

Columbia County Growth Management Plan 2011 – Community Assessment

Development Services Division
Planning & Engineering Department
2011



CONTENTS

1 Population	6
Introduction	6
The Planning Area	6
Population Trends	6
Population Composition	8
Income and Educational Attainment	10
Columbia County Tomorrow	12
2 Housing.....	14
Introduction	14
Residential Growth in Columbia County.....	14
Current Housing Stock	14
Age of Housing Stock	15
Housing Growth	16
Household Type	16
Housing Cost	18
Housing Trends	19
Housing Stock and School Age Population.....	19
Housing Forecast.....	20
Summary and Needs Assessment	20
3 Economic Development	22
Introduction	22
Setting – The Region	22
Setting - The County.....	23
Economic Base Inventory.....	24
Columbia County Employment Trends	25
Major Development Trends and Unique Economic Opportunities.....	26
Retail Trade and Services	26
Medical Industry and Health Services.....	26
Tourism	27
Construction.....	27
Manufacturing and Wholesale Trade	27
Fort Gordon.....	28



Per Capita Income 28

Income per Sector 29

Inventory of Major County Level Economic Activities 30

Labor Force Participation and Employment 31

Commuting Patterns 31

Local and Regional Economic Development Resources 31

 Economic Development Agencies 31

 Augusta Metro Chamber of Commerce 32

 Education and Training Opportunities 32

 Georgia Power Company, Economic Development Division 33

 Georgia Department of Economic Development 33

4 Historic Resources..... 34

 Historic Overview 34

 Inventory of Historic Resources 35

 Possible National Register Sites in Columbia County 35

 Possible National Register Sites in Columbia County Continued 36

 Assessment of Historic Preservation Needs 36

5 Natural Resources and Greenspace 37

 Introduction..... 37

 The Natural Environment of Columbia County 37

 Climate 37

 Topography and Steep Slopes 38

 Protected Mountains 38

 Soils 38

 Prime Agricultural and Forest Land 40

 Major Parks, Recreation and Conservation Areas 41

 Environmentally Sensitive and Ecologically Significant Areas 43

 Plant and Animal Habitats 43

 Air Quality..... 45

 Water Resources 46

 Aquifers and Groundwater Recharge Areas 47

 Water Supply Watersheds..... 48

 Wetlands 48

 Floodplains 49



Protected River Corridor	49
Stormwater Utility	50
Scenic Views and Sites	51
Columbia County Greenspace Program	51
Savannah River Conservation Area and Greenway	52
Floodplain Greenways.....	52
Evans-Martinez Open Space	52
Northwest Conservation Area.....	52
Summary and Needs Assessment	52
6 Community Facilities and Services	55
Public Safety.....	55
Columbia County Sheriff's Office	55
Fire and Emergency Medical Services.....	56
Animal Control and Care.....	57
Assessment of Public Safety Needs.....	57
Hospitals and Other Public Health Care Facilities	57
Hospitals.....	57
Public Health	58
Senior Services	58
Public Transit.....	59
Assessment of Public Health Needs	59
Parks and Recreation	59
Assessment of Parks and Recreation Needs	62
Educational Facilities.....	63
Assessment of Education Needs.....	65
Cultural Facilities.....	65
Assessment of Cultural Facilities Needs.....	65
Solid Waste Management.....	66
Assessment of Solid Waste Management Needs.....	66
Water and Wastewater System	66
Water	66
Wastewater.....	67
Assessment of Water and Wastewater Needs	68
General Government	68



Assessment of General Government Needs..... 69

7 Land Use 70

 Introduction..... 70

 Land Use Assessment 70

 Land Use Category Descriptions..... 70

 Influences on Future Development..... 75

 Historic Patterns of Growth..... 75

 Land Use and Infrastructure Patterns 76

 Blighted and Transitional Areas..... 76

 Incompatible Land Use Relationships 77

 Environmentally Sensitive Areas 78

 Future Land Use Demand 78

 Opportunities 81

 Constraints 81

 Existing Character Areas..... 82

 Evans/Martinez 82

 Kiokee Creek Area 82

 Conservation Area 82

 Lake Area 83

 Harlem Rural Area 83

 Grovetown Area 83

 Fort Gordon Area 83

 Future Development Strategy 84

8 Transportation Plan Summary..... 90

 Traffic Congestion 90

9 State Quality Community Objectives..... 93

Summary..... 103



COMMUNITY ASSESSMENT

COMMUNITY VISION

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 took the opportunity in 2005 to prepare a growth management plan update to incorporate the latest planning standards from the state which includes three components: the preparation of a Community Participation Program, a Community Assessment, and a Community Agenda. In 2010 Columbia County undertook a partial update of their Growth Management Plan in order to refine their land use policies and implementation methods. This document presents the community assessment of the Growth Management Plan Update. It incorporates information from the previous versions and presents them in a single unified document. It provides an analysis of existing conditions and potential opportunities as well as issues that will be further defined and addressed as part of the Community Agenda – the final component of the plan update.

1 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 from the last census, taken in 2010. The primary sources for population data include the US Census Bureau and the State of Georgia's Department of Community Affairs.

THE PLANNING AREA

Columbia County is one of six counties that comprise the Augusta-Aiken Metropolitan Statistical Area (MSA). The MSA includes Burke, McDuffie and Richmond Counties in Georgia, and Aiken and Edgefield Counties in South Carolina, 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 Area Regional Commission (CSRA RC), which is also centered in 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 2010 Census, about 36 percent of the people in the MSA live in Augusta-Richmond County, while Columbia County is home to 22 percent. Including Burke and McDuffie County, two-thirds of the MSA's 556,877 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 2,900 additional people every year for the past twenty years. Columbia County’s population growth in the 2000s was considerably higher than population growth in the 1990s, but still fast-paced. The current population is estimated at just over 128,000 people, and population growth in Columbia County is expected to continue at a similar rate for the next twenty years.

Six-County MSA			
Year	1990	2000	2010
Total population	415,184	477,441	556,877
Population Increase	-	62,257	79,436

Source: US Census Bureau, DP-1, 2010.

Regional Distribution of Population by County, 2010		
	Population	Percent
Richmond County, Georgia	200,549	36.0%
Aiken County, South Carolina	160,099	28.7%
Columbia County, Georgia	124,053	22.3%
Edgefield County, South Carolina	26,985	4.8%
Burke County, Georgia	23,316	4.2%
McDuffie County, Georgia	21,875	3.9%
Six County Region Totals	556,877	100.0%

Source: US Census Bureau, DP-1, 2010.

The two major causes of population growth are new births and migration. In 2009, approximately 9,700 people migrated into Columbia County. Over 5,200 of these in-migrants came from other counties in Georgia, over 3,600 came from other states, and nearly 900 came from abroad. From 2010 to 2011, Columbia County experienced a net migration of 2,340 people.

Columbia County: Migration Patterns		
Residence in 2009	Columbia County, Georgia	Percent
Total	116,235	
Same house	99,288	85%
Different house in the U.S.	16,060	14%
- Same county	7,169	6%
- Different county:	8,891	8%
o Same state	5,233	5%
o Different state	3,658	3%
Abroad	887	1%

Source: US Census Bureau, American Community Survey (5Yr) DP02, 2010.



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 55 and 64 has grown most rapidly between 1990 and 2010. Meanwhile, the adult population between 35 and 44 has grown very little, especially in the decade from 2000-2010. The six-County region has shown some similar trends, losing population in the 35-44 year old category between 2000 and 2010. 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		
	1990	2000	2010
Total population	66,031	89,288	124,053
Male population	32,917	43,630	60,328
Female population	33,114	45,658	63,725
Population Increase	25,913	23,257	34,765

Source: US Census Bureau, DP-1, 2010.

Columbia County: Population by Age					
Age	1990	2000	2010	% Change, 1990-2000	% Change, 2000-2010
0 – 4 Years Old	5,404	6,198	8,305	14.7%	34.0%
5 – 13 Years Old	11,593	15,498	17,400	33.7%	12.3%
14 – 17 Years Old	3,147	4,734	8,105	50.4%	71.2%
18 – 20 Years Old	2,789	3,283	4,739	17.7%	44.4%
21 – 24 Years Old	3,099	3,221	5,361	3.9%	66.4%
25 – 34 Years Old	11,880	11,104	15,208	-6.5%	37.0%
35 – 44 Years Old	12,713	16,575	17,984	30.4%	8.5%
45 – 54 Years Old	7,295	14,128	19,305	93.7%	36.6%
55 – 64 Years Old	4,239	7,417	14,946	75.0%	101.5%
65 and over	3,872	7,130	12,700	84.1%	78.1%
Total	66,031	89,288	124,053		

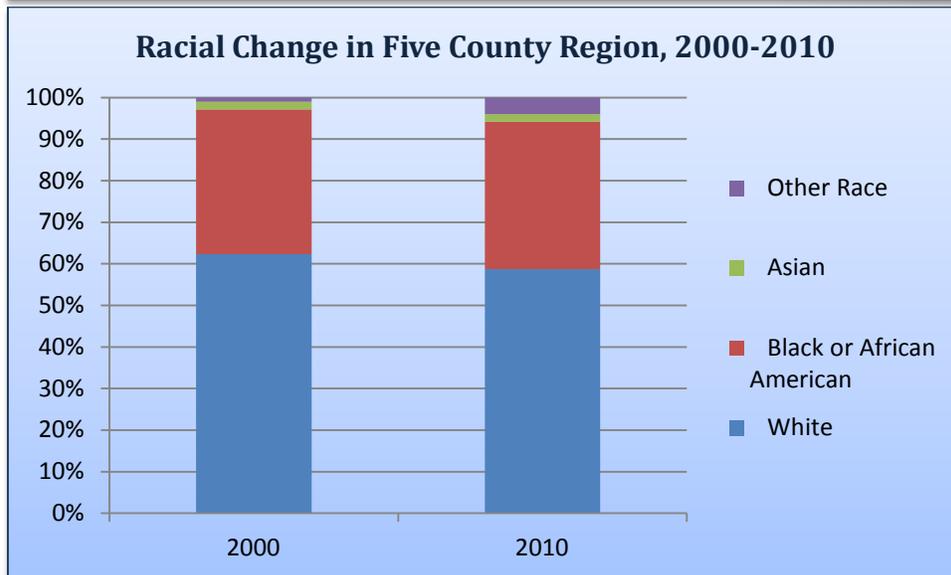
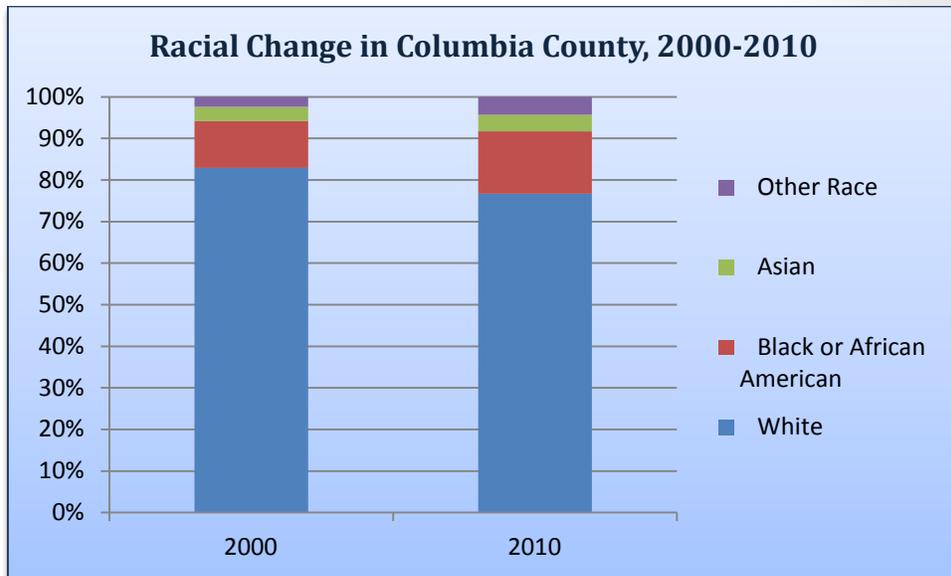
Source: US Census Bureau, SF1 (QT-P2), 2010.

Another population change for the county is the composition of race and ethnicity. Columbia County has remained predominantly white since 1990; however the proportion of the population which is white has declined slightly from 86 percent to around 76 percent between 1990 and 2010. The greatest change in racial composition is the rapid growth of Asian and other races in the county, from below three percent in 1990 to over eight percent today.

Columbia County: Racial Composition			
Race or Ethnicity	Year		
	1990	2000	2010
White alone	86.0%	82.7%	76.5%
Black or African American alone	11.0%	11.2%	14.9%
Asian or Pacific Islander	2.3%	3.5%	4.0%
Other race	0.4%	2.4%	4.3%

Source: US Census Bureau, DP-1, 2010.

The six-county region has also attracted a growing Asian and other races population from 2000-2010. Compared to Columbia County, the black population in the region has continued to grow between 1990 and 2010. Columbia County, however, experienced a trend counter to the region from 1990-2000 as the black population declined. Since then, the black population in the county has increased significantly from 2000-2010.



INCOME AND EDUCATIONAL ATTAINMENT

Columbia County has the highest average household income in the three-County region comprised of Columbia, McDuffie, and Richmond counties. The median household income in Columbia County is \$66,333, which is 34 percent higher than the state of Georgia median income of \$49,347. 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.

Median Household Income	
	2010 (\$)
Columbia County	66,333
State of Georgia	49,347
Richmond County	37,882
McDuffie County	35,414

Source: US Census Bureau, American Community Survey (5Yr) DP03, 2010.

In addition, average household income grew faster for Columbia County than for the state of Georgia from 2000-2010. This fast increase in average household incomes is believed to be linked to the in-migration of high income households.

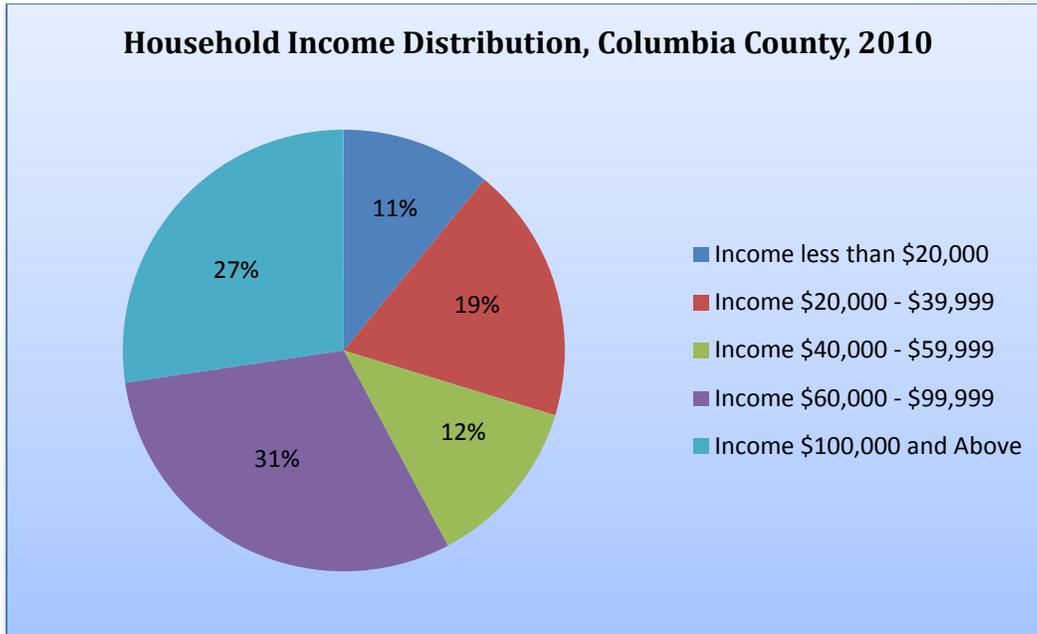
Looking at income distribution, there are households with all ranges of income living in Columbia County. The largest grouping of household income occurs in the \$50,000-\$125,000 range. As of the 2010 Census, there were also about 7,500 ‘workforce’ households, in the \$20,000-\$40,000 range.

Columbia County: Household Income Distribution		
	2000 (\$)	2010 (\$)
Total Number of Households	31,120	44,898
Income less than \$9,999	1,332	1,668
Income \$10,000 - \$14,999	1,173	1,089
Income \$15,000 - \$19,999	1,121	1,641
Income \$20,000 - \$29,999	3,119	3,274
Income \$30,000 - \$34,999	1,588	1,839
Income \$35,000 - \$39,999	1,710	2,415
Income \$40,000 - \$49,999	3,372	1,585
Income \$50,000 - \$5,9999	3,450	3,408
Income \$60,000 - \$74,999	4,466	5,236
Income \$75,000 - \$99,999	4,769	6,977
Income \$100,000 - \$124,999	2,222	4,139
Income \$125,000 - \$149,999	1,184	2,348
Income \$150,000 and above	1,606	4,474

Source: US Census Bureau, American Community Survey (5Yr) B19001, 2010.



Of Columbia County's 32,602 families in 2010, about 5.3% of these families, or 1,728 families, had incomes below the poverty level. Most of these families below the poverty level had children less than 18 years of age.



Per capita income for Columbia County is about 17% higher than per capita income for the state of Georgia. Per capita income has grown faster than median household income because average household sizes have been decreasing. As household incomes continue to increase, and household sizes continue to decrease, this trend towards higher per capita incomes is expected to continue. Columbia County is expected to continue to have higher than average per capita income than the state of Georgia.

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 34 percent of adults having a college degree. This compares with 21 percent of Richmond County residents and 11 percent of McDuffie County residents. Also, Columbia County has the fewest percent of adults who did not complete a high school education, at 10 percent of the population.

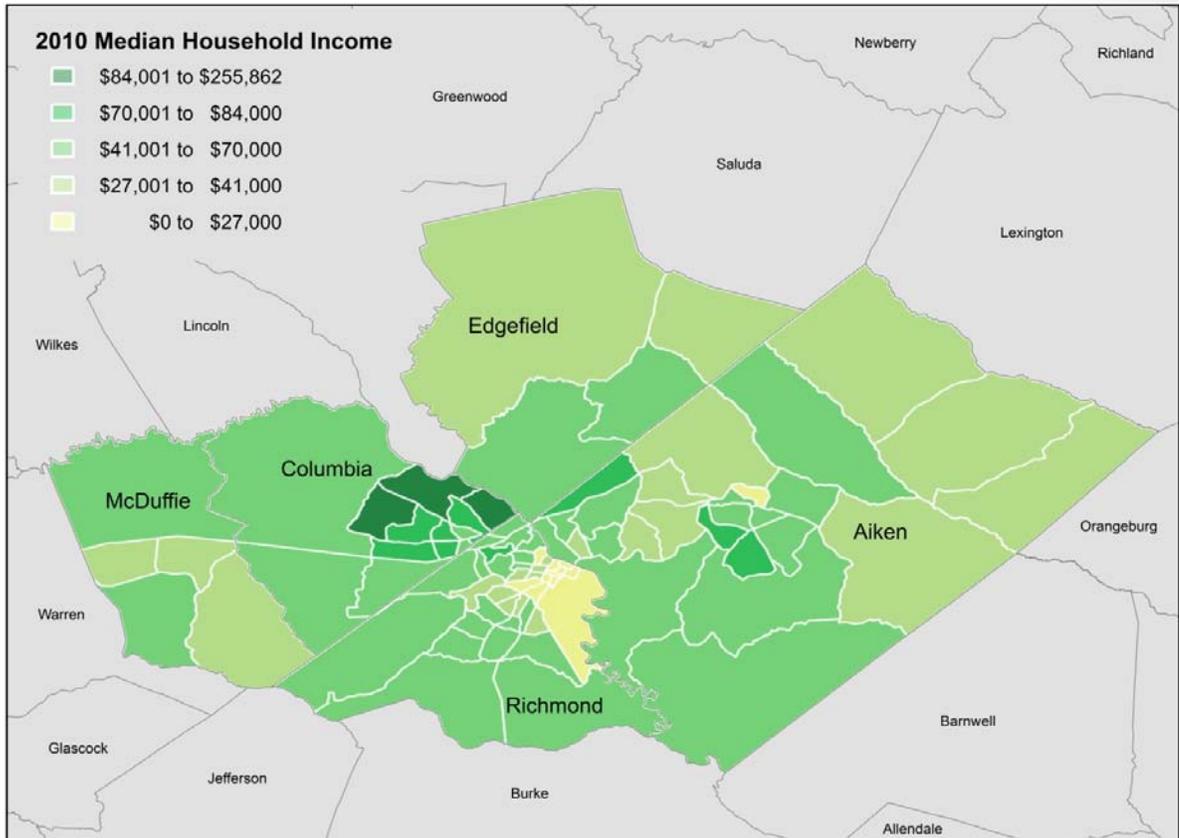
Educational Attainment, 2010				
	Columbia	McDuffie	Richmond	Georgia
Less than 9th Grade	3%	11%	6%	6%
9th to 12th Grade (No Diploma)	7%	19%	12%	10%
High School Graduate or Equivalent	27%	36%	31%	30%
Some College (No Degree)	20%	16%	23%	20%
Associate Degree	9%	6%	8%	7%
Bachelor's Degree	21%	7%	13%	18%
Graduate or Professional Degree	13%	4%	8%	10%

Source: US Census Bureau, American Community Survey (5Yr) DP02, 2010.



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 2010

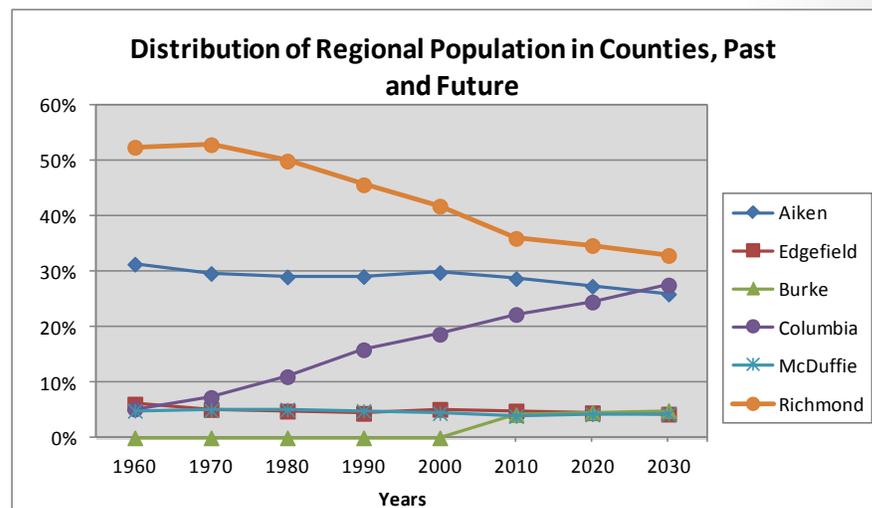
Similar to the Hoyt Model, growth in Columbia County is dependent on the growth of the entire Augusta region. Should the region experience a population decline, or conversely, a population explosion, Columbia County’s growth will result in new development of all kinds – residential development as well 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 a slight decline in regional growth will occur before leveling its pace. By 2030, it is projected that Columbia County will comprise 28 percent of the region’s population, up from 22 percent today.



Columbia County: Population Projections				
	2000	2010	2020	2030
Total Population	89,288	124,053	153,346	193,983
Decade Population Increase	-	34,765	29,293	40,637
Decade Percent Increase	-	39%	24%	27%
Source: Georgia County Guide, 2012				

Augusta Region: Population Projections				
	2000	2010	2020	2030
Total Population	477,441	556,887	625,482	702,894
Decade Population Increase	-	79,446	68,595	77,412
Decade Percent Increase	-	17%	12%	12%
Source: Georgia County Guide and South Carolina Office of Research and Statistics, 2012.				



Source: US Census Bureau, Georgia County Guide, South Carolina Office of Research and Statistics, 2012.

The age distribution for the county will have the most significant impact on future development patterns. In the future, the over-65 population is expected to grow rapidly as most residents of Columbia County age in place. The lack of robust growth in the 35-44 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 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 in 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 Evans-Martinez area and in the cities of Harlem and Grovetown.

CURRENT HOUSING STOCK

Over the last twenty years, the number of housing units has increased 76 percent from 23,745 units in 1990 to 41,722 housing units in 2010. The dominant housing type is single-family housing, which comprised 77 percent of the housing stock in the county in 2010. The second largest type of housing is manufactured homes, which comprised 10 percent of the housing stock in the county in 2010. Townhomes and duplexes made up 6 percent of the housing stock and multi-family types of 3 units or greater made up 6.7 percent of the housing stock in 2010. During the decade from 2000 to 2010, about 10,000 single-family homes, 1,500 attached single-family homes, 150 multi-family units, and 90 manufactured homes were added to Columbia County's housing stock.

Columbia County: Types of Housing Units			
	1990	2000	2010
TOTAL Housing Units	23,745	33,321	46,314
Single Units (detached)	18,120	25,762	35,838
Single Units (attached)	414	845	2,423
Double Units	477	556	369
3 to 9 Units	826	896	1,835
10 to 19 Units	189	198	683
20 or more Units	22	530	555
Manufactured Home	3,546	4,519	4,611
All Other (Boat, RV, van, etc.)	151	15	0

Source: US Census Bureau, American Community Survey (5 Yr) DP04, 2010.

Columbia County: Types of Housing Units (Percent)			
	1990	2000	2010
TOTAL Housing Units	100%	100%	100%
Single Units (detached)	76.3%	77.3%	77.4%
Single Units (attached)	1.7%	2.5%	5.2%
Double Units	2.0%	1.7%	0.8%
3 to 9 Units	3.5%	2.7%	4.0%
10 to 19 Units	0.8%	0.6%	1.5%
20 or more Units	0.1%	1.6%	1.2%
Manufactured Home	14.9%	13.6%	10.0%
All Other (Boat, RV, van, etc.)	0.6%	0.0%	0.0%

Source: US Census Bureau, American Community Survey (5 Yr) DP04, 2010.

Single-family detached housing dominates the housing stock of Columbia County. Over 87 percent of the housing stock is single-family detached or manufactured homes. The percentage of single-family detached housing has remained about the same during the decade from 2000 to 2010.

10 percent of the single-family detached housing supply in Columbia County is manufactured homes. The number of manufactured homes has increased from 1990 to 2010, but as a percentage, manufactured homes compose a diminishing share of the housing stock.

Of the remaining housing stock, 6 percent is attached housing and about 7 percent is multi-family housing. From 2000 to 2010, the greatest growth among these types of housing development 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, the age of the housing stock is not an issue. Only 2,128 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				
	2000	2000 (Percent)	2010	2010 (Percent)
Built 1980 - 1989	10,229	31%	9,597	21%
Built 1970 - 1979	6,439	19%	7,079	15%
Built 1960 - 1969	2,646	8%	3,044	7%
Built 1950 - 1959	961	3%	1,103	2%
Built 1940 - 1949	268	1%	559	1%
Built 1939 or earlier	373	1%	466	1%

Source: US Census Bureau, American Community Survey (5 Yr) DP04, 2010.

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 31,120 in 2000 to 44,898 in 2010. The number of households is expected to continue to grow to approximately 76,000 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 Household Characteristics			
	1990	2000	2010
Total number of households	21,841	31,120	44,898
Average household size	2.97	2.85	2.75

Source: US Census Bureau, DP-1, 2010.

HOUSEHOLD TYPE

A large majority, 78 percent of the Columbia County population, lives in family households, with 22 percent of the population living in non-family households. This compares with 69 percent of the Augusta region’s 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 is a high proportion of families with children in Columbia County.



Household Type	Columbia County	Percent of Households
Total:	44,898	
Family households:	34,839	77.6%
2-person household	13,425	29.9%
3-person household	8,790	19.6%
4-person household	7,731	17.2%
5-person household	3,277	7.3%
6-person household	1,057	2.4%
7-or-more-person household	559	1.2%
Non-family households:	10,059	22.4%
1-person household	8,352	18.6%
2-person household	1,388	3.1%
3-person household	188	0.4%
4-person household	90	0.2%
5-person household	24	0.1%
6-person household	6	0.0%
7-or-more-person household	11	0.0%
Source: US Census Bureau, SF1 (P28), 2010.		

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. Non-family households are much less likely to be home owners and will often seek multi-family 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
3+ persons Family household	48%
2 person Family household	30%
Non-family households	22%
Housing Types	Percent
Single-family Detached	87%
Townhomes and Duplexes	6%
Multi-family Housing	7%
Source: US Census Bureau, American Community Survey (5 Yr) DP04, 2010.	



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 2010 was \$168,700 in Columbia County, compared with \$99,300 in Richmond County and \$93,600 in McDuffie County. Housing prices rose 43 percent over the decade from 2000 to 2010. However, Columbia County median incomes rose 19 percent during the same period, so the growth in housing costs appears to be significantly outpacing income growth. Columbia County housing prices rose less quickly than in the state of Georgia, which saw a 45 percent increase in the price of housing from 2000 to 2010.

Likewise, the cost of rental housing in Columbia County is higher than in Richmond and McDuffie counties. The median rent in 2010 in Columbia County was \$828 per unit, compared with \$686 in Richmond County and \$565 in McDuffie County.

There were 10,980 cost-burdened households in Columbia County in the year 2010. A cost-burdened household is defined by the U.S. Department of Housing and Urban Development (HUD) as “families who pay more than 30 percent of their income for housing.” Over 4,000 of these cost-burdened households were spending even more – over 50 percent – of their income on housing. Approximately 37 percent of owner-occupied, Columbia County households were cost-burdened by high housing costs. This compares with a rate of 52 percent in Richmond County and 53 percent in McDuffie County. So although Columbia County’s costs are high, the rate of cost-burdened households is lower compared to other areas of the three-county Augusta region.

Housing Costs	County		
	Columbia	Richmond	McDuffie
Median property value	\$168,700	\$99,300	\$93,600
Median rent	\$828	\$686	\$565

Source: US Census Bureau, American Community Survey (5 Yr) DP04, 2010.

Cost-Burdened Households	County		
	Columbia	Richmond	McDuffie
Owner-occupied units	37%	52%	53%
Renter-occupied units	44%	50%	47%

Source: US Census Bureau, American Community Survey (5 Yr) DP04, 2010.

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 multi-family housing and mandate minimum lot sizes for housing. These regulations can result in a reduced housing supply which in turn drives up housing costs.

Although Columbia County has a large quantity of affordable housing units, access to affordable housing has decreased from 2000 to 2010. Due to current economic conditions, fewer owner-occupied households are able to secure affordable housing or households have become cost-burdened. The percentage of renter-occupied affordable housing in particular has decreased by 10 percent. Adding to the rental housing stock would help to increase the affordable housing supply in the county.

Access to Affordable Housing		
	2000	2010
Owner-occupied		
Affordable housing	81%	76%
Cost-burdened household	18%	23%
Not computed	1%	1%
Renter-occupied		
Affordable housing	61%	51%
Cost-burdened household	33%	41%
Not computed	6%	8%
Source: US Census Bureau, American Community Survey (5 Yr) DP04, 2010.		

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, Columbia Road, Chamblin Road and Hardy McManus roads. Less expensive single-family housing development is concentrated in the Grovetown area.

Townhomes and attached single-family units represented an increasing portion of new housing construction during the early to mid-2000s. Most of these townhome developments had been of single-story attached units with two-car parking pads rather than enclosed garages. However, due to a shift in consumer preference, the county has seen a number of townhome to single family conversions.

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:



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

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.	

HOUSING FORECAST

It is estimated that to accommodate a year 2030 population of 194,000 people, the county will require 76,000 housing units or an additional 31,200 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	44,898	57,866	76,072
Decade Increase in Households	-	13,778	12,968	18,206
Estimated Household Size	2.85	2.75	2.65	2.55
Source: US Census Bureau SF1, 2010; Columbia County Staff; Georgia County Guide Projections, 2012.				

2011 MULTI-FAMILY HOUSING REPORT

In January of 2011, at the request of the Board of Commissioners, the Columbia County Planning and Engineering Department prepared an assessment of the County’s multi-family housing stock. The intent of the report was to examine the role that multi-family housing will play in the overall mix of housing types as the county continues to develop. The report compares Columbia County’s housing figures to similar jurisdictions and makes recommendations for future policies with regard to multi-family housing going forward. The report’s recommendations are as follows:

- Zoning to allow a 2.7% annual increase in new apartments up to 2015 could keep up with the projected population growth. This calculates to about 50 apartment units per year, which could effectively result in only one rezoning over the next four years since most apartment developments average about 200 units. With reference to townhouses, this calculates to about 60 units per year. The County should monitor the



development of the vacant acreage and track the number of apartment units and townhouses added annually. When the GMP is next updated, identify specific locations suitable for apartments and townhouses. Any new apartment developments, including those in a PUD shall be encouraged to be located within nodes. Any new townhouse developments, including those in a PUD shall be located within nodes or along arterials. Any townhouse developments, including those in a PUD shall remain at 8 units per acre.

- Review the density in apartment zoning district and consider amending the zoning code to create a new district, called “A-R10,” to allow for 10 units per acre for any future apartment rezonings. Also, the maximum density allowed in the PUD zoning district shall be 12 units per acre. Current undeveloped land zoned “A-R” shall remain at 14 units per acre as per the current zoning ordinance.
- Complete all zoning code revisions before the end of 2010.
- Adopt the Multi-Family Housing Study as part of new GMP. In the new GMP, permit more zoning flexibility along the corridors between nodes for a greater mix of land uses. The final GMP shall be presented to the Planning Commission and then to the Board of Commissioners in October 2010. The Regional Commission and the State will then have time to review the new GMP and it will be returned to the County by January 2011. Adopt the new GMP prior to the February 28, 2011 deadline.
- Planning staff will carry out further study of retirement communities, looking at concepts and statistics for retirement communities within Columbia County and other examples outside of the County.

The complete report titled *Multi-Family Housing in Columbia County* is included as an appendix to this plan update.

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 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 six-county region, including the counties of Burke, Columbia, McDuffie and Richmond in Georgia, and Aiken and Edgefield 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 policy-making within the county.

Although Columbia County is a growing community economically, it remains primarily a bedroom community. As part of the Augusta-Aiken MSA (Burke, Columbia, McDuffie and Richmond Counties in Georgia and Aiken and Edgefield Counties in South Carolina), Columbia County residents enjoy the cultural and employment benefits of being part of a metropolitan area that has an overall population of over 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 non-residential 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. 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 a half hours away.

Columbia County must be viewed within the regional context. During the past decade, the Augusta Region has experienced average 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 2000-2010.

Government is the leading employer in the region, followed by retail, administrative and waste management services, and health care and social assistance. 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’s 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 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 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 primary economic base for the Augusta region is government employment, particularly state and local government, military, and federal. The income from federal and state government programs drives much of the economy of the region. Government employment constitutes 20 percent of regional employment. A second economic base can be found in administrative and waste management services – generally services related to business services. Administrative and waste management services constitute 9.8 percent of regional employment. A third economic base is manufacturing, which comprises 6.9 percent of regional employment. These are the three main components of the Augusta region’s economic base.

Employment Sector	Augusta MSA Employees	Percent of Regional Employment	Location Quotient**	Columbia County
Military*	12,772	4.3%	2.17	0.8%
State government*	16,919	5.6%	1.81	1.3%
Administrative and waste management services*	29,407	9.8%	1.49	7.9%
Federal, civilian*	9,020	3.0%	1.47	0.4%
Construction	18,250	6.1%	1.23	8.1%
State and local	38,586	12.9%	1.16	10.3%
Retail trade	31,172	10.4%	1.03	15.0%
Manufacturing*	20,789	6.9%	1.02	6.3%

Source: Bureau of Economic Analysis, CA25N – Total full-time and part-time employment by NAICS industry, 2010.
 *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 to 2010 period. Manufacturing has gone from 24 percent of the region’s



economy in 1980 to 7 percent in 2010, while government employment has declined from 28 percent of regional employment to 20 percent. Meanwhile, service has gone from 15 percent of the economy to 35 percent. Service includes administrative and waste management services; arts, entertainment, and recreation; educational services; health care and social assistance; information; professional, scientific and technical services; and other services (except public administration). The trend away from manufacturing towards services is a nationwide trend, but for services to be part of an economic base they must be export-oriented, or services that the Augusta region can sell to the larger US or world economy.

Other major components of regional employment include retail trade at 10 percent, health care and social assistance at 9 percent, and construction at 6 percent. These employment categories, while significant, are not likely to constitute the economic base of the region because they are rarely exported.

The economy of the Augusta region is similar to the state of Georgia overall in its primary employment economic sectors. State and local government, retail trade, health care, and manufacturing are all major employers, both in the region and in the state. The major difference appears to be the importance of administrative and waste management services, a variety of business services, which appears to be a larger segment of the Augusta regional economy than the state. This suggests that there may be some specialization or economic strength in the administrative and waste management services area for the Augusta region.

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, local government (including schools), other services (except public administration), and accommodation and food services. These employment categories serve the local population and tend to grow as population grows.

One notable feature of Columbia County employment is the high number of self-employed people in the county. 33 percent of employed people are self-employed, as compared with 23 percent in the region as a whole. This may indicate a highly-educated and highly entrepreneurial work force, often working for individual one- or two-person firms.

Employment Sector	Number of Jobs	Percent of Employment
Retail trade	7,120	15.0%
Local government	4,261	9.0%
Other services, except public administration	4,097	8.6%
Accommodation and food services	3,915	8.2%
Construction	3,826	8.1%
Health care and social assistance	3,779	8.0%
Administrative and waste management services	3,736	7.9%
Manufacturing	2,992	6.3%

Source: Bureau of Economic Analysis, CA25N – Total full-time and part-time employment by NAICS industry, 2010

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 decreased slightly from 1990 to 2010. In 1990 retail trade comprised 15.9 percent of employment and by 2010 it constituted 15 percent of employment in the county. Service employment experienced even more dramatic growth, from 14.5 percent of employment to 26.4 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 Pollard’s 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 approximately 27,000 health care employees. Georgia’s Health Sciences University, The Medical College of Georgia, is a 632-bed teaching hospital with approximately 2,948 residents and students, and 1,027 full-time faculty employees. Approximately \$84.4 million was awarded to the Medical College of Georgia for research in fiscal year 2011. 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.georgiahealth.edu/iris/>)

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 weeklong 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.

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. The relatively large amount of construction employment is related to Columbia County's rapid population growth and the corresponding rapid housing and commercial development in the county. Construction employment had been consistently about 11 percent of employment in the county until it fell in 2008 due to the economy. By 2010, it has stabilized at 8 percent of employment.

MANUFACTURING AND WHOLESALE TRADE

Manufacturing employment in Columbia County has grown from 2,700 in 1990 to 2,992 in 2010. However, manufacturing employment growth has lagged population and employment growth in the county, as manufacturing has declined from 14.3 to 6.3 percent of Columbia County employment. Infrastructure improvements meeting specific needs (rail sidings, water pressure, and 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:

- Augusta Sportswear, Inc.
- Club Car/Ingersoll
- Georgia Iron Works Co.
- Greenfield Industries, Inc.
- John Deere Georgia
- Martin Marietta Aggregates
- Pollard Lumber Co., Inc.
- Southern Beverage Packers, Inc.
- Tracy-Luckey Co.

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 2012, Fort Gordon employed more than 8,600 civilians and more than 15,000 military personnel. In addition, Fort Gordon serves a retirement community of 12,670 military retirees and 33,076 retiree family members. 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 completed in 2010, now called the NSA/CSS Georgia Cryptologic Center. Future growth of the center consists of an approximate 45,000 square foot addition scheduled for construction in 2013. Fort Gordon is a model corporate neighbor and citizen, making valuable contributions to the community by supporting civic endeavors such as Adopt-a-School, D.A.R.E, and scouting 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.

Presently, there are no planned or pending Base Relocation and Closure (BRAC) processes underway for Fort Gordon. The last BRAC meeting was held in 2005 and no new plans have been scheduled since then. Based on this information, 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 during the 1990-2002 period, the county fared 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; professional, scientific, and technical services; and construction. This illustrates the growth of the medical community in the Augusta region as well as new housing construction. Some of the fastest growing sectors, particularly in Columbia County, provide relatively low wages. Retail trade ranks only a 0.54, while personal services rank 0.51. 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	\$61,407	1.47
Professional, scientific & technical services	\$59,311	1.42
Construction	\$57,483	1.38
Mining	\$50,312	1.21
Manufacturing	\$49,422	1.19
Wholesale trade	\$49,364	1.19
Finance & insurance	\$44,471	1.07
Health care and social assistance	\$42,410	1.02
Information	\$42,100	1.01
Admin, support, waste mgt, remediation services	\$40,007	0.96
Forestry, fishing, hunting, and agriculture support	\$38,177	0.92
Transportation & warehousing	\$36,550	0.88
Real estate & rental & leasing	\$30,581	0.73
Arts, entertainment & recreation	\$23,700	0.57
Retail trade	\$22,476	0.54
Other services (except public administration)	\$21,325	0.51
Educational services	\$19,970	0.48
Accommodation & food services	\$12,806	0.31
Unclassified establishments*	\$11,538	0.32
Utilities**	N/A	N/A

*Median number of paid employees was used to calculate income per employee.
 **Data was withheld to avoid disclosing data for individual companies.
 US Economic Census, 2010 MSA Business Patterns (NAICS). Bureau of Economic Analysis, CA34 – Wage and salary summary, 2010.

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 center 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 was approved and funded by state government and has recently been built. This new campus is 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 45,831 in 2000 to 59,525 in 2010. The labor force participation rate has decreased slightly, from 69.6 percent to 66.6 percent, reflecting a growing retiree population in the county. Unemployment in the county has remained low, and as of 2010 the county's unemployment rate was 6.3 percent, significantly lower than the Augusta MSA's at 8.7 percent or the state of Georgia's unemployment rate of 8.8 percent (Source: US Census Bureau DP03, 2010). 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 2000 to 2010, the percent of labor force that worked inside Columbia County increased from 32.7 percent to 35 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 56.5 percent to 55.7 percent, while the percent of people working in South Carolina declined from 11 percent to 9.3 percent (Source: US Census Bureau S0801, 2010). 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 Commission (CSRA RC) has been designated by the U.S. Department of Commerce's Economic Development Administration as the region's economic development district. The Regional Commission provides economic development support to its 13 county and 39 city member jurisdictions.

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

- Business Retention Activities

- Project Management
- Prospect Development Initiatives
- Site Selection and Initial Consultations

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

CSRA RC 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 RC 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 allied health sciences, business, information and engineering technology, and industrial education. Currently campuses exist in Burke, McDuffie, and Richmond counties and a new campus recently opened in 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 Coldwell Banker Kinard Realty, Georgia Power Company, and Morgan Stanley Smith Barney, 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. In 2002, GDEcD helped Columbia County to attract a \$35 million expansion of Quebecor World Inc., the world's largest commercial printer. Examples of recent recruitment successes include Caterpillar's new manufacturing facility in Athens-Clarke and Oconee Counties with 1,400 new jobs and a \$200 million investment; the expansion of Home Depot in Kennesaw with 700 new jobs and an investment of \$24 million; and Starbucks' new manufacturing plant in Augusta, which brings a \$172 million investment and 140 new jobs to Richmond County.

GDEcD also helps Georgia companies to market internationally. GDEcD's efforts include facilitating participation in trade shows, providing contacts and consultants in international markets, and supplying extensive training resources.

4 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 Stallings 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, farming was no longer 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 Clarks 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 actively promotes awareness of the county's history and historic resources. 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. "Cedar Hill", c. 1820
6. Old Washington Road
7. Damascus Baptist Church, c. 1820, north side of Ridge Road, 1 mile east of Washington Road
8. Dunns' Chapel, c. 1848, northwest corner of GA 47 and Ridge Road
9. Winfield Area, c. 1840
10. Sharon Church, 1779 , south side of GA 150 across from intersection of Mistletoe Road
11. William Few house site, c. 1930
12. Shiloh Church, c. 1853, east side of GA 150, 1.5 mile southwest of Winfield Road
13. Cedar Dale, c. 1858, east side of GA 150, 2 miles north of Cobbham Crossroads.
14. Woodville, c. 1814
15. Old Kiokee Church, c. 1804, west side of GA 47, ¼ mile north of US 221

POSSIBLE NATIONAL REGISTER SITES IN COLUMBIA COUNTY CONTINUED

16. Appling Community (multiple sites, c. 1816)
17. Shucraft Road House, c. 1890
18. Lewiston Community, Columbia Road at Hereford Farm Road, c. 1870
19. Plantation House on Columbia Road, c. 1830
20. Columbia Road, c. 1790
21. Otts House, c. 1865, south side of Wrightsboro Road, $\frac{3}{4}$ mile west of US 221
22. Wrightsboro Road, c. 1815
23. Magruder Home, c. 1810
24. Grovetown (multiple sites along Robinson Avenue)
25. The Dodge House, c. 1910
26. Campania
27. Harlem (multiple sites, c. 1850)
28. Appling Courthouse, c. 1809-1812
29. White Oak Camp Ground, portion in Columbia County, c. 1792
30. The Gatekeepers Inn, Savannah Rapids Pavilion, c. 1890

[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 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 are located in the Southern Piedmont, while the southern one-fourth 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 the 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-Applying-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 a

reddish or brownish, loamy surface layer and 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 predominantly 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; and 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 multi-family 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 were created when the lake was filled, just 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 with 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 PARK/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 multiple functions providing recreational opportunities, 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 Rapids Pavilion, 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 1,920 acre 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 of 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

Endangered or Threatened Plants

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

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:

Rare Plants

Species Name	Common Name	Primary Habitat
<i>Aster georgianus</i>	Georgia Aster	Upland oak-hickory-pine forests and openings; sometimes with <i>Echinacea laevigata</i> or over amphibolite
<i>Marshallia ramosa</i>	Pineland Barbara Buttons	Altamaha Grit outcrops; open forests over ultramafic rock
<i>Amorpha georgiana</i> var. <i>georgiana</i>	Georgia Indigo-bush	River terraces; floodplain woods; Flint Kaolin outcrops; mesic habitats with wiregrass, longleaf pine, mixed oaks
<i>Anemone berlandieri</i>	Glade Windflower	Granite outcrop ecotones; openings over basic rock
<i>Arabis missouriensis</i>	Missouri Rock cress	Granite and amphibolite outcrops
<i>Bouteloua curtipendula</i>	Side-oats Grama	Limestone glades and barrens
<i>Clematis ochroleuca</i>	Curly-heads	Dry woods in circumneutral soil
<i>Dryopteris celsa</i>	Log Fern	Floodplain forests; lower slopes of rocky woods
<i>Paronychia virginica</i>	Yellow Nailwort	Serpentine outcrops
<i>Pediomelum</i> sp. 2	Dixie Mountain Breadroot	Shallow soils over mafic (serpentine) rock, upland longleaf pine-mixed oak savanna and powerline rights-of-way
<i>Portulaca umbraticola</i>	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, Plants, 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 Betty's Branch, Boggy Gut, Clarks Hill, Euchee Creek, Jones Creek, Kiokee, Little Kiokee Lloyd, Reed Creek and Sandy Run. 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 Euchee 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 Clarks Hill Reservoir. The Savannah River provides primary drainage for the central part of the county. Brier Creek in Warren 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; stormwater run-off and industrial uses that involve the 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 Program. In conjunction with State funding, the county aims to set aside 20 percent of its land mass in permanent green 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 ordinances, 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. The 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 three 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 grounds, 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 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 Columbia 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 downstream 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 established in 2000 and has collected fees over the past 11 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 2016. 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 stormwater 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 Locks 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.

Focus Areas of the Greenspace Program	
Land Type	Acres Acquired to Date
Savannah River Conservation Area and Greenway	5,471
Floodplain Greenways	155
Evans-Martinez Open Space	198
Northwest Conservation Area	0
Historic/Natural Resources	4,148
Total	10,015
Columbia County Greenspace Program, June 2005	



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 Clarks Hill Lake.

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.

EVANS-MARTINEZ 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.

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.

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:

- Construction permits
- Flood Protection Ordinance
- General land use and land development regulations
- Land disturbance and building permits



- Savannah River Development Regulations
- Site plan and engineering review
- Soil Erosion Ordinance
- Tree Protection Ordinance

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 U.S. EPA and Army 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 limiting 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 landfills;
- Regulating chemical and petroleum storage tanks; and
- 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 to:

- 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 established 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 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. 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 SHERIFF’S 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 sub-station in Evans and a main office in Appling. The Evans sub-station 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.

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's Emergency Medical Services (EMS) is provided through a private contract with Gold Cross EMS, which is also managed by the Emergency Services Division. There are six EMS sub-stations 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:

Response Time Requirements		
Priority	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 as to 80% of the call.	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 Evans-Martinez, Harlem-Grovetown, and Appling.

HOSPITALS

The residents of Columbia County are served by several 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 Ronald Reagan Drive. 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 a 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 1,800 square feet 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 Euclaw 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 for 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 \$3.00 each way and junior residents (age under 12) pay a fee of \$1.00 each way. All other residents pay a fee of \$4.50 each way. This service is provided from Monday through 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 the Evans Town Center in order to maximize opportunities for partnerships with existing health care and other services providers.

PARKS AND RECREATION

There are 11 existing parks, one planned park, and three community centers that make up Columbia County's parks and recreation system. The Evans Towne Center Park is the newest park in the county. Currently, there are plans to expand Blanchard Woods Park. The park is 150 acres and only 40 acres have been developed with five soccer fields, concessions, restrooms, a locker room facility, and a playground. Funding for five additional fields will be placed in the next SPLOST referendum.

Lakeside Park is a planned joint venture between the Board of Education and the Board of Commissioners. Lakeside Park is a 70 acre parcel behind Lakeside High School. The Board of Commissioners' portion will have 5 soccer fields, 6 tennis courts, a playground and restrooms. Mass grading of the site will begin in August 2012. Funding for the construction of the fields remains to be identified.

The Columbia County Community & Leisure Services Division completed its Comprehensive Master Plan in the 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 expansions 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 parks as of 2011:

- 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, and ¼ mile walking trail.
- Blanchard Woods Park: 150 acres under development will contain ten soccer fields, four tennis courts, a playground, restrooms, concessions, a walking track and festival area.
- Evans Towne Center Park: 17 acres located across from the Evans Government Center, it contains an amphitheater, playground, dog park, and walking trail.
- Goodale Park: 11.89 acres, 20 parking spaces + 2 handicapped spaces, located within the City of Grovetown on Wrightsboro Road and contains a walking trail, two tennis courts, two baseball fields, a basketball court, playground, picnic area with charcoal grills.
- Harlem City Park: 13.5 acres, 120 parking spaces, located within the City of 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.
- Kiddie Park: 4.4 +/- acres, 14 parking spaces, located within the City of Grovetown at 105 Whiskey Road, and contains toys, benches, picnic areas, and slides.
- Liberty Park: 231.93 acres, 167 parking spaces and 7 handicapped spaces, located within the City of Grovetown at 1040 Newmantown Road and contains a community center, four baseball fields, a concession stand with restrooms.



- Library Memorial Garden Park: 14 acres located adjacent to the Jabez Sanford Hardin Performing Arts Center and Library; contains one playground, pavilions, grills, a splash pad, and a paved walking path.
- 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.
- Memorial Park: 0.66 acres, 14 parking spaces, located within the City of Grovetown on West Robinson Ave and contains veteran's names printed on wall and painted on bricks, and a cannon from Fort Gordon.
- 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.
- 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.
- 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.
- 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.
- Savannah Rapids Pavilion Park: 33 acres. 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.
- 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 BassMasters Tournament.

In addition to the above County parks, the State-operated Mistletoe State Park along Clarks Hill Lake is located within Columbia County. The planned Lakeside Park is not included on this list and will be placed in the next SPLOST referendum.

COMMUNITY CENTERS

The following is a list of community centers:

- 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 qualify. The center sponsors a number of leisure and recreational activities to keep seniors active.
- 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.
- Liberty Park Community Center: 14,000 square feet, located within the City of Grovetown at 1040 Newmantown Road, this facility has 2 meeting rooms with a maximum occupancy of 75 people. The gym can accommodate 500 people. This facility also includes a full-size kitchen, exercise room, game room.
- 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 PARKS AND RECREATION NEEDS

Between the Master Plan for the Community & Leisure Services Division 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 Community & Leisure Services Division'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 proximity 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, Clarks Hills Lake, and the Savannah Rapids Pavilion all lay along the northern edge of the county. The other major parks facility, Patriots 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 Evans-Martinez 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 schools, 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, Evans 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	1,708	1,675	6
3	Greenbrier, 5114 Riverwood Pkwy, Evans 30809	1,703	1,560	7
4	Harlem, 1070 Appling-Harlem Highway, Harlem 30814	1,057	1,000	8
5	Lakeside, 533 Blue Ridge Dr, Evans 30809	1,465	1,520	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 Evans-Martinez 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 51,000 square-foot Columbia County Main Library serves the Evans-Martinez area and was completed in 2006. The library includes a theater as well as an outdoor amphitheater. The Harlem-Grovetown area is served by the 10,000 square-foot Eucler Creek Branch constructed in 1994. The Harlem Branch (15,000 square feet) is over capacity and planned for expansion.

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 library and performing arts center in the Evans Town Center fills a need for the county both for additional library space and performing arts space. This helps 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 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 of 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 Clarks Hill 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 has recently undergone an extensive renovation. The plant has been 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 Clarks Hill Water Treatment Plant is permitted to withdraw up to 8 million gallons per day from the Clarks Hill Reservoir, and has 1 million gallons of storage capacity. The Clarks Hill 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 March 1, 2011 there were 39,518 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, 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 serves 32,098 residential and commercial accounts as of March 1, 2011.

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 one of the county's primary treatment facilities, currently receiving over 46 percent of the total waste flow. Service area for this plant includes the Reed Creek drainage basin, which contains most of the county's established 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. Originally constructed with a capacity of 1.5 million gallons per day, major expansions in 1997 and 2003 have increased the plant's capacity to 6 million gallons per day. A request to expand to 12 million gallons per day has been submitted to Georgia EPD. This plant serves the fastest growing section of the County and currently treats 40 percent of the total waste flow.

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 a major expansion of the Little River WPCP, a relief sewer near the Reed Creek station, and construction of a wastewater transfer pump station and main in the Jones Creek 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 Engineering, 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 was completed on November 4, 2005.

ASSESSMENT OF GENERAL GOVERNMENT NEEDS

With the construction of the new Justice Center and the main library, Jabez Hardin Sanford 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 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 Growth Management Plan. Consequently, the principal objective of this Land Use section is to determine the most suitable and efficient use of the land and the pattern in which those uses will occur. The integration of existing development patterns, growth trends and the analysis of land development capacity (the ability of land to support development) form the basis for the land use policy described in this section of the Growth Management Plan.

LAND USE ASSESSMENT

LAND USE CATEGORY DESCRIPTIONS

The Georgia Department of Community Affairs' (DCA) "Standards and Procedures for Local Comprehensive Planning" includes a list of standard land use categories. The broadly defined land use categories contained in the list establish the parameters under which each local jurisdiction should classify existing parcels. The following section provides an overview of the land use categories Columbia County will use in order to inventory current land uses. A breakdown of current land uses in each category is contained within this chapter.

RESIDENTIAL

Because Columbia County is predominantly 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 5 subcategories on the Future Land Use Map: Rural Residential, Recreation-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 2½ acres and often larger due to poor soil conditions.

RECREATIONAL RESIDENTIAL

Recreational Residential, usually zoned R-4, are areas located along the Clarks Hill Lake for residents to maintain summer or weekend homes. This district is established to provide for low-density residential development which is intended to permit only those residential and related recreational uses of land and structures. The minimum lot size in the R-4 district is 40,000 square feet.

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 Unit Developments.

The 2010 Multi-family Housing study, completed in 2010, calls for the establishment of a new zoning district for all apartment developments after December 31, 2010 called A-R10. This new district would limit the density of apartments to 10 units per acre. The study also calls for multi-family developments within Planned Unit Developments to be limited to 12 units per acre.

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, e.g. walking distance, planned as a unified complementary whole.

PROFESSIONAL/OFFICE

The 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 which are most of the professional/office uses in the urbanized area of Evans-Martinez. Purely professional/office 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 locate on individual lots. Commercial uses are zoned:

- C-1 (Neighborhood Commercial)
- C-C (Community Commercial)
- C-2 (General Commercial)
- C-3 (Heavy Commercial)

Zoning designation depends 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 (Special) district, 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 sub-stations.

PUBLIC/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). There are fourteen elementary schools, six middle schools, four high schools as well as multiple private education facilities located throughout the county. Institutional uses include churches, cemeteries and other private non-profit uses. Institutional uses in the county consist primarily of churches and other faith-based institutions. Public and institutional uses are typically not concentrated in specific locales, and this is the case in Columbia County, with one exception – the 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 includes the Columbia County Courthouse Annex, and the main library and performing arts center in Evans. In addition, the Fort Gordon Military Reservation occupies a significant portion of land in the southeast tip of the county.

PARKS – ACTIVE RECREATION

This category includes 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 RECREATION

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 to 100 acres and offering a wide array of recreational amenities and passive open space.

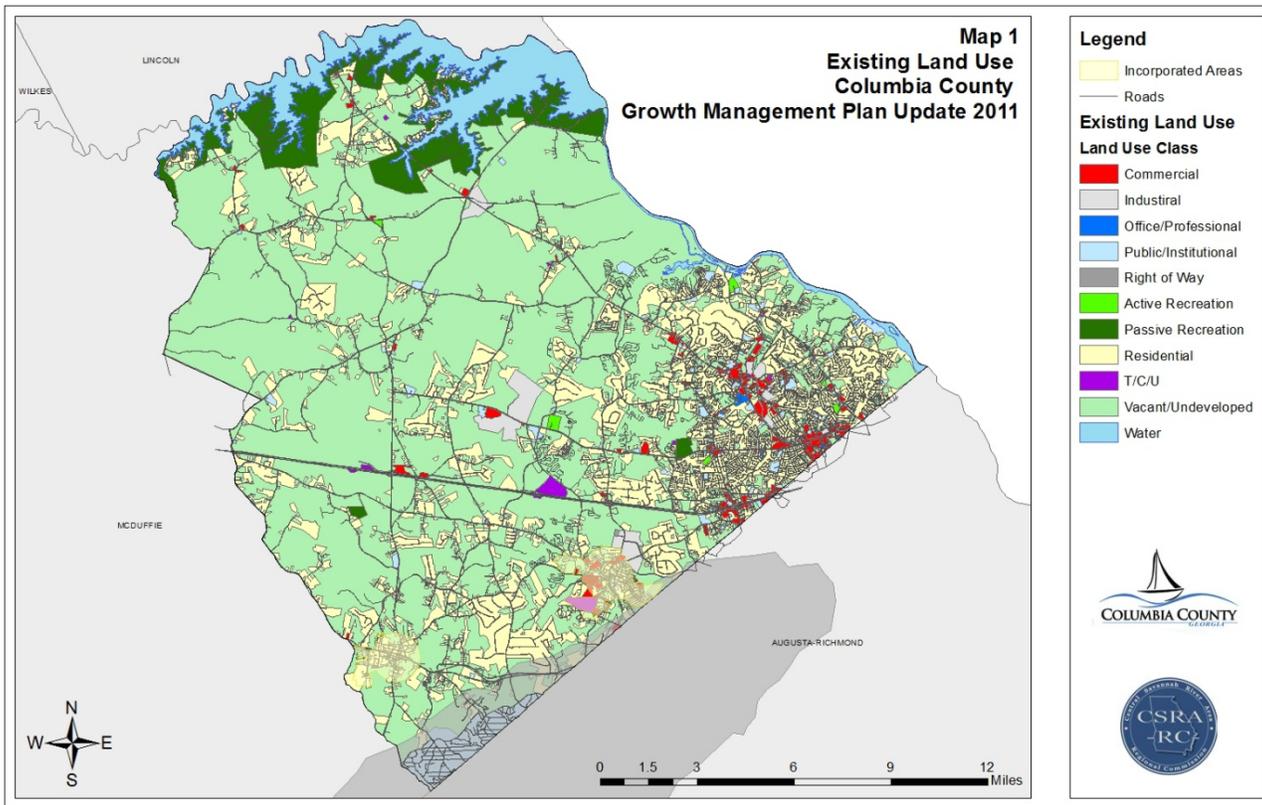
UNDEVELOPED/VACANT

Undeveloped land is vacant land 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 non-residential 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.

Existing Land Use Acreage Totals, Columbia County		
Land Use Category	Acres	%
Commercial	2,285.97	1.2%
Industrial	2,211.07	1.2%
Residential	43,173.08	23.2%
Office / Professional	130.44	0.1%
Public / Institutional	4,322.20	2.3%
Parks - Active Recreation	245.83	0.1%
Parks - Passive Recreation	10,048.90	5.4%
Transportation/Communication/Utilities	7,669.90	4.1%
Undeveloped / Vacant	115,826.04	62.3%
Total	185,913.43	100%

Source: Columbia County GIS Office; Calculations by CSRA RC, 2005





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 Evans-Martinez 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 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.

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 Evans-Martinez 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 or 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 1960s and early 1970s, 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 has 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 was one of the key goals of the 2005 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 development arrangement 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 effect 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 increases 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 effects in that the

structures are upgraded and the 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.

In response to this and other factors, this update of the Growth Management Plan proposes a series of linkages between the established nodes where appropriate development could occur. A further discussion of this policy can be found later in this chapter.

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 development; employment growth drives the demand for new commercial and industrial development. Population and employment projections for Columbia County have been established through 2040. 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 in the next 30 years from 124,053 to 194,340, about a 64 percent increase; total employment in the county is expected to grow in the same period from 47,260 to 82,910, about a 75 percent increase.

Population and Household Projections 2010-2030						
	2010	2015	2020	2025	2030	2040
Persons per household	2.75	2.64	2.59	2.56	2.53	2.51
Population	124,053	128,490	141,490	154,610	167,790	194,340
Households	44,898	48,350	54,290	60,200	66,030	77,250
Source: US Census Bureau, 2010; Woods & Poole Economics, 2005						



Employment Projections 2010-2030						
	2010	2015	2020	2025	2030	2040
Persons Employed	47,260	51,910	57,020	62,620	68,760	82,910
Source: Woods & Poole Economics, 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.

Residential Land Use Demand 2000-2025					
Land Use Category	Density (DU/Acre)	Units	Gross Acres	Net Acres	% of Acreage
Residential – Low-density	0.50	3,834	7,667	5,808	45.0%
Residential – Medium-density	2.80	24,047	8,588	6,506	49.5%
Residential – High-density	6.30	3,137	498	377	3.0%
Mixed-use	6.30	1,743	277	210	1.5%
Total			17,204	13,033	100%
Source: Columbia County GIS, Calculations by CSRA RC, 2005					

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 known 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 Sector 2010-2030							
Sector	2010	2015	2020	2025	2030	2040	Change
Farm, Forestry, Fishing, Mining	590	610	630	650	670	700	+ 110
Utilities	110	110	110	120	120	120	+ 10
Construction	4,520	4,930	5,830	5,870	6,400	7,620	+ 3,100
Manufacturing	3,710	3,800	3,880	3,950	4,020	4,120	+ 410
Wholesale Trade	660	630	600	570	540	480	- 180
Retail Trade	6,300	6,840	7,410	8,010	8,630	9,930	+ 3,630
Transportation, Warehousing	640	740	840	960	1,080	1,350	+ 710
Information	560	620	680	750	830	990	+ 430
Finance & Insurance	1,610	1,650	1,670	1,690	1,700	1,700	+ 90
Real Estate	2,110	2,340	2,580	2,840	3,120	3,720	+ 1,610
Professional & Tech	2,790	3,380	4,060	4,850	5,760	7,990	+ 5,200
Management	450	470	480	500	510	540	+90
Administrative	4,750	5,420	620	7,120	8,210	11,000	+ 6,250
Education, Health Care, Social Services	4,520	5,140	5,810	6,560	7,390	9,290	+ 4,770
Recreation, Food Service	5,160	5,730	6,360	7,040	7,780	9,420	+ 4,260
Other Services	3,520	3,880	4,270	4,690	5,130	6,130	+ 2,610
Military	310	310	310	310	310	310	0
Federal Employees	140	150	170	180	200	230	+ 90
State & Local Government	4,820	5,190	5,570	5,970	6,390	7,260	+2,440
Total*	47,260	51,910	57,020	62,620	68,760	82,910	+ 35,630

Source: Woods & Poole Economics, 2005 *=Totals may not add due to rounding

Employment to Acreage Future Land Use Demand 2000-2025				
Land Use Category	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	0.2	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, EDAW Analysis 2005

Using this method, the following land use demand is forecast: 928 acres of commercial, 242 acres of professional-office, 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.

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.
- The construction of a County-wide broadband network, funded through the American Recovery and Reinvestment Act (ARRA) of 2009 will offer enhanced connectivity for the County’s residents and businesses, both current and future.

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 Echee Creek as 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 U.S. Army Corps of Engineers.

EXISTING CHARACTER AREAS

EVANS/MARTINEZ

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 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 Evans/Martinez 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 Evans/Martinez 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.

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 housing – 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.

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.

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.

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.

GROVETOWN AREA

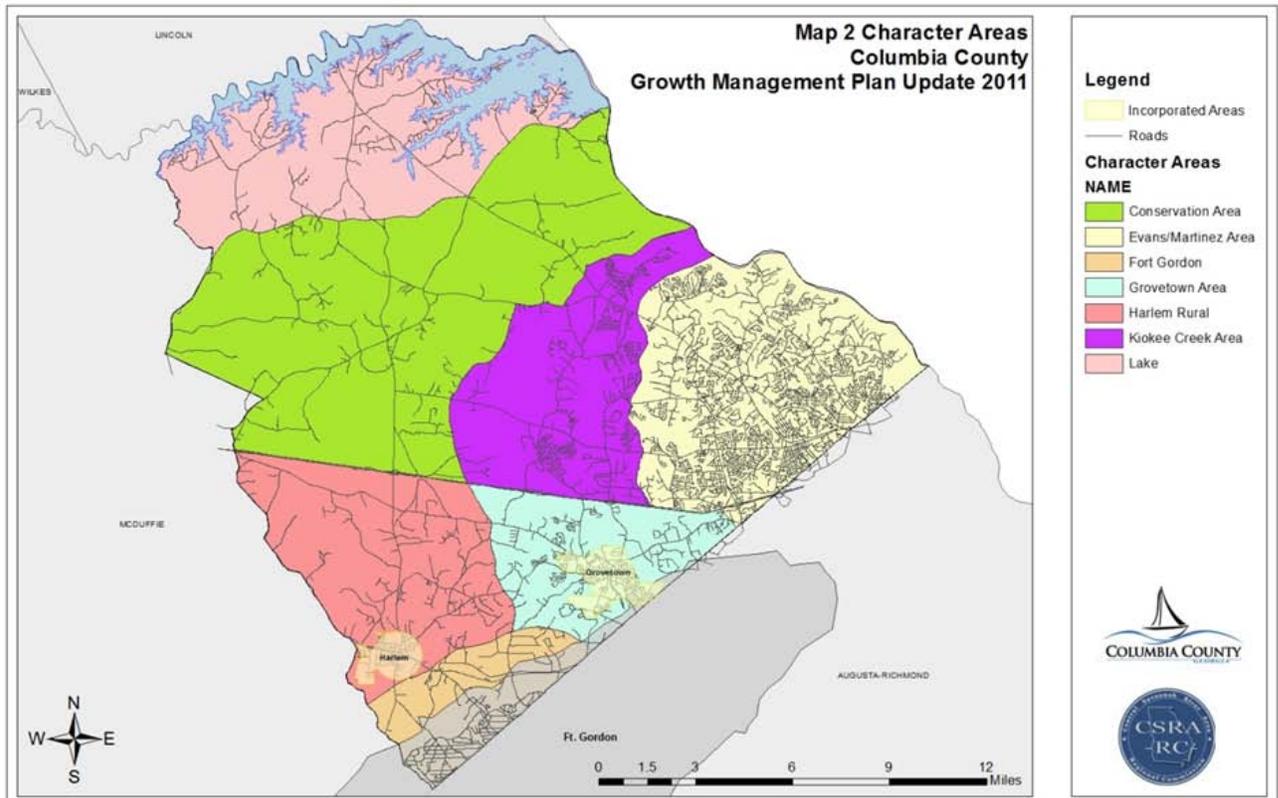
The City of Grovetown and the surrounding area has experienced significant suburban growth as the Martinez area has expanded south and growth from the Richmond County and Fort Gordon areas has extended to the west. There is a clustering of commercial buildings and residential development within Grovetown, 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.

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 Areas and Descriptions		
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 Evans-Martinez 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 Corps 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.



FUTURE DEVELOPMENT STRATEGY

The Growth Management Plan Update will achieve this vision by organizing future development into a rational system of nodes and corridors. A Node is a



concentrated activity center with a balance of commercial, office and residential uses. The Nodal Development Concept is a plan to organize these more intense land uses into nodes, thus protecting existing neighborhoods, lessening sprawl, and making the most efficient use of existing infrastructure. Most new commercial, office, and mixed-use developments are planned for designated nodes and the corridors that connect them. Nodes have been placed predominantly where major infrastructure exists and in the more developed parts of the county, while corridors have been located in places where development has already taken root between the nodes. All nodes are placed at existing intersections, usually of two major roads. Most of the proposed nodes currently have access to water and sewer infrastructure.

The nodal development concept is not new, but has been part of Columbia County's Growth Management Plan for 10 years; the growth corridor policy is new to the 2011 Plan. The updated plan has placed more of an emphasis on how nodes should function, and interact with one another, and on developing policies to help implement the concept, while at the same time accurately reflecting the situation on the ground.

Two nodes have specific development plans – the Evans Town Center area and the Martinez area. Both of these node-specific plans give recommended guidance on urban design and land use patterns within the nodes, as well as proposed infrastructure projects to enhance the quality of the nodes. In general it is recommended that node-specific plans be developed for all Tier I and Tier II nodes.

Nodes come in four sizes called Tiers. The largest nodes are called Tier I nodes. These nodes can contain the widest variety of land uses – retail, professional/office, civic, and multi-family residential. Tier I nodes should contain the largest amount of development in terms of acreage and square feet, and are generally about 2 miles in diameter. Commercial development within Tier I nodes can be very large in scale, including big box national chains, and attract a market from the entire county and possibly beyond from neighboring counties. Major destinations within the county, including major civic facilities, are best located within Tier I nodes. The Tier I nodes are Evans Town Center, Martinez, and Lewiston/Grovetown.

Tier II nodes are the second largest nodes. Tier II nodes can contain retail, professional/office, civic, and dense residential land uses such as smaller multi-family developments and townhomes. Generally Tier II nodes will have less acreage and less commercial square feet than Tier I nodes and are about 1 mile in diameter. Typically, big box stores that draw from a regional market are not appropriate for Tier II nodes.

The Tier II nodes include Baston, Evans to Locks, Belair, Greenbrier, and the Interstate Service Area. The Bartram Trail node is not currently appropriate for development, but as the residential population around Bartram Trail develops and as Columbia County's population grows this will be a good future location for a node.

Tier III nodes are the third largest nodes, and are primarily intended to serve the retail needs of adjacent neighborhoods. Tier III nodes should be modest in scale and acreage, providing services such as groceries and other neighborhood conveniences, and are generally contained within a ½ mile diameter. The scale of development should be neighborhood-sized, attracting residents from just a few miles around. Some office and civic development can be an adjunct to the neighborhood services in Tier III nodes. Tier III nodes include Columbia and Harlem.

Tier IV nodes are the smallest nodes, and are only planned for rural areas. These nodes should consist of just a handful of convenience services, such as gas stations, small restaurants, and convenience stores. They should only contain a few acres of commercial activity, all contained within a ¼ mile diameter. Tier IV nodes include Appling, Eubanks, Riveridge, Winfield, Pollard’s Corner, and Leah.

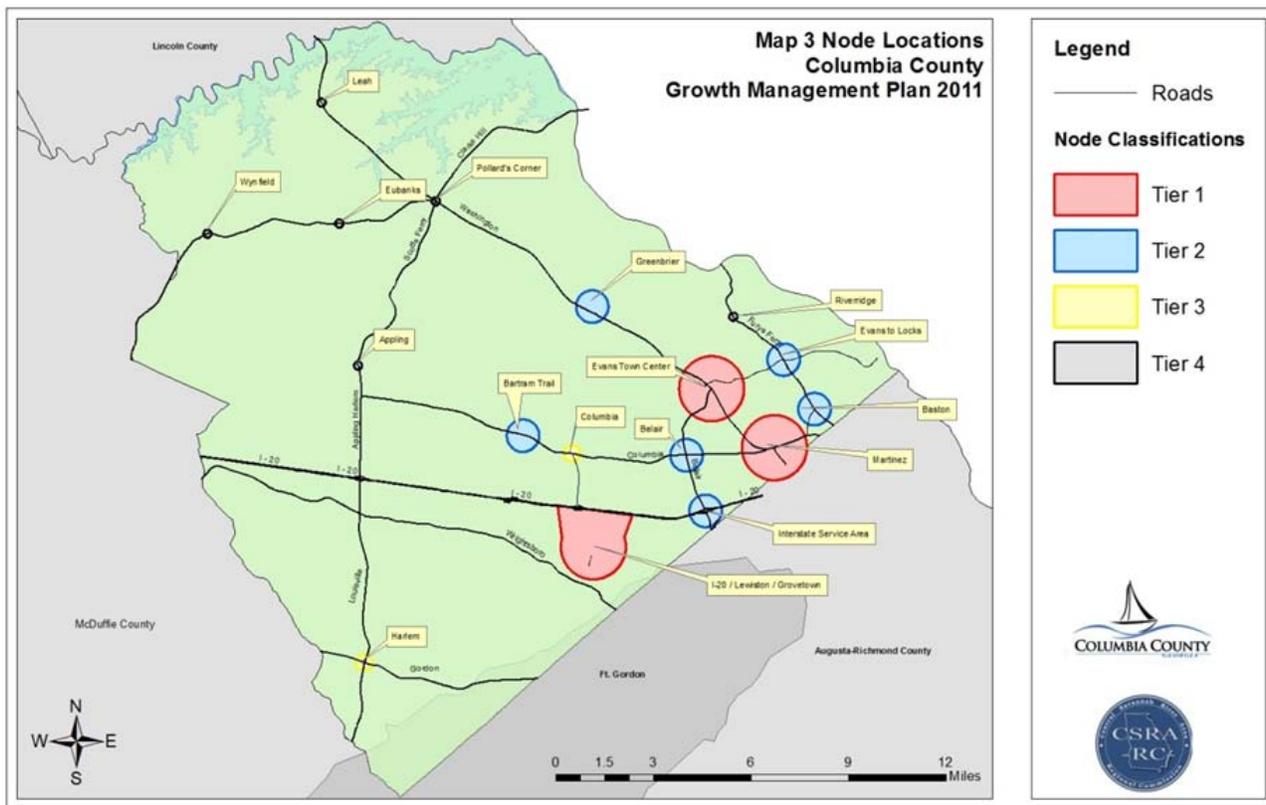
The nodes were divided into four categories to reflect both the past development patterns in Columbia County and to guide future development patterns. Below is an illustration of the Tiers along with the appropriate land uses, acreage of commercial and office uses, range of square feet for these commercial and office uses, pictures of local examples, and images of regional examples for each Tier level.

Nodal Structure				
Designation	Appropriate Uses	Acres	Range of sq. ft.	Representative Areas
Tier 1	<ul style="list-style-type: none"> • Retail • Employment • Large Civic • Multi-family Residential • Big Box Retail 	100-200	1,000,000-2,000,000	Evans Town Center Government Center Education Medical Financial
Tier 2	<ul style="list-style-type: none"> • Retail • Medium Employment Centers • Small Civic • Dense Residential 	30-50	300,000-500,000	Baston Road Columbia Road Belair Road
Tier 3	<ul style="list-style-type: none"> • Retail (Neighborhood Services) • Professional/Office 	6-20	60,000-180,000	Grovetown
Tier 4	<ul style="list-style-type: none"> • Retail • Local Convenience • Office 	2-4	Up to 40,000	Pollard’s Corner Pumpkin Center Leah

Complementing the nodal development policy is a node buffer policy. This policy states that commercial development is to be discouraged immediately outside the nodes, as this undermines the integrity of the planned nodes. Development will be permitted in the identified corridors between nodes. Generally the non-competition buffer around a node should be about 1 mile beyond the edge of the node. For Tier I nodes, larger buffers may be necessary.

Historically, land use along major arterials has often been dominated by commercial development. In an effort to encourage appropriate development, a system of linkages or corridors has been established between existing nodes. These linkages are organized in the same way that the nodes are. Corridors are divided into tiers based on their proximity to other nodes, existing development patterns, or desired future development patterns. It should be stated that this policy was not put in place to encourage sprawling development along major arterial roads; rather it is an effort to aid County Staff in making common sense planning decisions and to guide appropriate growth in areas that have already seen significant development.

To ensure that appropriate development is located within the new corridor system, an amendment to the Permitted Use table of the County’s Zoning Ordinance is recommended. A new category, much like the existing Evans Town Center will provide clarity for which specific uses will be permitted within the new corridors. In an effort to reduce future curb cuts along the designated corridors, the County’s Zoning Ordinance should be amended to include an interconnectivity requirement for new development, where applicable. Although the majority of commercial



development will locate inside nodes, some property outside of nodes is unsuitable for any other use than commercial. In such rare cases, requests for commercial zoning should be considered so long as they meet the following set of minimum criteria:

1. Adjacent property is zoned commercial or zoned PUD for commercial use.
2. The request will not increase the footprint of commercial zoning in the area.
3. Due to surrounding conditions, non-commercial land use is impractical.
4. The requested zoning will not limit the usability of nearby residential property.

Single-family residential can still be developed along major arterials so long as the development is oriented away from major corridors and buffered with walls and a planted buffer.

Corridor Structure			
Designation	Existing Uses	Future Uses	Location
Tier 1	- Strip Commercial	- Light Retail - Professional - Institutional - High-Density Residential	- Baston Road - Between Baston and Martinez nodes - Washington Road - Between Martinez and Evans Town Center nodes - Flowing Wells/ Wheeler Road to Old Anderson Road between Martinez and Interstate Service Area nodes
Tier 2	- Professional - Residential	- Large-Scale Professional - Large-Scale Institutional - High-Density Residential	- Fury's Ferry Road - Between Evans to Locks and Baston nodes - Evans to Locks Road - Between Evans to Locks and Evans Town Center nodes - Washington Road - Between Evans Town Center and Greenbrier nodes - North Belair Road - Between Evans Town Center and Belair Nodes - South Belair Road - Between Belair and Interstate Service Area nodes
Tier 3	- Low-Density Residential - Some Commercial	- Smaller-Scale Professional - Smaller-Scale Institutional - High-Density Residential	- Columbia Road - Between Martinez and Belair nodes

8 TRANSPORTATION PLAN SUMMARY

The Columbia County 2025 Long Range Transportation Plan was 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 widening, 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 widening, 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 is 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 to manage traffic congestion.

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 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 most relevant to the Growth Management 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
- Para-transit
- 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
- Guaranteed Ride Home Program
- Ride Share Matching Services
- Vanpooling Mid Term

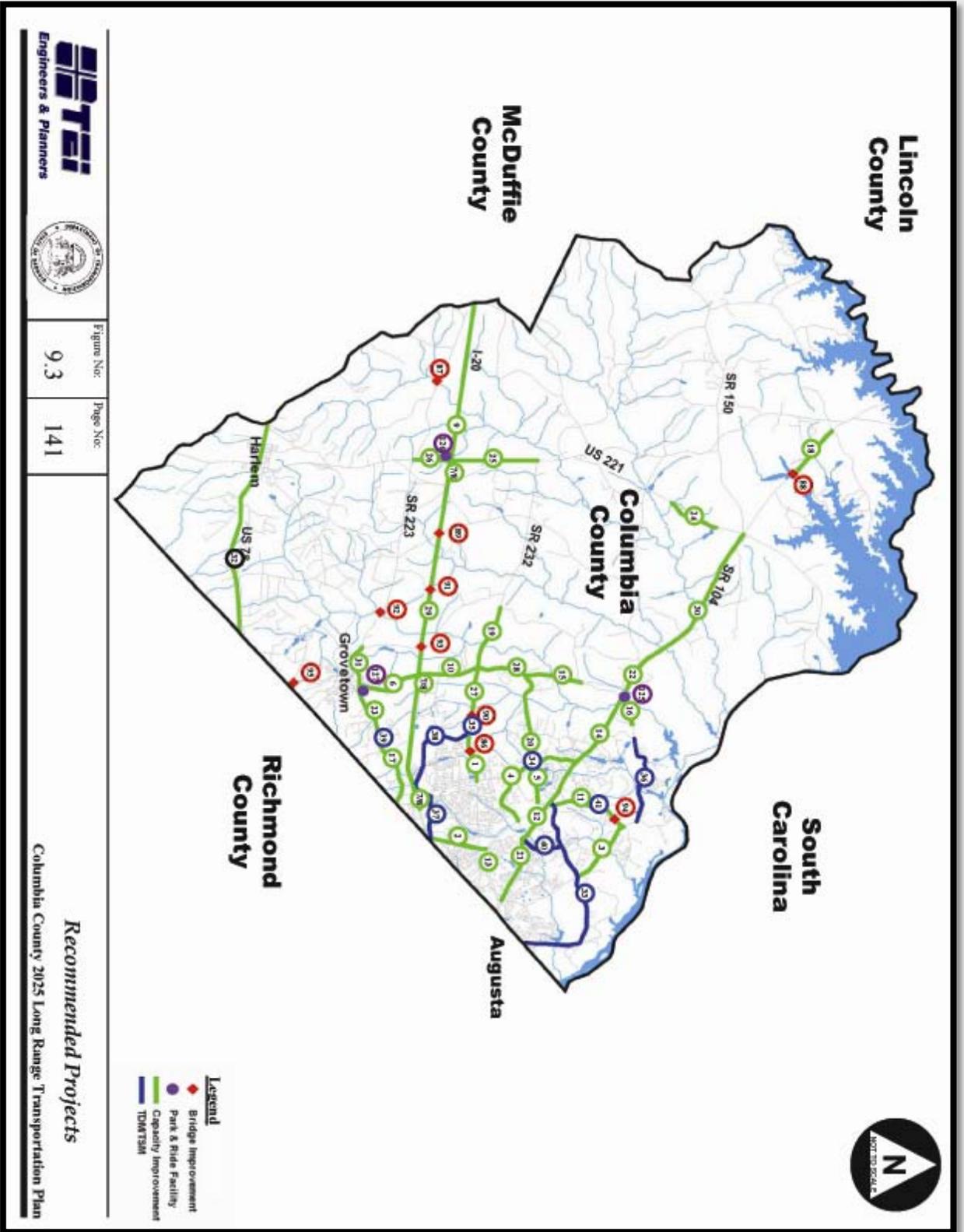
LEVEL FOUR: Actions that optimize the highway system's operation for single occupancy vehicle (SOV) trips, and for all other trips using highway facilities/modes such as traffic signalization modification, intelligent transportation systems.

- 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.



9 STATE QUALITY COMMUNITY OBJECTIVES

In 1999, the Board of the Department of Community Affairs adopted the Quality Community Objectives (QCOs), as a statement of the development patterns and options that will help Georgia preserve its unique cultural, natural and historic resources while looking to the future and developing to its fullest potential. The Office of Planning and Quality Growth has created the Quality Community Objectives Local Assessment to assist local governments in evaluating their progress towards sustainable and livable communities.

This assessment is meant to give a community an idea of how it is progressing toward reaching these objectives set by the Department, but no community will be judged on progress. The assessment is a tool for use at the beginning of the comprehensive planning process, much like a demographic analysis or a land use map, showing a community that “you are here.” Each of the fifteen Quality Community Objectives has a set of yes/no statements, with additional space available for comments. The statements focus on local ordinances, policies, and organizational strategies intended to create and expand quality growth principles.

A majority of “yes” answers for an objective may indicate that the community has in place many of the governmental options for managing development patterns. “No” answers may provide guidance in how to focus planning and implementation efforts for those governments seeking to achieve these Quality Community Objectives.

This initial assessment is meant to provide an overall view of the community’s policies, not an in depth analysis. There is no right or wrong answer to the questions in this assessment. Its merit lies in completion of the document, and the ensuing discussions regarding future development patterns.

Should a community decide to pursue a particular objective, it may consider a “yes” to each statement a benchmark towards achievement. Please be aware, however, that this assessment is only an initial step. Local governments striving for excellence in quality growth should consider additional measures to meet local goals.

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.



Development Patterns			
Traditional Neighborhoods Objective:			
Traditional neighborhood development patterns should be encouraged, including the use of more human scale development, mixing of uses within easy walking distance of one another, and facilitating pedestrian activity.			
Criteria	Yes	No	Comments
1. If we have a zoning code, it does not separate commercial, residential and retail uses in every district.	✓		The Planned Unit Development process allows for a mix of uses within a single zoning district.
2. Our community has ordinances in place that allow neo-traditional development “by right” so that developers do not have to go through a long variance process.	✓		The Nodal Protection Overlay District promotes neo-traditional development in designated areas
3. We have a street tree ordinance that requires new development to plant shade bearing trees appropriate to our climate.		✓	
4. Our community has an organized tree-planting campaign in public areas that will make walking more comfortable in the summer.		✓	
5. We have a program to keep our public areas (commercial, retail districts, parks) clean and safe.	✓		Keep Columbia County Beautiful
6. Our community maintains its sidewalks and vegetation so that walking is an option that some would choose.	✓		
7. In some areas several errands can be made on foot if so desired.	✓		
8. Some of our children can and do walk to school safely.	✓		
9. Some of our children can and do bike to school safely.	✓		
10. Schools are located in or near neighborhoods in our community.	✓		
Traditional Neighborhoods Assessment:			
Traditional neighborhood development patterns, with a focus on the 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.			



Development Patterns			
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.			
Criteria	Yes	No	Comments
1. Our community has an inventory of vacant sites and buildings that are available for redevelopment and / or infill development.	✓		Vacant storefront survey underway by the Columbia County Development Authority.
2. Our community is actively working to promote brownfield redevelopment.		✓	
3. Our community is actively working to promote greyfield development.		✓	
4. We have areas of our community that are planned for nodal development (compacted near intersections rather than spread along a major road).	✓		The county has adopted the nodal protection overlay district (NPOD) to encourage higher density developments at intersections.
5. Our community allows small lot development (5,000 ft ² or less) for some uses.	✓		
Infill Development Assessment:			
Columbia County completed a redevelopment plan for Martinez in 2005, 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. As a part of this update the establishment of incentives for redevelopment in the Martinez area is recommended to enhance ongoing redevelopment efforts.			

Development Patterns			
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.			
Criteria	Yes	No	Comments
1. If someone were dropped from the sky into our community, he or she would know immediately where he or she was, based on our distinct characteristics		✓	
2. We have delineated the areas of our community that are important to our history and heritage, and have taken steps to protect those areas.		✓	
3. We have ordinances to regulate the aesthetics of development in our highly visible areas.	✓		



Development Patterns			
Sense of Place Continued			
Criteria	Yes	No	Comments
4. We have ordinances to regulate the type and size of signage in our community.	✓		
5. We offer a development guidebook that illustrates the type of new development we want in our community.		✓	A draft is being developed.
6. If applicable, our community has a plan to protect designated farmland.		✓	
Sense of Place Assessment:			
<p>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.</p>			

Development Patterns			
Transportation Alternatives Objective:			
<p>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.</p>			
Criteria	Yes	No	Comments
1. We have public transportation in our community.	✓		
2. We require that new development connects with existing development through a street network, not a single entry / exit.		✓	
3. We have a good network of sidewalks to allow people to walk to a variety of destinations.	✓		
4. We have a sidewalk ordinance in our community that requires all new development to provide user-friendly sidewalks.		✓	
5. We require that newly built sidewalks connect to existing sidewalks whenever possible.		✓	
6. We have a plan for bicycle routes through our community	✓		
7. We allow commercial and retail development to share parking areas wherever possible.	✓		
Transportation Alternatives Assessment:			
<p>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 Program calls for a network of interconnected greenways. If implemented as envisioned, together these would promote a significant alternative transportation infrastructure.</p>			



Development Patterns			
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.			
Criteria	Yes	No	Comments
1. Our community is characteristic of the region in terms of architectural styles and heritage.		✓	
2. Our community is connected to the surrounding region for economic livelihood through businesses that process local agricultural products.		✓	
3. Our community encourages businesses that create products that draw on our regional heritage (mountain, agricultural, metropolitan, coastal, etc.)		✓	
4. Our community participates in the Georgia Department of Economic Development’s regional tourism partnership.	✓		
5. Our community promotes tourism opportunities based on the unique characteristics of our region.	✓		
6. Our community contributes to the region, and draws from the region, as a source of local culture, commerce, entertainment and education	✓		
Regional Identity Assessment:			
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.			

Resource Conservation			
Open Space Protection 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.			
Criteria	Yes	No	Comments
1. Our community has a Greenspace Program.	✓		
2. Our community is actively preserving greenspace, either through direct purchase or by encouraging set-asides in new development.	✓		
3. We have a local land conservation program, or we work with state or national land conservation programs, to preserve environmentally important areas in our community.	✓		
4. We have a conservation subdivision ordinance for residential development that is widely used and protects open space in perpetuity.	✓		Our Residential Cluster Overlay District achieves this goal.



Open Space Protection Continued			
Open Space Protection Assessment:			
<p>Columbia County has a strong and recently developed Greenspace Program and Parks and Recreation System Comprehensive Master Plan. The county has been making steady progress on implementing these plans with the acquisition of new green spaces 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.</p>			

Resource Conservation			
Heritage Preservation Objective:			
<p>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.</p>			
Criteria	Yes	No	Comments
1. We have designated historic districts in our community.		✓	
2. We have an active historic preservation commission.		✓	
3. We want new development to complement our historic development, and we have ordinances in place to ensure this.		✓	
Heritage Preservation Assessment:			
<p>Historic preservation has lagged in Columbia County. However, the creation of an entity to oversee historic preservation efforts in the county is underway. The City of Harlem completed a historic survey and has obtained 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.</p>			

Resource Conservation			
Environmental Protection Objective:			
<p>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 the 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.</p>			
Criteria	Yes	No	Comments
1. Our community has a comprehensive natural resources inventory.	✓		
2. We use this resource inventory to steer development away from environmentally sensitive areas.		✓	
3. We have identified our defining natural resources and taken steps to protect them.		✓	
4. Our community has passed the necessary “Part V” environmental ordinances, and we enforce them.		✓	
5. Our community has a tree preservation ordinance which is actively enforced.		✓	



Environmental Protection Continued:			
Criteria	Yes	No	Comments
6. Our community has a tree-replanting ordinance for new development.	✓		
7. We are using stormwater best management practices for all new development.		✓	
8. We have land use measures that will protect the natural resources in our community (steep slope regulations, floodplain or marsh protection, etc.).		✓	
Environmental Protection Assessment:			
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.			

Social and Economic Development			
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.			
Criteria	Yes	No	Comments
1. We have population projections for the next 20 years that we refer to when making infrastructure decisions.	✓		
2. Our local governments, the local school board, and other decision-making entities use the same population projections.		✓	
3. Our elected officials understand the land-development process in our community.	✓		
4. We have reviewed our development regulations and/or zoning code recently, and believe that our ordinances will help us achieve our QCO goals.	✓		
5. We have a Capital Improvements Program that supports current and future growth.	✓		
6. We have designated areas of our community where we would like to see growth, and these areas are based on a natural resources inventory of our community.		✓	
7. We have clearly understandable guidelines for new development.	✓		
8. We have a citizen-education campaign to allow all interested parties to learn about development processes in our community.		✓	
9. We have procedures in place that make it easy for the public to stay informed about land use issues, zoning decisions, and proposed new development.	✓		
10. We have a public-awareness element in our comprehensive planning process.	✓		



Growth Preparedness Continued:
Growth Preparedness Assessment:
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.

Social and Economic Development			
Appropriate Business 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.			
Criteria	Yes	No	Comments
1. Our economic development organization has considered our community’s strengths, assets and weaknesses, and has created a business development strategy based on them.	✓		SWOT analysis conducted by the Columbia County Development Authority in 2009.
2. Our economic development organization has considered the types of businesses already in our community, and has a plan to recruit businesses and/or industries that will be compatible.	✓		The Columbia County Development Authority is in charge of recruiting compatible business.
3. We recruit firms that provide or create sustainable products.	✓		The Columbia County Development Authority recruits sustainable and environmentally responsible firms to the County, when feasible.
4. We have a diverse jobs base, so that one employer leaving would not cripple our economy.	✓		
Appropriate Business Assessment:			
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.			

Social and Economic Development			
Employment Options Objective:			
A range of job types should be provided in each community to meet the diverse needs of the local workforce.			
Criteria	Yes	No	Comments
1. Our economic development program has an entrepreneur support program.	✓		
2. Our community has jobs for skilled labor.		✓	
3. Our community has jobs for unskilled labor.	✓		
4. Our community has professional and managerial jobs.	✓		
Employment Options Assessment			
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.			



Social and Economic Development			
Housing Choices 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.			
Criteria	Yes	No	Comments
1. Our community allows accessory units like garage apartments or mother-in-law units.	✓		
2. People who work in our community can also afford to live in the community.	✓		
3. Our community has enough housing for each income level (low, moderate and above-average).		✓	
4. We encourage new residential development to follow the pattern of our original town, continuing the existing street design and maintaining small setbacks.		✓	No original town exists in Columbia County.
5. We have options available for loft living, downtown living, or “neo-traditional” development.	✓		These are allowed as a part of a Planned Unit Development.
6. We have vacant and developable land available for multi-family housing.	✓		
7. We allow multi-family housing to be developed in our community.	✓		Multi-family development is allowed according to the 2010 Multi-family housing study, included as an appendix to this plan.
8. We support community development corporations that build housing for lower-income households.		✓	
9. We have housing programs that focus on households with special needs.		✓	
10. We allow small houses built on small lots (less than 5,000 square feet) in appropriate areas.	✓		
Housing Choices Assessment:			
Columbia County has limited housing choices to meet the needs of its current population and current employment base. Columbia County’s housing is by far the most expensive in the region. Also, the supply of attached and multi-family housing choices is limited, especially in light of the existing demographic patterns in the county.			

Social and Economic Development			
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.			
Criteria	Yes	No	Comments
1. Our community provides workforce training options for its citizens.	✓		
2. Our workforce training programs provide citizens with skills for jobs that are available in our community.	✓		
3. Our community has higher education opportunities, or is close to a community that does.	✓		
4. Our community has job opportunities for college graduates, so that our children may live and work here if they choose.	✓		



Educational Opportunities Continued:
Educational Opportunities Assessment:
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.

Governmental Relations			
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.			
Criteria	Yes	No	Comments
1. We participate in regional economic development organizations.	✓		
2. We participate in regional environmental organizations and initiatives, especially regarding water quality and quantity issues.	✓		
3. We work with other local governments to provide or share appropriate services, such as public transit, libraries, special education, tourism, parks and recreation, emergency response, homeland security, etc.	✓		
4. Our community thinks regionally, especially in terms of issues like land use, transportation and housing, understanding that these go beyond local government borders.	✓		
Regional Solutions Assessment:			
Generally, regional solutions are not needed for most of Columbia County’s current challenges.			

Governmental Relations			
Regional Cooperation Objective:			
Regional cooperation should be encouraged in setting priorities, identifying shared needs, and finding collaborative solutions, particularly where it is critical to the success of a venture, such as protection of shared natural resources.			
Regional Cooperation	Yes	No	Comments
1. We plan jointly with our cities and county for comprehensive planning purposes.	✓		
2. We are satisfied with our Service Delivery Strategy.	✓		
3. We initiate contact with other local governments and institutions in our region in order to find solutions to common problems, or to craft region-wide strategies.	✓		
4. We meet regularly with neighboring jurisdictions to maintain contact, build connections, and discuss issues of regional concern.	✓		
Regional Cooperation Assessment:			
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.			



SUMMARY

The Community Assessment presents an overview of the current conditions in Columbia County and identifies opportunities and trends that will form the basis for the next step in the plan update process, which includes the development of the 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.

