps of Engineers—wetland (404) permits.

The county should adopt a Groundwater Recharge Area Protection Ordinance to meet Department of Natural Resources, Chapter 391-3-16, Rules for Environmental Planning Criteria, Minimum Requirements. This Ordinance will establish a groundwater recharge area district, determine pollution susceptibility, and establish permit development review, site plan requirements and enforcement policies. Requirements for ground water recharge areas vary according to the susceptibility of the recharge area.

The objectives of the ordinance would be to:

- Protect groundwater quality by restricting land uses that generate, use or store dangerous pollutants in recharge areas;
- Protect groundwater quality by limited density of development; and
- Protect groundwater quality by ensuring that any development that occurs within the recharge area shall have no adverse effect on groundwater quality.

Requirements for significant recharge areas include:

- Prohibiting new hazardous waste treatment or disposal facilities

- Regulating existing facilities that handle hazardous waste
- Regulating land fills
- Regulating chemical and petroleum storage tanks
- Regulating the disposal of agricultural waste

The county should adopt a Water Supply Watershed Protection Ordinance to meet the Department of Natural Resources, Chapter 391-3-16, Rules for Environmental Planning Criteria, Minimum Requirements. Regulations depend upon the size of the water supply watershed.

The objectives of such an ordinance would be:

- Protect the quality of water supply used for drinking and other human needs. The protection is necessary for the enhancement of public health, safety, and welfare.

For large water supply watersheds, buffers are established that prohibit development along stream corridors near the water supply.

For small water supply watersheds, buffers are establishes that prohibit development along stream corridors near the water supply. In addition:

- New hazardous waste disposal facilities are prohibited
- Total impervious area is restricted
- Hazardous materials handling areas are regulated
- New sanitary landfills are regulated

Additionally, water supply management plans are required.

The county will continue to control development location and practices so that unsuitable soils are not built on, erosion is minimized, wetlands are not disturbed and floodplains are avoided. The county currently enforces responsible development practices through land disturbance and building permits, inspection and review process. This process mitigates harmful development practices and will remain intact in the future.

6.0 Community Facilities and Services

Introduction

The adequacy and availability of community facilities is a necessary part of the comprehensive planning process due to the importance of maintaining and attracting future residents, businesses and industries to the area. Growth needs to be managed in such a way as to not put an undue burden on existing community facilities, and thereby negatively affect the overall quality of life in the county. It is important that the prioritizing, scheduling and construction of community facilities meet the needs of current and future populations. At the same time, the provision of community facilities can guide and direct growth in an orderly and logical manner. The highest priorities should be in areas that are targeted for growth in the short term, as illustrated on the Development Opportunities Map illustrated in Chapter 11. The county should avoid "leapfrog" development in low-density areas and the inefficient use of infrastructure dollars constructing facilities in these areas.

This Community Facilities Element inventories the various public and semi-private facilities and services available in Columbia County. It also assesses the quality and availability of these community facilities with respect to the impact of projected population and economic growth through the year 2025. This section uses population estimates and projections, as well as projections of economic growth located in the Population and Economic Elements as a basis for need assessment and the development of Level of Service (LOS) Standards, where appropriate.

Public Safety

Public Safety includes sheriff services, emergency medical services, fire protection and animal control. The Columbia County Sheriff's Office provides general police protection. All other public safety functions are provided through the Columbia County Emergency Services Division.

Columbia County Sheriffs Office

Columbia County residents depend on the Columbia County Sheriff's Office for law enforcement including the serving of arrest warrants and civil papers.

The Sheriff's Office has the following divisions:
Administrative Services – The Administrative Services Division provides administrative support such as records keeping, evidence keeping, procurement, information technology, and crime analysis.

Criminal Investigation Division – The Criminal Investigation Division's responsibility is to solve crimes by questioning victims, witnesses and suspects, accumulating physical evidence, and tracing stolen property.

Community Services Division – The Community Services Division oversees various volunteer service programs, such as the Reserve Unit, the Cadet Corps, the All Terrain Vehicle Ready Unit and the Citizens Auxiliary Unit.

The Detention Center – The Detention Center is responsible for conducting the detention center and court security.

Office of Professional Standards – The Office of Professional Standards oversees the qualification of new officers and the ongoing training of existing officers.

Special Operations Division – Specific crime-fighting functions, such as the Crime Suppression Unit, the Traffic Unit, and the Vice and Narcotics Unit, are housed under the Special Operations Division.

Patrol Division – The Patrol Division provides daily crime prevention and crime response functions for the county. The division is comprised of 60 certified law enforcement officers and ten school crossing guards. The Patrol Division is divided into four squads. Each squad operates with a lieutenant, a staff sergeant, a sergeant, and 12 deputies. Approximately 290 square miles of Columbia County are divided into ten patrol beats. Deputies are assigned permanent beats, allowing each beat deputy to become intimately familiar with his or her patrol area. This system has proven to be both highly effective and efficient.

The Sheriff's Office operates a substation in Evans and a main office in Appling. The Evans substation serves as the base of operation for the Patrol Division and the Appling office houses the records bureau, administration, and detention facility.

The Columbia County Detention Center can house up to 280 prisoners. Currently the Detention Center Division is approved for up to 114 positions including peace officers, detention officers and civilians.

The cities of Grovetown and Harlem both operate independent Police Departments.

Fire and Emergency Medical Services

Columbia County fire protection and medical first responder services are provided through private contracts which are managed by the Emergency Services Division. There are four centers from which fire and other emergency services are provided: The Martinez-Columbia Fire Rescue Department, the North Columbia Fire and Rescue Department, the Grovetown Department of Public Safety and the Harlem Department of Public Safety.

The average fire department response time is 1.5 minutes in urban areas and ten minutes in rural areas. There are approximately 56 emergency vehicles in 18 separate locations throughout the county to provide rapid response to emergency needs.

Columbia County Emergency Medical Services (EMS) are provided through a private contract with Gold Cross EMS, which is also managed by the Emergency Services Division. There are six EMS substations which house ambulances and medical personnel within Columbia County. Additionally, this service provides a medical transport helicopter to Columbia County. The response time requirements for EMS are based on the type of call, as well as the geographic area of the call, as follows:

	Urban	Rural
Priority 1	8 minutes, 59 seconds as to 90% of the calls	14 minutes, 59 seconds as to 90% of the calls
Priority 2	10 minutes, 59 seconds as to 90% of the calls	16 minutes, 59 seconds as to 90% of the calls
Priority 3	40 minutes, 0 seconds after the agreed-upon time for pickup of the Patient	Same as Urban

Animal Control and Care

The Emergency Services Division provides animal control services in Columbia County. There is an animal control facility located on Columbia Road in Appling, with a fleet of six trucks that provide coverage throughout the entire County. Plans are in place to expand the existing facility to provide a separate viewing area for individuals interested in adopting pets. In 2004, animal control services provided over 11,000 location visits and over 5,000 stray animal pick-ups.

Assessment of Public Safety Needs

Columbia County provides police protection and law enforcement through the Sheriff's Office and the Emergency Services Division handles all other public safety services. The county is currently meeting the needs of its residents adequately. As growth continues in outlying parts of the county, more formalized service areas should be established to deliver public safety services more efficiently and prevent redundancy. Particular attention should be directed to increasing Fire and Emergency Services for the emerging Greenbrier Town Center in order to prevent overburdening the resources currently dedicated to the Evans Town Center area.

Hospitals and Other Public Health Care Facilities

The county's health care services and facilities are provided through a network of modern private hospitals and clinics, a coordinated system of public health clinics, and numerous independent health care providers. The Columbia County Health Department has three clinics serving Martinez-Evans, Harlem-Grovetown, and Appling.

Hospitals

The residents of Columbia County are served by several excellent Hospitals and Medical Centers in the immediate metro Augusta area, including: University Hospital in Augusta, Doctors Hospital (formerly Columbia-Augusta Medical Center) in Augusta, Dwight David Eisenhower Army Medical Center (DDEAMC) at Fort Gordon, and St. Joseph Hospital in Augusta.

University Hospital, located at 1350 Walton Way, is the community hospital for the metro Augusta area. The 612-bed multi-service medical facility provides acute in-patient and outpatient emergency care, intensive care, trauma, and psychiatric care and operates two nursing homes, one in Columbia County. In addition, the hospital addresses the specialized needs of women's healthcare issues with the W.G. Watson Women's Center.

Doctors Hospital is a private multi-service medical facility located at 3651 Wheeler Road in Augusta. The facility is licensed for 354 beds and provides acute in-patient and outpatient care including emergency and intensive care. In 1998, the hospital embarked on a $14 million expansion and renovation project to better serve the needs of patients and staff. Doctors Hospital also provides specialized care for burn victims at their premier Burn Center, which celebrated its 20th year of treatment in 1998. The burn center boasts a 96 percent survival rate and treats an average of 700 burn victims annually. In addition, the hospital operates two satellite facilities, one in Columbia County at 635 Washington Road. The satellite facilities provide day surgery treatment for outpatients.

The Dwight David Eisenhower Army Medical Center is a 400-bed hospital located at Fort Gordon that serves the needs of military personnel, their dependents and retirees across the Southeast. In addition, Eisenhower is a teaching hospital, training civilian doctors and nurses in a number of vital medical disciplines.

St. Joseph Hospital, located at 2260 Wrightsboro Road, is 236-bed medical facility that specializes in women's health care and minimally invasive surgical procedures. The hospital has taken its mission into the community via a major home-health-care initiative that extends into 18 counties surrounding metro Augusta, including Columbia County. The St. Joseph Hospice Program fills the medical, emotional, spiritual and social needs of terminally ill patients and their families. In addition, St. Joseph has a partnership with University Hospital as the joint-owner of Brandon Wilde, a self-contained retirement community for older adults that has been ranked among the top 20 facilities of its kind in the country.

Public Health

The Columbia County Health Department operates three clinics at the Evans Government Center, Harlem-Grovetown, and Appling. The Evans and Harlem-Grovetown clinics were constructed within the last ten years, but the Appling clinic was built in 1976. In response to recent pressures

resulting from population growth in the Appling area, the Appling clinic is in the process of taking bids for the renovation and expansion of the facility in order to better serve present and future health needs in the Appling area. This expansion will involve approximately 1800 square feet (SF) of new office space along with renovated exam rooms and clinic facilities. The Health Department is beginning to provide more community outreach programs and it is anticipated that this shift in the provision of clinical services will have tangible effects on future facility needs.

Senior Services

Presently, Columbia County provides senior services at the senior center within the Bessie Thomas Community Center, built in 1994. Located at 5915 Euchee Creek Drive in Grovetown, this 1,800-square foot multi-purpose public community and senior center accommodates up to 125 people seated and 200 for reception style events. With a pool table, TV room, and arts and crafts room, the senior center offers a range of recreational programs and activities for senior citizens. Regularly scheduled field trips to restaurants and recreational destinations add to the diverse programs the center has to offer seniors. Transportation is provided to all seniors at no cost to and from the center or any of its many planned activities. The center also delivers 135 ready-to-eat meals on weekdays to the homes of homebound citizens that qualify for the program.

Public Transit

The Columbia County Public Transit System consists of three 15 passenger vans, two of which are equipped to transport wheelchair bound citizens. Appointments are required one business day in advance. Citizens are transported to education facilities, employment centers, shopping facilities, medical facilities, and general places of business between the hours of 10:00 am and 3:30 pm.

Senior residents (age 60+) pay a fee of $2 each way and junior residents (age under 12) pay a fee of $1 each way. All other residents pay a fee of $3 each way. This service is provided from Monday thru Friday.

Assessment of Public Health Needs

Current public facilities and private hospitals are highly regarded and serve Columbia County residents well. As population increases, area hospitals will continue to expand their facilities and services to meet these needs. The county will support the development of a new hospital in the area if the need arises.

The county is also encouraging the development of extended care facilities to meet the future needs of its aging population. Such facilities should be located in the vicinity of one of the two identified Town Centers, particularly Evans, in order to maximize opportunities for partnerships with existing health care and other services providers.

Parks and Recreation

There are nine existing parks, two planned parks and three community centers that make up Columbia County's parks and recreation system. The Reed Creek Wetlands Interpretive Park is the newest park in the county. Phase I of Reed Creek was completed in spring of 2005 and included a boardwalk, parking, and signage. Phase II will include a wetland center with classroom areas and visitor information and displays. Also, recently completed was Phase II of the Savannah Rapid Pavilion and Park, with expanded parking and bike trails. Batram Trail Golf Course, located next to Patriot's Park, is currently under construction and will open in 2005 and will be converted to County ownership in 2035. The two planned parks are the Library Memorial Garden park, 14 acres adjacent to the Jabez Performing Art Center and Library, and the Evans Town Center Commons Park, 17 acres across from the Evans Government Center.

The Columbia County Recreation Department completed its Master Plan in spring of 2002. The master plan included various forms of public input, including a steering committee and a series of survey instruments. The most requested recreation programs included arts and crafts, concerts, and running/walking trails. The most requested facilities were greenways, neighborhood parks with playgrounds, and passive parks. There was a strong support for additional open space and a desire to be able to walk or bike to park facilities. Some of the public's main criticisms included that recreational programs are not publicized enough and that parks are not located near the majority of the population in the county.

The Master Plan identifies current parks and related facility needs and lays out a schedule for expansion and renovation. The plan identified a park acreage deficit of 200 acres in 2002, with a potential to expand to a deficit of over 1,000 acres over 20 years if no park expansion were completed. Also, the plan noted that many park facilities do not provide universal access (access for the disabled, etc.). The master plan includes a list of new parks facilities recommended for each district, and detailed facility improvement recommendations for each park. The plan also discusses various financing options, with the pros and cons of each option.

Public Parks

The following is a list of current parks:

1. Lonnie O. Morris Park: 6.3 acres, 30 parking spaces, located in Appling on Highway 221 just outside of Appling and contains two baseball/softball fields, one tennis court, one basketball court, two playgrounds, one batting cage and restrooms.

2. Blanchard Park: 25 acres, 30 parking spaces, located on Dewey Drive in Evans off Belair Road and contains two baseball/softball fields, one small soccer field, two batting cages, playground, ¾ mile walking trail and restroom facilities.

3. Blanchard Woods Park: 150 acres under development, will contain ten soccer fields, four tennis courts restrooms, concessions, walking track and festival area.

4. Harlem City Park: 13.5 acres, 120 parking spaces, located in Harlem on Church Street and contains three baseball/softball fields, one soccer/football field, one tennis court, one basketball court, two playgrounds, one batting cage and restrooms.

5. Patriots Park: 100 acres, 600 parking spaces, located on Columbia Road in the center of the county, this facility houses the recreation department and contains six baseball fields, five softball fields, nine tennis courts, five regulation soccer fields, ¼ mile walking track, 18-hole disc golf course, gymnasium, two playgrounds, picnic tables and grills and concession buildings.

6. Reed Creek Wetlands Interpretive Park: 13.4 acres, 25 parking spaces, located off Fury's Ferry Road at Forest Creek subdivision, and contains a 300-foot boardwalk, interpretive signs and wetland vegetation.

7. Riverside Park: 55.5 acres, 188 parking spaces, located on Hardy-McManus Road behind Riverside Elementary School, and contains eight baseball/softball fields, batting cages, two tennis courts, boat ramp, fishing pier, playground, beach volleyball court, picnic tables, one picnic shelter and restrooms.

8. Roberts Park: Privately owned and operated, 2.0 acres, 30 parking spaces, located on Ruth Drive in Martinez and contains a baseball/softball field and a playground.

9. Savannah Rapids Pavilion Park: The park contains a boat launch, picnic area, a playground, fishing opportunities, a seven-mile trail for walking or biking, and ample parking. Other facilities include an outdoor dance pavilion and a community center/conference facility. Also included in the complex are historic displays and visitor information at the Savannah Rapids Visitor Center.

10. Wildwood Park: 975 acres, limited parking, located off Highway 74 and Washington Road on Holloway Road in Appling at Clarks Hill and contains 61 campsites with electricity and water hookups, horse riding and mountain bike trails, eight boat ramps, archery range, playground, three covered pavilions, beach areas, restrooms with showers, and will be the future home of the National Disc Golf Headquarters and Hall of Fame. Wildwood Park provides access to excellent fishing and boating opportunities and in 2005 served as the location for the Citgo Bass Masters Tournament.

In addition to the above County parks, the State-operated Mistletoe State Park along Clark Hill Lake is located within Columbia County. The two

planned parks are not incorporated in this list but include the Library Memorial Garden park and the Evans Town Center Commons park.

Community Centers

The following is a list of community centers:

1. Bessie Thomas Center (Gold Cross Ambulance and Senior Center): 1,800 square feet, located in Grovetown, this multi-purpose community and senior center accommodates up to 125 people seated and 200 people for reception-style events. Transportation is provided to the Senior Center and free lunches are available for those who quality. The center sponsors a number of leisure and recreational activities to keep seniors active.

2. Eubank Blanchard Center: 1,200 square feet, located at the intersection of Highway 150 and Ray Owens Road, this multi-purpose community and senior center accommodates up to 75 people, and includes playgrounds and a walking track. This location was recently given to Emergency Response Services for the site of a future fire station.

3. Savannah Rapids Pavilion: 25,000 square feet, located atop an 80-foot bluff in the center of a 31-acre wooded site in Martinez, this facility has seven meeting and banquet rooms and the capacity to seat 500 for a seated reception, full commercial kitchen, and an observation deck overlooking the Savannah River and Augusta Canal, and 300 parking spaces to be expanded to 560 in 2005 and 2006.

Assessment of Park and Recreation Needs

Between the recent Master Plan for the Recreation Department and the Columbia County Greenspace Program, the future open space and recreation needs of the county are well planned. New parks are planned for in each section of the county, and a series of connecting greenways is planned to increase recreation opportunities and access to parks and open space. The Recreation Department's Master Plan identified existing deficiencies in the parks program and lays out a systematic approach for addressing these deficiencies. These two plans are a strong foundation for open space and park expansion efforts in the county.

As noted in both plans, there is a need to focus on providing more small-scale, pocket or neighborhood parks in close to existing and future residences. The goal should be to provide parks of one to ten acres within ½-mile of residents – so that residents can walk or bike to a pleasant passive, recreation park. Despite a very strong parks system overall, this remains a weakness of the Columbia County parks and greenspace system.

Secondly, it should be noted that there is a strong imbalance in the location of parks facilities. Wildwood Park, Clark Hills Lake, and the Savannah River Pavilion all lie along the northern edge of the county. The other major parks facility, Patriot's Park, is centrally located. The clustering of recreational amenities along the northern edge of the county may be one of the factors in imbalanced residential development patterns around the Martinez-Evans area. Therefore the area south of I-20 should be a priority area for the acquisition of flood plain greenways as well as a major community park. Development of these kinds of facilities south of I-20 will help to balance the preponderance of recreational amenities along the northern edge of the county.

Educational Facilities

The Columbia County Board of Education and several private schools provide educational facilities in the county. There are sixteen elementary, seven middle schools, four high schools, and one alternative school within the Columbia County School System.

Enrollment as of April 2005 was 19,744 students. This is an increase of approximately 12 percent since the last comprehensive plan five years ago (September 1999 enrollment was 17,698 students).

The school system includes vocational training, special education and alternative education programs. Test scores for the Iowa Tests of Basic Skills, the American College Testing Exam and the Scholastic Assessment Test for the Columbia County School System were above national averages. For more information about the performance of public schools in Columbia County, please see: http://www.ccboe.net/ and click on the link "CCBOE Georgia Report Card."

Elementary Schools				
#	Name	Spring 2005 Enrollment	Estimated Capacity	Portables
1	Belair, 325 N. Belair Rd, Evans 30809	486	450	4
2	Blue Ridge, 550 Blue Ridge Dr, Evans 30809	702	745	0
3	Brookwood, 455 S. Old Belair Rd, Grovetown 30813	585	570	4
4	Euchee Creek, 795 Louisville Rd, Grovetown 30813	512	576	5
5	Evans, 628 Gibbs Rd, Evans 30809	459	450	4
6	Greenbrier, 5116 Riverwood Pkwy, Evans 30809	697	470	0
7	Grovetown, 300 4th Ave, Grovetown 30813	582	648	3
8	Lewiston, 5426 Hereford Farm Road, Evans 30809	498	590	0
9	Martinez, 213 Flowing Wells Rd, Martinez 30907	481	450	2
10	North Columbia, 2874 Ray Owens Rd, Appling 30802	370	591	6
11	North Harlem, 525 Fairview Dr, Harlem 30814	492	413	4
12	Riveridge, 4109 Mullikin Road, Evans 30809	0	570	0
13	Riverside, 4431 Hardy McManus Rd, Evans 30809	963	740	0
14	South Columbia, 325 McCormick Rd, Martinez 30907	505	475	2
15	Stevens Creek, 3780 Evans-to-Lock Rd, Augusta 30907	845	725	2
16	Westmont, 4558 Oakley Pirkle Rd, Martinez 30907	591	650	7
	TOTAL	8,768		43

Source: Columbia County Board of Education, Individual School Projections, 2005.

Middle Schools				
#	Name	Spring 2005 Enrollment	Estimated Capacity	Portables
1	Columbia, 6000 Columbia Rd, Grovetown 30813	691	600	3
2	Evans, 4318 Washington Rd, Evans 30809	865	550	12
3	Greenbrier, 5120 Riverwood Parkway, 30809	755	575	7
4	Grovetown, 5463 Harlem Grovetown Road, Grovetown 30813	493	575	0
5	Harlem, 375 West Forrest St, Harlem 30814	420	525	2
6	Lakeside, 527 Blue Ridge Dr, Evans 30809	871	726	0
7	Riverside, 1095 Fury's Ferry Road, Evans 30809	948	700	12
	TOTAL	5,634		36

Source: Columbia County Board of Education, Individual School Projections, 2005.

High Schools				
#	Name	Spring 2005 Enrollment	Estimated Capacity	Portables
1	Crossroads Academy, 112 Ford Avenue, Grovetown 30813	n/a	n/a	3
2	Evans, 4550 Cox Rd, Evans 30809	1708	1675	6
3	Greenbrier, 5114 Riverwood Pkwy, Evans 30809	1703	1560	7
4	Harlem, 1070 Appling-Harlem Highway, Harlem, 30814	1057	1000	8
5	Lakeside, 533 Blue Ridge Dr, Evans 30809	1465	1520	4
	TOTAL	5,933		28

Source: Columbia County Board of Education, Individual School Projections, 2005.

In March of 2005, Columbia County voters approved a one percent Special Local Option Sales Tax (SPLOST) to finance improvements and additions to the public school system. This SPLOST will generate between $90 million to $115 million in revenue. The largest portion of funds will be used for new school construction, including one new high school, three new middle schools (including one to replace Evans Middle School), and three new elementary schools. SPLOST funds will also be used to improve existing school facilities, for technology upgrades, for purchasing school buses, and for purchasing land for future school system expansion. Any excess revenues will be used to pay down debt or for a property tax rollback.

Assessment of Education Needs

Columbia County's educational facilities are planned and maintained by the Columbia County Board of Education. Given the county's rapid pace of growth in recent years, it is not surprising that enrollment at several schools in the system exceed capacity significantly. At present, this problem is alleviated by the use of portable classrooms, but new school construction will be required in the urbanizing areas of the county to relieve acute overcrowding. The recently completed Greenbrier complex of three new schools, near Washington Road and William Few Parkway, will accommodate growing enrollments in this developing area during the short term. However, additional facilities and/or expansions are necessary to alleviate current and future overcrowding in the Martinez-Evans area and within the cities of Harlem and Grovetown. Anticipating the need for future schools, the Growth Management Plan will recommend future potential school sites.

Cultural Facilities

There are three public libraries located in Columbia County. System-wide services include reference and information, inter-library loans, programs for children and adults, free library cards to residents, and a large general

collection of books, magazines, newspapers, audio and videocassettes, and compact discs.

The 9,700 square-foot Warren C. Gibbs Branch serves the Martinez-Evans area. The Harlem-Grovetown area is served by the 10,000 square-foot Euchee Creek Branch constructed in 1994. The Harlem Branch (15,000 square feet) is over capacity and planned for expansion.

A new library and performing arts facility, the Jabez Sanford Hardin Performing Arts Theatre, is currently under construction in the Evans Town Center area, with a tentative opening date of March 2006. The library will be 51,000 square feet and will include a theater seating area capable of holding 300, as well as an outdoor amphitheatre capable of holding 750 persons. The new library will hold up to 150,000 books and contain meeting rooms and computer areas as well.

The City of Harlem is also taking an active role in supporting local cultural initiatives. The city is embarking on a renovation of its downtown theatre using public and non-profit funds. Currently, the renovated theatre will be called the Harlem Arts and Education Center.

Assessment of Cultural Facilities Needs

The new library and performing arts center in Evans Town Center will fill a need for the county both for additional library space and new performing arts space. This will help Columbia County host its own arts organizations, and provide space for those in the larger Augusta region. Locally supported and locally available arts and cultural facilities are an important part of a vibrant community, and the new library and performing arts center helps to meet this growing need for the growing Columbia County community.

Solid Waste Management

Currently all garbage collection and recycling are managed through private carriers as permitted by Columbia County. There are a series of private landfills, located inside and outside the county, that accept solid waste.

A portion of solid waste has been disposed at the county-operated Baker Place Road landfill, a 112-acre facility jointly owned by the Board of Commissioners and the Columbia County Solid Waste Management Authority. This landfill will reach capacity and is expected to close in January of 2006. Thereafter, only private landfills will be available to accept Columbia County's solid waste.

Assessment of Solid Waste Management Needs

Private garbage, recycling collection, and landfill operation has proved satisfactory to residents and businesses. Landfills must comply with all of Columbia County's land use and environmental protection laws.

Water and Wastewater System

Water

The goal of water treatment is to make the water safe to drink by removing biological and chemical contaminants. There are two drinking water treatment facilities: The Jim Blanchard Water Treatment Plant and the Clark Hills Water Treatment Plant.

The Jim Blanchard Water Treatment Plant will soon be capable of producing 45.7 million gallons per day of drinking water, and has storage capacity of 5.25 million gallons. The Jim Blanchard Water Treatment Plant was originally built in 1973, but is currently undergoing an extensive renovation. The plant is being converted from a chlorine-fed system to a Sodium Hypochlorite Generation system to improve plant safety and reduce risk both at the plant and for surrounding residences.

The Clark Hills Water Treatment Plant is permitted to withdraw up to 8 million gallons per day from the Clark Hills Reservoir, and has 1 million gallons of storage capacity. The Clark Hills Water Treatment Plant was originally built in 1988.

Columbia County also has the ability to purchase water from the City of Augusta through two connections to the City's water system.

The county is divided into five pressure systems, each served by its own water tower. As of June 2004, there were 31,137 water accounts in the county, including residences and businesses. Demand for water is expected to grow in proportion with future population growth.

Major water projects planned for the next five years include improvements to both major water treatment plans, new water transmission mains to establish water delivery to the center of the county, a new centrally located maintenance facility, and additional piping and pumping capacity to strengthen the existing distribution system. The focus for service extension is the center of the county (toward William Few Parkway, around Hereford Farm Road, and toward Tubman Road) and around the I-20 corridor.

Wastewater

The Columbia County sewage system began in 1973, with the construction of a gravity flow collection system and two treatment plants, the Reed Creek and Crawford Creek Water Pollution Control Plants (WPCP). Today, the sewer system of Columbia County currently served 26,591 residential and commercial accounts as of May 2005

The Reed Creek plant, an advanced treatment activated sludge facility was constructed on Steven's Creek Road with an initial capacity of 1.7 million gallons per day. Expansion to 4.55 million gallons per day in 1994 has allowed Reed Creek to remain the county's primary treatment facility, currently receiving over 70 percent of the total waste flow. Service area for this plant includes the Reed Creek drainage basin, which contains most of the county's population center.

Crawford Creek WPCP serves the upper reaches of the Crawford Creek drainage basin, primarily the area southwest of Belair and Columbia Roads. The plant has a treatment capacity of 1.5 million gallons per day.

The Little River WPCP was constructed in 1987 off Hardy McManus Road and receives wastes from the Euchee Creek and Betty's Branch drainage basins. It has a capacity of 3 million gallons per day.

Kiokee Creek WPCP, the most recent addition to the County's facilities built in 2002, adjacent to the detention facility and serves only the immediate area. This plant has a treatment capacity of 300,000 gallons per day. Plans for possible extensions in the Appling area to the historic Courthouse, Board of Education facility, and Olive Grove church are in the preliminary study phase.

The cities of Harlem and Grovetown operate their own collection and treatment facilities. Septic tanks are employed throughout the rest of the county.

Major wastewater projects planned for the next five years include an upgrade to the Reed Creek WPCP, a relief sewer near the Reed Creek construction of a wastewater transfer pump station and main in the Jones Creek Basin, and the installation of a collector sewer in the Betty's Branch Basin. The focus for service extension is the center of the county and around the I-20 corridor.

Between wastewater and water planned extensions and facility renewals, a total of $33.5 million in projects is planned for the next five years, of which $25 million will be covered by bonds. The balance will be financed with system revenues and SPLOST funds.

Because of low soil percolation rates in some areas, population density should be limited in outlying areas to one unit per one to three acres, depending on soil type.

Assessment of Water and Wastewater Needs

Except for a small number of water customers in rural parts of the county, Columbia County supplies the majority of the water and wastewater services.

The water and sewerage systems of Columbia County serve the purpose of meeting the need of the current population and businesses. As the county develops, water and sewer service will need to be expanded to meet the needs of new development. Water and sewer service should only be expanded in a way that supports the goals of the Growth Management Plan. Provision of this service is one of the best ways for the county to shape its future growth and development.

The City of Grovetown exports its excess wastewater to Columbia County. As Grovetown has grown, its needs have expanded rapidly, and sewer fees will need to be raised to pay for the new development.

The Harlem and Grovetown areas need water and sewer service expansions to serve the population growth and development in their communities as well.

General Government

Columbia County operates under a commission-based system of government in which five commissioners are elected to four-year terms. Four commissioners are elected to represent districts, while one commissioner is elected county-wide and serves as the commission chairman. In addition, each commissioner serves as chairman over a specific interest committee, which provides the conduit for information and business to be conducted from the various county departments and the Board of Commissioners.

To carry out the programs of the Board of Commissioners, several county officials are appointed by the Commission. The Clerk of the Court, Coroner, Magistrate Court Judge, Probate Court Judge, Juvenile Court Judge, Tax Commissioner, Sheriff, and District Attorney are appointed by the Commission and coordinate their activities with the County Administrator. The county Administrator serves as the chief administrative officer for the county and directly supervises all county department heads. The Administrator also coordinates activities and budgets with elected officials, agencies, boards, and authorities. Civic leaders in Columbia County maintain a pro-business outlook while seeking to balance the needs of their residential populations by encouraging economic development and promoting commercial and retail expansion in a manner supportive of the existing high quality of life.

The Columbia County Government Center located in Evans is the site for numerous county departments including Finance, Information Services, Planning and Development, Engineering and Building Standards, Sheriff, Health, Vehicle Tags, and an Auditorium. These departments are housed in a 30,000-square foot facility.

The Columbia County Justice Center was completed in August of 2002. The Justice Center and Courthouse houses the Magistrate Court, Juvenile Court, Clerk of Superior Court, Probate Court, Superior Court Judges,

District Attorney, Probation, and Court administration on the first floor. A jury assembly room, a small courtroom, two medium-size courtrooms, and a large courtroom are on the second floor of the building. The lower level of the Justice Center contains offices and a secure receiving area for prisoners being tried in court. The total facility has 69,700 square feet.

Renovation of the Appling Courthouse began November 1, 2004. The renovation of the interior will include painting, flooring and replacing various fixtures. The exterior will include cleaning the brick, replacing windows and landscaping. The renovation should be complete in the summer of 2005.

Assessment of General Government Needs

With the construction of the new Justice Center and the main library, Jabez Hardin Samford Performing Arts Theatre, Evans will continue to house most general government functions and many community services. However, continued growth will undoubtedly place additional demands on these facilities and staff, and will require county office additions and improvements. Therefore, methods to accommodate future growth in government services are being explored.

7.0 Land Use

Introduction

Land and the uses to which it is put constitute the foundation on which all other aspects of development are founded. Land use and development patterns establish the foundation for the Comprehensive Plan. Consequently, the principal objective of the Land Use Plan is to determine the most suitable and efficient use of the land and the pattern in which these uses will occur. The integration of existing development patterns, growth trends and the analysis of land development capacity (the ability of the land to support development) form the basis for preparing the Future Land Use Plan.

Land Use Categories and Patterns

An inventory and analysis of existing land use was conducted to establish the type, spatial distribution and intensity of development within the county. Inventoried parcels were classified by primary use and transferred to a map depicting existing land use. For planning purposes, land uses are identified under the categories listed below.

Agriculture and Forestry

This category includes land being actively farmed, including crop cultivation or livestock operations, or set aside for timber management as an agricultural pursuit. Much of the land in the western half of the county, north of I-20, is used either for agricultural purpose or as part of active forestry operations.

Residential

Because Columbia County is predominately a bedroom community, it is important to consider all types of residential development. The residential category is for land devoted to permanent living accommodations, including lots containing houses or manufactured homes, housing subdivision developments, and buildings containing multiple housing units attached horizontally (such as duplexes or townhomes) or vertically (like apartments).

In order to evaluate these various forms of residential use, the “Residential” category is divided into five subcategories on the Future Land Use Map: Rural Residential, Low Density Residential, Medium Density Residential, and High Density Residential.

Rural Residential

Rural Residential areas are primarily located in the southern and western portions of the county where sanitary sewer and often public water is not available, necessitating on-site sewage disposal systems and wells. Rural Residential areas are usually zoned R-A Residential-Agricultural, where lots are required to be a minimum of 2-½ acres and often larger due to poor soil conditions.

Low Density Residential

Low Density Residential areas are primarily in the urbanized area of the county, but can also be located in the rural southern and western areas in the county. These are lots consisting of single-family houses, commonly developed in suburban subdivisions at densities approaching 1 unit per acre. Lots and areas qualifying as low density residential are usually a minimum 30,000 square foot lots and are usually zoned R-1 Single-Family Residential. Some low density lots are also zoned R-A, but these are non-conforming legal lots of record.

Medium Density Residential

Most of the residential portions of Martinez and Evans fall within this category, having been the first areas that attracted growth from Augusta-Richmond County once sanitary sewer service was available in the area. Typical development in this category consists of single-family subdivisions with net densities between one unit per acre and approaching eight units per acre. Most of the single-use developments in these areas are zoned R-2 Single-Family Residential, R-3 Single-Family Residential or R-3A Single- and Two-Family Residential. The mixed-use developments that are located in these areas tend to be large with a variety of housing types, recreational opportunities and compatible shopping facilities, zoned PUD Planned Unit Development.

High Density Residential

There are pockets of high density housing located in the urbanized area of the county. High density residential consists of town homes and apartments with net densities between eight and 14 units per acre. High density housing is usually zoned T-R (Townhouse Residential) A-R (Apartment Residential) or within larger Planned Units Developments.

Mixed Use

Mixed use is typically a single building containing more than one type of land use; or a single development of more than one building and use, where the different types of land uses are in close proximity, planned as a unified complementary whole.

Professional Office

Professional Office use is a type of commercial development that primarily provides a service as opposed to the sale of goods or merchandise. Examples include medical or engineering offices, real estate offices, insurance agencies and corporate headquarters. Most of the office-professional use is in the urbanized area of Martinez-Evans. Purely office/professional uses are often zoned P-1 Professional, although the commercial zoning districts also allow office uses.

Commercial

Commercial uses are predominantly establishments that offer goods or merchandise for sale or rent, and other commercial uses that do not operate in “office” settings. Such uses include stores, shopping centers, hotels, restaurants, gasoline stations, automobile body shops, physical

fitness centers, markets and building supply centers. Commercial development within Columbia County consists of both sales and service uses.

These uses occur on individual lots or within strip shopping centers. The area around the major intersection of Washington Road, Columbia Road, and Bobby Jones Expressway in Martinez has long been the commercial hub of the county with several large shopping centers anchored by big box retail chains. With direct access to I-20, Washington Road supports a large concentration of interstate- oriented commercial uses on individual lots, such as fast food restaurants, gas stations, and overnight lodging. Most of the more recent commercial developments have occurred in the Evans area as shopping centers, often organized around a grocery store, along with new family-style restaurants and other convenience services typically located on individual lots.

Commercial uses are zoned C-1 (Neighborhood Commercial), C-C (Community Commercial), C- 2 (General Commercial) or C-3 (Heavy Commercial), depending on the types of uses and intensity of development. Some commercial uses, such as auto paint and body stores are occasionally located in the M-1 zone.

Industrial

This category includes industrial, light manufacturing, distribution and business park uses. Most industrial uses in the county are zoned M-1 Light Industrial reflecting the low intensity of such uses common to Columbia County; some more intense uses are zoned M-2 General Industrial. A large portion of the industrial and quarry activities occur in the S-1 zone, as well.

Transportation, Communication and Utilities

This category includes such uses as power generation plants, railroad facilities, radio towers, public transit stations, telephone switching stations, streets and highways. In Columbia County, uses classified in this category almost exclusively consist of streets, highways and the railroad tracks, along with cell towers and utility substations.

Institutional

Institutional uses include public state, federal or local government uses as well as quasi-public institutions and some private institutions. Governmental uses include County Administration buildings and courthouses, fire stations, libraries, post offices and public schools (but not parks). Institutional uses include churches, cemeteries and other private non-profit uses. Public and institutional uses are typically not concentrated in specific locales, and this is the case in Columbia County, with one exception – Evans Town Center. While the majority of public and institutional land uses in the county are located on scattered sites, the Government Complex in Evans is a growing hub of local governmental uses and community facilities. This hub has been reinforced with the completion of the new Columbia County Courthouse Annex, and will be expanded with the completion of the main library and performing arts center in Evans in 2006. In addition, the Fort

Gordon Military Reservation occupies a significant portion of land in the southeast tip of the county. There are fourteen elementary schools, six middle schools, four high schools as well as multiple private educations facilities located throughout the county. Institutional uses in the county consist primarily of churches and other faith-based institutions.

Parks—Active Recreation

Parks- Active Recreation uses include land dedicated to active recreational uses. These lands may be either publicly or privately owned and may include playgrounds, sports fields and recreation centers. Parks such as Patriots' Park that have baseball, softball, football or soccer fields, play equipment or basketball, tennis or multi-purpose courts for sports activities provide active recreation opportunities in the county.

Parks- Passive Recreations and Conservation

This category includes land dedicated to passive recreational uses or undeveloped open space reserved for public use. These lands may be either publicly or privately owned and may include picnicking grounds, camping, trails and interpretive areas, nature preserves, wildlife management areas, national forests, golf courses, or may be held in their natural state.

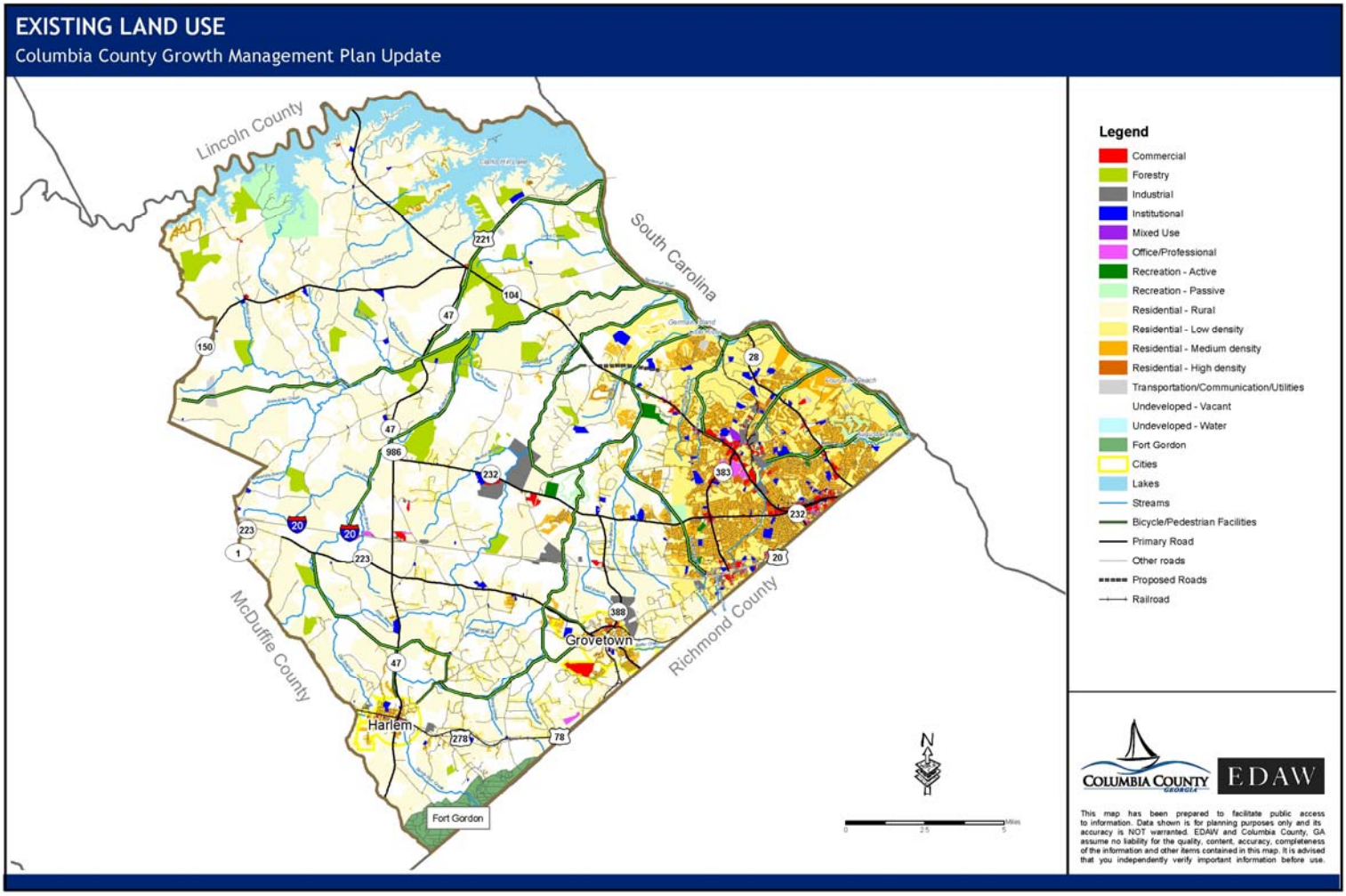
Columbia County enjoys extensive access to recreational uses particularly due to the presence of Clarks Hill Lake and the Savannah River along the northern border of the county. Mistletoe State Park occupies almost 2,000 acres in the northwest corner of the county and Wildwood Park offers 975 acres of recreational uses such as boating and camping. In addition to these large state and local facilities, there are eight other County parks ranging in size from two to100 acres and offering a wide array of recreational amenities and passive open space.

Undeveloped

Undeveloped land is vacant and lands where development has been abandoned or where deteriorated buildings are located. Undeveloped lands are located throughout the county, but tend to predominate around areas that are zoned for nonresidential use or are relatively unusable due to floodplain or wetlands on the property. Flood prone areas encompass about 17 percent of the acreage in the county's 192,726 acre land area. Undeveloped lands are clearly evident along the banks of the Savannah River and within the floodplain of several of its tributaries, such as Kiokee, Little Kiokee, and Euchee Creek. Water bodies such as lakes and streams are also considered undeveloped areas.

Columbia County Existing Land Use Distribution -2005		
Land Use Classification	**Acres**	**Percent**
Commercial	1,586	0.8%
Forest	6,562	3.5%
Industrial	2,103	1.1%
Institutional	1,688	0.9%
Mixed Use	52	0.0%
Office-Professional	504	0.3%
Recreation - Active	360	0.2%
Recreation - Passive	2,576	1.4%
Residential - Low Density	18,357	9.7%
Residential - Medium Density	11,903	6.3%
Residential - High Density	420	0.2%
Residential - Rural	79,849	42.1%
Transportation, Communication, Utilities	331	0.2%
Undeveloped - Vacant	52,098	27.5%
Undeveloped - Water	11,153	5.9%
	189,542	100.0%

Source: Columbia County GIS database, EDAW analysis, 2005


EXISTING LAND USE
Columbia County Growth Management Plan Update
Lincoln County
South Carolina
McDuffie County
Richmond County
Grovetown
Harlem
Fort Gordon
Legend
Commercial
Forestry
Industrial
Institutional
Mixed Use
Office/Professional
Recreation - Active
Recreation - Passive
Residential - Rural
Residential - Low density
Residential - Medium density
Residential - High density
Transportation/Communication/Utilities
Undeveloped - Vacant
Undeveloped - Water
Fort Gordon
Cities
Lakes
Streams
Bicycle/Pedestrian Facilities
Primary Road
Other roads
Proposed Roads
Railroad
COLUMBIA COUNTY GEORGIA
EDAW
This map has been prepared to facilitate public access to information. Data shown is for planning purposes only and its accuracy is NOT warranted. EDAW and Columbia County, GA assume no liability for the quality, content, accuracy, completeness of the information and other items contained in this map. It is advised that you independently verify important information before use.

Influences on Future Development

Historic Patterns of Growth

Over the last 35 years, Columbia County has experienced phenomenal growth as more and more people moved to the area seeking new housing in proximity to good schools within the Augusta-Aiken Metropolitan Area. Single-family residential growth has been the strongest area of new development with the majority occurring in classic suburban subdivisions in the northeast section of the county. As single-family residential growth continues, much of it is occurring in the form of large, executive-style homes located in subdivisions closer to the Savannah River and centered on golf courses and other recreational amenities. There is a limited amount of single-family attached housing, and even fewer multi-family developments in the county, and these tend to be concentrated in the Martinez-Evans area primarily along Belair and Washington Roads.

Commercial growth has been a function of automobile accessibility, with the largest concentrations located at major thoroughfare intersections and along the established commercial corridors that tie into I-20: Washington Road, Belair Road, and Bobby Jones Expressway. Unfortunately, much of the earliest commercial development in the county occurred in the form of ubiquitous strip centers, fast food restaurants and gas stations that sprawl along major arterial roads.

The establishment of a town center at Evans was one of the objectives of the “Forward 2020” plan and was promoted by the recent adoption of the Evans Town Center Overlay District in November of 2002. Evans Town Center is successful in its mix of live, work, and play uses and as a concentration of important civic functions. Evans Town Center is successful as a regional attractor for various types of economic activity. However Evans Town Center fails to function as a true town center from an urban design perspective.

Evans Town Center does not have the characteristics to promote a walkable environment. Important characteristics that are missing include buildings close to the sidewalk, buildings in close proximity to each other, and a system of minor streets for creating alternative paths and distributing traffic. Instead of commercial development being concentrated along a network of smaller streets near the center, it is spreading out along the major arterials. Also Evans Town Center lacks key urban design features, such as well-defined edges, gateways, and central public spaces lined with activity.

In short, Evans Town Center is successful as a concentration of economic and civic activity, but it is not successful in creating the pleasant public environment and traffic reduction benefits of a true town center.

Industrial uses in the county primarily consist of light industrial developments, industrial and business parks, wholesale and distribution uses which have capitalized on the county’s valuable attributes of available

land, water and sewer service, and access to I-20. Currently, there are two main concentrations of industrial development in the county: one near Evans, with access to railroad transportation, and the other near Grovetown with access to I-20 via Horizon South Parkway. By virtue of water and sewer extensions in the vicinity of the Horizon South Parkway/Lewiston Road interchange, future industrial growth is planned to extend along this segment of the I-20 corridor.

Land Use and Infrastructure Patterns

Although a small pocket of the Central Martinez area is not supplied with county sewer, the majority of the urbanized portion of the county around Martinez-Evans is fully served by the county's public water and sewer facilities. The sewer and water service areas do not extend much beyond William Few Parkway, leaving almost the entire western half of the county reliant on wells and septic tanks. Historically, the installation of new infrastructure in Columbia County has tended to create expanded service areas that mimic the pattern of the drainage basins which dissect the area. For instance, the Reed Creek basin in Martinez contains most of the county's population base and is the location of the first treatment plant, which was built in 1973. The series of gently sloping ridge tops and moderately steep hillsides, which guide the course of several creeks in the area, have helped shape the pattern of development during the last thirty years as new growth has spread out from the Reed Creek basin (Martinez) in a banding pattern moving westward towards Belair Road and further to William Few Parkway. Single-family residential development has been closely tied to the water and sewer service areas, with the exception of a limited number of homes on large lots (five acres of more) near the lake and in the rural parts of the county. Though less dependent on sanitary sewer availability than residential subdivisions, commercial and industrial development has also been fueled by access to public utilities and has concentrated along the I-20 corridor.

Blighted and Transitional Areas

Columbia County is fortunate in having virtually no blighted areas and no areas in transition from one use to another that create incompatible land use relationships or untenable living conditions. Most of the county's older homes fall into one of three categories: the historic homes of Appling and Harlem, most of which are well-maintained by their resident owners; the neighborhoods of the late '60s and early '70s, in and around Martinez, which are well-tended by their residents; and scattered aging structures on large lots that are prime candidates for redevelopment in economically attractive locations. Within this last category, however, there are a growing number of single-family houses, built during a quieter era and fronting on major thoroughfares such as Washington Road, Fury's Ferry Road, and Belair Road, which now find themselves on busy multiple lane arterial roads. These houses are transitioning to low-intensity commercial and office uses, compatible with nearby residential development to the rear.

Incompatible Land Use Relationships

Classic land use conflicts such as incompatibilities between adjacent uses are limited in Columbia County. The abundance of land and low density development patterns have limited land use conflicts until recent years. However as development pressures have continued, new land use conflicts are beginning to emerge. The protection of single family residential areas has been an increasing issue in the county. Recent denser housing development and commercial development has at times been viewed as a threat to existing single family neighborhoods. Finding the right location and relationship between these necessary uses and existing neighborhoods is one of the key goals of this growth management plan update.

After the adoption of the 2020 Growth Management Plan, the county increased the minimum lot size requirement for single-wide manufactured homes to five acres. With manufactured homes no longer available as a source of affordable housing the demand for other affordable housing types, such as townhomes, has increased.

Most of these new townhome developments use narrow dead-end private streets off a central public road. A majority of the units do not have garages but utilize a concrete parking pad in front of the entrance. This, in conjuncture with the narrow private roads, allows for little or no guest parking and creates unsafe conditions for fire protection. This development arrangement also does not allow for adequate green space or landscaping. Concerns about these new townhome developments include traffic impacts, safety vehicle access, lack of greenspace, visual incompatibility, and durability and longevity of this new housing stock.

As a result of the advent of metal buildings, clear-cut properties and garish signs, Columbia County has turned its eye to the aesthetics of the built environment. Design guidelines for development within the Evans Town Center and the newly established Corridor Protection Overlay have been adopted as well as a signage provision in the Zoning Ordinance.

Another area of concern is the affect that major arteries are having on existing residential units. During the mid 1960s and 1970s, when Columbia County was experiencing its first wave of residential development, homes were built directly off of main roads such as North Belair Road, Baston Road, and Old Evans Road, to name a few. These roads have now been widened to accommodate the steadily increasing traffic volumes. The residential value of these homes has diminished as the traffic volume and noise increase and as the structures age.

The 2020 Growth Management Plan calls for the conversion of these units into office use. This appears to have beneficial affects in that the structures are upgraded and that office use has minimal impact on the surrounding residential uses. However, this has added increased stress on the road network due to turning volumes. This has also increased the pressure for

strip commercial development along major arterials, which is contrary to the 2020 Growth Management Plan vision for a nodal development pattern.

Environmentally Sensitive Areas

Columbia County is rich with natural resources, particularly water features such as the Savannah River, which serves as its northern boundary, along with the many creeks, floodplains and wetlands, which bisect the county. In addition, the large granite outcropping known as "Heggie's Rock," and the abundant natural open spaces in the undeveloped areas of the county provide valuable opportunities for community enhancement through protection and use as accessible natural areas. The greenway trail system being developed as part of the Augusta Regional Transportation Study (ARTS) will link several of the parks and community facilities within the county and ultimately connect to the larger trail system which extends into Richmond County and the City of Augusta.

Future Land Use Demand

Future land use demand is driven by population growth and employment growth. Population growth drives the demand for new residential lands; employment growth drives the demand for new commercial and industrial lands.

Population and employment projections for Columbia County have been established through 2025. These projections are based on regional population and employment projections, with the added assumption that Columbia County will continue to gather a disproportionate share of both population and employment growth. The population of the county is expected to grow from 100,819 to 144,667, about a 43 percent increase; employment in the county is expected to grow from 39,717 to 62,109, about a 56 percent increase.

Population and Household Projections							
	1990	2000	2005	2010	2015	2020	2025
Persons per household	2.97	2.85	2.79	2.75	2.69	2.65	2.60
Population	66,031	89,288	100,819	112,350	123,113	133,877	144,667
Households	22,233	31,329	36,092	40,855	45,687	50,519	55,742

Source: Columbia County Staff and EDAW analysis, 2005.

Employment Projections							
	1990	2000	2005	2010	2015	2020	2025
Employment	18,884	32,436	39,717	45,554	45,519	56,306	62,109

Source: Central Savannah River Area Regional Plan 2005-2025 and EDAW analysis, 2005.

Population growth is transformed into new residential land demand through a series of equations and assumptions. First population is transformed into households using assumptions about household size. Next, households are allocated to low density, medium density, and high density types. Each type uses a corresponding amount of land. The total of the land used for

each of the housing density types is the total residential land use demand. Using this method, an additional 16,135 acres of residential development is forecast for the next 20 years in Columbia County.

	Density (DU/Acre)	Acres (Gross)	Acres (Net)	Units	Percent of Acreage
Residential - Low Density	0.50	5,490	7,261	2,196	45.0%
Residential - Medium Density	2.80	6,039	7,987	13,527	49.5%
Residential - High Density	6.30	366	484	1,845	3.0%
Residential - Very High Density	12.00	122	161	1,171	1.0%
Mixed Use	6.30	183	242	922	1.5%
Total		12,200	16,135	19,662	100%

Source: Columbia County GIS, EDAW analysis, Columbia County Staff.

Employment growth is transformed into new commercial, office, industrial, and institutional land demand through a more complex series of equations and assumptions. First, employment growth is allocated to different economic sectors. Then new jobs in each economic sector are allocated to a distribution of commercial, office, industrial or institutional land types. New employment is then transformed to floor area by using the typical floor area needed for each employee. Finally floor area is converted into acres by using standard building assumptions about the amount of floor area per acre of land (sometimes know as F.A.R. floor area ratio).

Critical assumptions in this future land use demand projection include:

- What types of land does each employment in each economic sector use?
- How much floor area is needed for the average employee?
- What percent of the average land parcel is developable?
- How much 'extra' land should be allocated to facilitate market choice and flexibility?

These assumptions can be updated when more accurate data is available or when policies behind the assumptions change.

Employment Growth by Economic Sector, 2005-2025						
Economic Sector	2005	2010	2015	2020	2025	2000-2025 Increase
Agriculture	348	399	399	494	544	196
Forestry, fishing, related activities, and other 3/	145	167	167	206	227	82
Mining	73	83	83	103	114	41
Utilities	128	147	147	182	200	72
Construction	4,549	5,218	5,214	6,450	7,114	2,565
Manufacturing	3,664	4,202	4,199	5,194	5,729	2,065
Wholesale trade	851	976	975	1,206	1,331	480
Retail trade	5,584	6,405	6,400	7,917	8,732	3,148
Transportation and warehousing	621	713	712	881	972	350
Information	499	573	572	708	781	281
Finance and insurance	1,826	2,095	2,093	2,589	2,856	1,030
Real estate and rental and leasing	2,368	2,716	2,714	3,357	3,703	1,335
Professional and technical services	1,126	1,292	1,291	1,597	1,761	635
Management of companies and enterprises	109	125	125	155	170	61
Administrative and waste services	2,918	3,347	3,344	4,136	4,563	1,645
Educational services	950	1,090	1,089	1,347	1,486	536
Health care and social assistance	3,004	3,445	3,442	4,258	4,697	1,693
Arts, entertainment, and recreation	739	847	846	1,047	1,155	416
Accommodation and food services	2,654	3,044	3,042	3,763	4,151	1,496
Other services, except public administration	3,123	3,582	3,580	4,428	4,884	1,761
Federal, civilian	143	164	163	202	223	80
Military	271	311	310	384	423	153
State and local	4,024	4,615	4,612	5,704	6,292	2,269
Total	39,717	45,554	45,519	56,306	62,109	22,392

Source: Central Savannah River Area Regional Plan 2005-2025 and EDAW analysis, 2005.

Employment to Acreage Future Land Use Demand, 2025				
Land Use Type	Commercial	Professional Office	Industrial	Institutional
New Employment	6,693	5,552	5,144	4,832
Average Floor Area per Employee	600	330	800	330
Estimated Floor Area Ratio (FAR)	0.20	0.23	0.14	0.23
Additional Acreage Demand	461	183	685	159
Efficiency Multiplier	1.15	1.15	1.15	1.15
Market Choice Multiplier	1.75	1.15	2.00	1.15
Additional Acreage Allocation	928	242	1,574	210

Source: Columbia County Staff and EDAW analysis, 2005.

Using this method, the following land use demand is forecast: 928 acres of commercial, 242 acres of office-professional, 1,574 acres of industrial, and 210 acres of institutional.

These forecasts also include factors that take into account the usable portion of developed land because not all the land is used in developments (efficiency multiplier) and a factor to provide for market competition between different land parcels (market choice multiplier).

It is important to realize that while these forecasts are realistic and based on empirical methods, they are estimates. Also, land use demand can be changed by county policy – denser or less dense development can be promoted, redevelopment can make new use of existing developed lands, and so forth.

Future Land Use Demand Summary, 2005-2025				
Land Use	**2005 Acres**	**Additional Acres**	**2025 Acres**	**% Increase over 2005**
Commercial	1,586	928	2,514	58%
Office Professional	504	242	745	48%
Industrial	2,103	1,574	3,678	75%
Institutional	1,688	210	1,898	12%
Residential - Low Density	18,357	7,261	25,618	40%
Residential - Medium Density	11,903	7,987	19,889	67%
Residential - High Density	420	484	904	115%
Residential - Very High Density	0	161	161	n/a
Mixed Use	52	242	294	465%
*Recreation - Active	360	956	1,316	266%
TOTAL	36,972	20,045	57,017	

Source: Columbia County GIS and EDAW analysis, 2005.
*Source: Park and Recreation System Comprehensive Master Plan, Spring 2002

Columbia County can look to the future with optimism but should be cautious in guiding development. Development opportunities outweigh constraints by a comfortable margin. The current development trend in Columbia County, in which growth is spreading to the west, particularly along the Washington Road and Columbia Road corridors, will encourage future development in the county during the twenty-year planning period. The following discussion summarizes opportunities for future development within Columbia County and identifies potential constraints and concerns.

Opportunities

Opportunities for future development of Columbia County include the following:

- Elected officials have a progressive attitude with regard to the need for planned development of the county that will enhance the quality of life.
- Columbia County is bisected by the Interstate-20 corridor. Interstate access creates opportunities for new planned industrial, distribution and commercial uses.
- Continued and sustained population growth in the area will maintain a healthy market demand for new development — so Columbia County can afford to be selective about the quality of development it accepts.
- Columbia County enjoys excellent access to regional recreational amenities such as Thurmond Lake and the Savannah River.
- Columbia County is located just far enough from Augusta to provide a relaxed lifestyle, facilitating creation of a unique community identity.
- There is an abundance of undeveloped land within the county. Almost two-thirds of the land area is undeveloped or in agricultural use.
- Columbia County benefits from access to high-quality medical facilities provided in the Augusta region
- There exist few blighted areas in the county.

Constraints

Some important constraints that will mold and direct growth include the following:

- Current development patterns, notably low density residential development, the lack of distributed commercial development, and strip commercial development are contributing to increased traffic congestion. As traffic congestion increases, it erodes quality of life in the county and effectively poses as a drag on new development.
- There is significant floodplain acreage within the county, particularly along Kiokee, Little Kiokee, and Euchee Creek all well as adjacent to Thurmond Lake and the Savannah River.
- The county is challenged to keep up with the pace of new growth with regard to the provision of public services such as water and sewer.

- A significant portion of the lakefront is controlled by the Corps of Engineers.

Recommended Character Areas

1. Evans/Martinez

If Columbia County had a center city, Evans/Martinez would be that city. The Martinez area was the first part of the county to experience significant suburban growth as a bedroom community, developing westerly along Washington Road from Augusta. The character of the Evans/Martinez area is primarily moderate density single family homes with high-traffic commercial corridors serving the immediate area. More recently, the Evans area has taken on the character of a commercial and government center. Although early plans aspired for Evans to become a 'town center' it has not developed as quite a traditional town center with mixed use, grid street pattern, small block length, and pedestrian-friendly development. The area is dependent on automobile access between residential and commercial areas and significant pressure exists to continue commercial strip development further out Washington Road and Fury's Ferry Road.

The residential development pattern in Martinez/Evans is moderate density - normally quarter-acre lots on curvilinear streets and cul-de-sacs. Two executive golf course communities have been developed, with two others under development on the edges of the area.

Traditional industrial development is concentrated along the railroad line through the center of the Martinez/Evans area. In the Evans area, a rapidly growing medical campus is emerging as a major land use and employment center. This growing medical area also features an attractive retirement community.

2. Kiokee Creek Area

This transitional land use area of Columbia County is currently little developed or has development at very low densities. The conversion of these undeveloped areas into single family subdivisions is anticipated to be the most rapid kind of land use change coming to this area. With readily available water and sewer service, westward expansion of suburban development into the Kiokee Creek Area – and the commercial uses that follow rooftops – is expected to continue. One promising trend is the development of large, planned developments with mixed residential densities, neighborhood commercial land uses, recreational amenities, schools and civic buildings incorporated into the development.

3. Conservation Area

A significant portion of western Columbia County has not developed. These lands are characterized by forests, agricultural and pasture lands, and rural residential. Without service by water and sewer services, these open spaces feature pastoral views and are predominantly agricultural with very low density residential development. The Appling community is

located in this area and provides a crossroads-style development of government and limited commercial development.

4. Lake Area

Columbia County is bordered on the north by Lake Thurmond (formerly - and still known to many residents as - Clarks Hill Lake). Featuring approximately 112 miles of shoreline, the lake offers public recreational opportunities, private clubs with marina facilities, development of lake homes on very small lots, as well as significant rural and open space away from the lake itself. Virtually all of the land along the shoreline of Lake Thurmond is controlled by the U.S. Army Corps of Engineers. Through the administration of long term leases, private residential development has been limited to recreational and weekend homes. Land away from the lake is rural in character but is beginning to develop with very low density residential. Aside from small bait shops and convenience stores, very few commercial uses are found in the Lake Thurmond area.

5. Harlem Rural Area

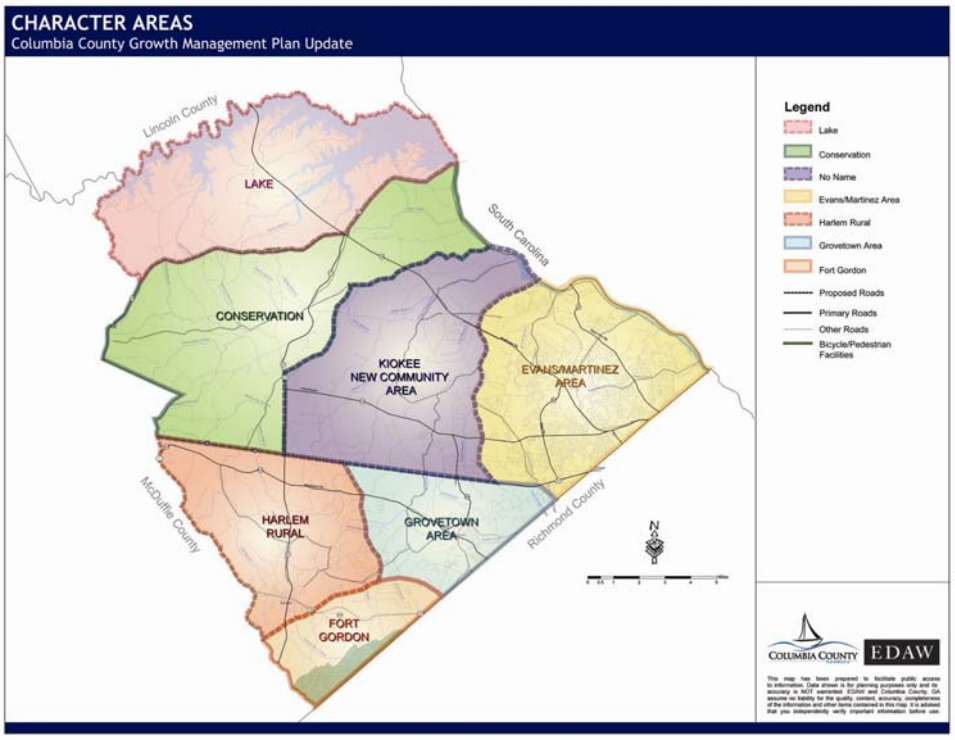
In the southwestern part of the county, there is a clustering of commercial buildings and neighborhood residential development within the City of Harlem. Otherwise, the unincorporated area outside of the city exhibits a very low density rural and agricultural character. With one of the few interchanges at I-20, there are opportunities for commercial and interstate-oriented development to locate along I-20 if future water and sewer services are extended from Harlem.

6. Grovetown Area

The City of Grovetown and the surrounding area has experienced significant suburban growth as the Martinez area has expanded south and growth from the Richmond County and Fort Gordon areas has extended to the west. There is a clustering of commercial buildings and residential development within Grovetown, with several residential subdivisions and commercial areas on the edge of the City. Horizon South Industrial Park is located in this area between the City and I-20. Institutional and civic buildings such as schools, libraries and community centers have located in the area to serve the residents. With the availability of water and sewer services, this area should continue to grow as a moderate density residential area.

7. Fort Gordon Area

Located in the extreme southern tip of the county along US 78, a significant area with very low density rural and agricultural character provides an opportunity to protect Fort Gordon from encroachment by incompatible development. This reduced threat of encroachment is one of the most important considerations used by the Department of Defense Base Realignment and Closure Commission (BRAC) process to determine the maintenance and future expansion opportunities of military installations.



Character Area	Description	Growth Trends
Evans-Martinez	Most urbanized and developed area of the county with the highest concentration of commercial, civic, and employment uses.	Expanding commercial development, denser residential development.
Kiokee Creek	Relatively undeveloped area but close to Martinez-Evans and with water/sewer provision.	Rapid single family housing subdivision development; some planned unit development.
Conservation	Rural area with some environmentally sensitive lands.	Little development pressure.
Lake	Access to recreational opportunities of Lake Thurmond. Land largely owned by Army Corp of Engineers.	Limited low-density recreational development.
Harlem	Traditional small town with mixed uses and historic center.	Moderate single family development in subdivisions.
Grovetown	Historic small town but new suburban development patterns dominate. Large and active industrial district.	Moderate single family development and some commercial development
Fort Gordon	Rural area surrounding military base.	Little development pressure.

During the Public Participation process, these Character Areas will be evaluated and development strategies for each will be determined as part of the Community Agenda. These development strategies will reflect the nodal development concept that was established in the Forward 2020 plan

and that has been revised in the current Growth Management Plan Update in collaboration with the steering committee.

Transportation Plan Summary

The Columbia County 2025 Long Range Transportation Plan was recently completed and adopted in 2004. This plan developed a list of recommended transportation improvements based upon a systematic process of evaluating current conditions, transportation modeling, and strategy screening to determine appropriate transportation improvement strategies.

The list of transportation projects includes arterial widenings, new roadways, transportation system management improvements, intersection improvements, bridge improvements, bicycle and pedestrian improvements, and transit improvements. Each improvement is noted for location, need, anticipated benefit, implementation schedule, and estimated costs. A scoring system was developed to objectively rank the merit of various transportation improvement projects.

Most of the projects proposed are road widenings, usually increasing the number of lanes from two to four. Ramp improvements and the widening of Interstate 20 are proposed as well. The extension of William Few Parkway is intended to provide additional north-south connectivity through the county. There are approximately $335 million earmarked for roadway capacity improvements. The second largest category of expenditures is for pedestrian and bike improvements, where bike lanes are proposed for many major arterials. A total of $49 million is proposed in pedestrian and bike facilities.

In addition to transportation improvements, the transportation plan identifies goals, objectives and policies for managing the transportation system. Many of these goals address related issues such as land use and corridor management. Also, the plan suggests a number of strategies that Columbia County should consider using for managing traffic congestion.

The transportation plan forecasts significant increases in congestion, particularly along east-west corridors and around the Evans Town Center area. This forecast indicates the congestion that would take place if the recommended transportation improvement projects were not implemented. In this forecast, the most congested corridors would include Interstate 20, Washington Road, Columbia Road, Fury's Ferry Road, North Belair Road, Wrightsboro Road, Hereford Farm Road, and Appling-Harlem Road.

The following section lists the recommended strategies for dealing with traffic congestion comes from the 2025 Long Range Transportation Plan. The Growth Management Plan Update looks to actively include these strategies where applicable.

Congestion Management System (CMS) Level
(Policies that are most relevant the Comprehensive Plan are underlined)

Level One: Actions that decrease the need for trip making (i.e. growth management, activity centers, congestion pricing, and some transportation demand management measures).

- Land Use Policies / Regulations
- Design Standards
- Locations of Jobs and Housing
- Telecommuting

Level Two: Actions that place trips into transit or other non-auto modes (i.e. public transit capital and operating improvements, and parking management).

- Fleet Expansion
- Transit Park and Ride Facilities
- Paratransit
- Service Enhancement / Expansion
- Transit Marketing
- Bicycle Facilities
- Pedestrian Facilities

Level Three: Actions that put as many trips as possible into high occupancy vehicles (HOVs).

- Park & Ride Lots
- Guarantee Ride Home Program
- Ride Share Matching Services
- Vanpooling Mid Term

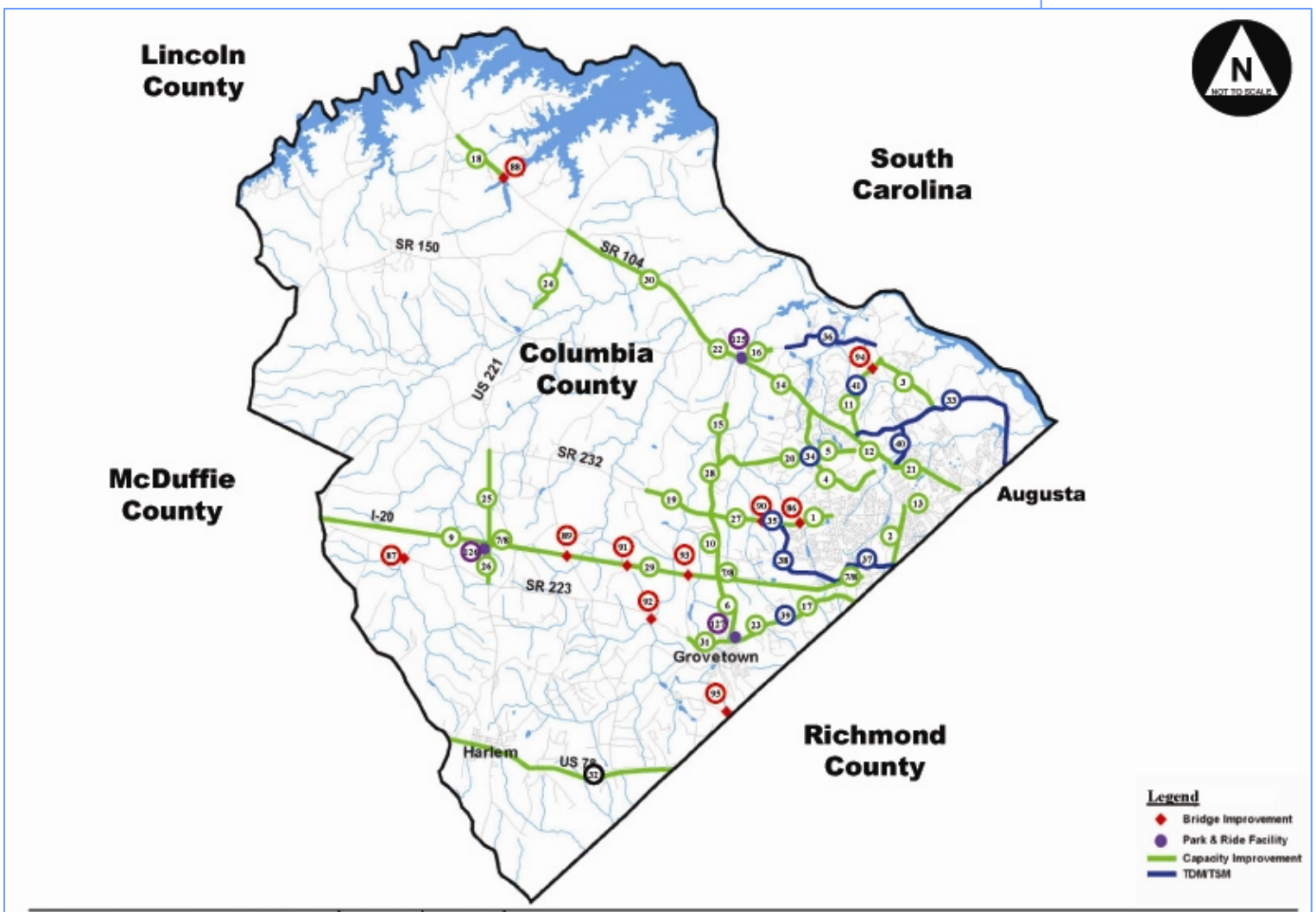
Level Four: Actions that optimize the highway system's operation for single occupancy vehicle (SOV) trips, and for all other trips using highway facilities/modes such as traffic signalization modification, intelligent transportation systems.

- Intersection Widening
- Channelization
- Intersection Turn Restrictions
- Signalization Improvements
- Traffic Control Center
- Computerized Signal System
- Traffic Surveillance and Control Systems
- Roadway Widening
- Truck Restrictions
- Driveway Control
- Median Control
- Frontage Roads
- Advanced Traveler Information

Level Five: Actions that increase the capacity of the highway system for SOVs by adding general-purpose lanes.

- Construct Freeway Lanes
- Construct Arterial Lanes

The following figure presents recommended projects for Columbia County that incorporate the aforementioned strategies.



TEI Engineers & Planners

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Recommended Projects

Columbia County 2025 Long Range Transportation Plan

8.0 State Quality Community Objectives

This chapter enumerates the State of Georgia's planning objectives, and the effectiveness of current policy and administration in Columbia County in meeting these objectives. These state objectives are known as "Quality Community Objectives" and are intended to apply to every community as they develop their comprehensive plan. After the Community Agenda is developed, the status of Columbia County with regard to these objectives will be updated accordingly.

Regional Identity Objective: Regions should promote and preserve an "identity," defined in terms of traditional regional architecture, common economic linkages that bind the region together, or other shared characteristics.

With the recent development of Savannah Rapids Park and Pavilion, Columbia County has contributed to the region's sense of history, identity, and place. This important park preserves historic structures and helps to tell the story of how the Savannah River played a crucial role in the early development of the region.

Growth Preparedness Objective: Each community should identify and put in place the prerequisites for the type of growth it seeks to achieve. These may include housing and infrastructure (roads, water, sewer and telecommunications) to support new growth, appropriate training of the workforce, ordinances to direct growth as desired, or leadership capable of responding to growth opportunities.

Columbia County has been largely pro-active in putting in place the infrastructure for growth. The water and sewer systems have been expanded to meet future needs. A recently enacted stormwater management program has helped to address some of the problems of recent rapid growth. The weakest link of Columbia County's infrastructure may be the road system, which requires improvements to keep up with development pressures.

Appropriate Businesses Objective: The businesses and industries encouraged to develop or expand in a community should be suitable for the community in terms of job skills required, linkages to other economic activities in the region, impact on the resources of the area, and future prospects for expansion and creation of higher-skill job opportunities.

Columbia County has sought out economic development in key regional industries, including manufacturing and medical services. Columbia County should carefully consider opportunities to plug into regional strengths and to continue to develop a high-skill, high-wage workforce.

Educational Opportunities Objective: Educational and training opportunities should be readily available in each community – to permit

community residents to improve their job skills, adapt to technological advances, or to pursue entrepreneurial ambitions.

With a strong public school system and the recent planned addition of a campus from Augusta Technical College, Columbia County is offering strong educational and training opportunities to its citizens.

Employment Options Objective: A range of job types should be provided in each community to meet the diverse needs of the local workforce.

Columbia County has a relatively small economic base with employment that is largely driven by serving the needs of the local population. Columbia County's economic development strategy will need to adapt to its growing prominence in the economy of the region. Columbia County is already beginning to see economic diversification, as medical employment growth is taking a foothold in the county.

Heritage Preservation Objective: The traditional character of the community should be maintained through preserving and revitalizing historic areas of the community, encouraging new development that is compatible with the traditional features of the community, and protecting other scenic or natural features that are important to defining the community's character.

Historic preservation has lagged in Columbia County without an entity to oversee historic preservation efforts. One bright spot is the City of Harlem that has recently completed an historic survey and is currently applying for historic district status for its downtown. Columbia County has been proactive in preserving Heggie's Rock and other notable natural features, including the Savannah River.

Open Space Preservation Objective: New development should be designed to minimize the amount of land consumed, and open space should be set aside from development for use as public parks or as greenbelts/wildlife corridors.

Columbia County has a strong and recently developed greenspace plan and parks master plan. The county has been making steady progress on implementing these plans with the acquisition of new greenspaces for preservation and recreation.

Columbia County's development patterns tend to favor low-density, large lot development that consumes land rapidly. Recently residential developments have taken advantage of conservation subdivision provisions to set aside the more sensitive lands within a development site. Policies will be considered in the Community Agenda to encourage denser housing types.

Environmental Protection Objective: Air quality and environmentally sensitive areas should be protected from negative impacts of development. Environmentally sensitive areas deserve special protection, particularly

when they are important for maintaining traditional character or quality of life of the community or region. Whenever possible, the natural terrain, drainage, and vegetation of an area should be preserved.

Columbia County has numerous environmental protection policies in place, including river corridor protection, a tree protection ordinance, a soil erosion ordinance, a flood protection ordinance, and site plan and engineering review. Columbia County does lack some important environmental protection ordinances, notably a groundwater recharge protection ordinance and an aquifer protection ordinance.

Regional Cooperation Objective: Regional cooperation should be encouraged in setting priorities, identifying shared needs, and finding collaborative solutions, particularly where it is critical to success of a venture, such as protection of shared natural resources.

Regional cooperation is a challenge in the Augusta region. Columbia County is experiencing a disproportionate share of both employment and population growth, while other counties in the region are experiencing poor growth. Finding opportunities for regional cooperation will be an important goal of the Growth Management Plan Update.

Transportation Alternatives Objective: Alternatives to transportation by automobile, including mass transit, bicycle routes and pedestrian facilities, should be made available in each community. Greater use of alternate transportation should be encouraged.

Currently transportation alternatives in Columbia County are lacking. Public transit is minimal, and walking and biking facilities are generally lacking. The 2025 Transportation Plan for the county calls for a fairly extensive system of new bike lanes and the greenspace plans calls for a network of interconnected greenways. If implemented as envisioned, together these would promote a significant alternative transportation infrastructure.

Regional Solutions Objective: Regional solutions to needs shared by more than one local jurisdiction are preferable to separate local approaches, particularly where this will result in greater efficiency and less cost to the taxpayer.

Generally regional solutions are not needed for most of Columbia County's current challenges.

Housing Opportunities Objective: Quality housing and a range of housing size, cost, and density should be provided in each community, to make it possible for all who work in the community to also live in the community.

Columbia County has limited housing choices to meet the needs of its current population and current employment base. The supply of attached and multifamily housing choices is inadequate, especially in light of the

existing demographic patterns in the county. Columbia County's housing is by far the most expensive in the region; however, this cost reflects the boom of new single-family housing construction occurring in the County today. The homes built during the 1970s and 1980s serves as a plentiful source of affordable housing for individuals and families desiring single-family detached homes.

Traditional Neighborhood Objective: Traditional neighborhood development patterns should be encouraged, including use of more human scale development, mixing of uses within easy walking distance of one another, and facilitating pedestrian activity.

Traditional neighborhood development patterns, with a focus on mixing of uses, pedestrian environment, and a variety of housing types incorporated into a single development, are still rare in Columbia County. There has been some movement towards traditional neighborhood development with two planned unit developments incorporating this development pattern. Stronger policies are needed to encourage the broader application of traditional neighborhood development in subdivision design.

Infill Development Objective: Communities should maximize the use of existing infrastructure and minimize the conversion of undeveloped land at the urban periphery by encouraging development or redevelopment of sites closer to the downtown or traditional urban core of the community.

Columbia County recently completed a redevelopment plan for Martinez, which is served by existing infrastructure and is seeing a gradual decline. The Martinez area redevelopment plan is yet to be implemented, but is a key part of Columbia County's strategy for containing commercial growth within nodal development areas.

Sense of Place Objective: Traditional downtown areas should be maintained as the focal point of the community or, for newer areas where this is not possible, the development of activity centers that serve as community focal points should be encouraged. These community focal points should be attractive, mixed-use, pedestrian-friendly places where people choose to gather for shopping, dining, socializing, and entertainment.

In the 2000 Growth Management Plan, Evans Town Center was envisioned as a mixed-use, pedestrian-friendly destination. There has been limited progress in creating a pedestrian environment. This is due in part to the current ordinances and design guidelines. Current guidelines are not adequate to create the sense of place that is desired for Evans Town Center because they are not based on the principles of access management and pedestrian-friendly design.

Summary

The Community Assessment presents an overview of the current conditions in Columbia and identifies opportunities and trends that will form the basis for the next step in the plan update process which includes the development final element of the Growth Management Plan Update referred to as the Community Agenda. The Community Agenda will present the near-term and long-term critical planning strategies for the county. These planning strategies are intended to help guide the location and design of development within the county and support the character guidelines for specific areas of the county. The policies expressed in the Community Agenda will address how Columbia County will meet the demands concurrent with the needs of the future anticipated population growth while supporting the overall vision for the county.