

Technical Addendum Data Assessment Tybee Island Master Plan



Submitted to:

**Georgia Department of
Community Affairs**

By:

City of Tybee Island, Georgia

March 2007



TECHNICAL ADDENDUM

DATA ASSESSMENT

Tybee Island Master Plan



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1. Population

1.1 Population Projections

Whether a city is experiencing rapid growth or steady decline, population projections provide valuable information and can be used as a planning tool to assist local governments and agencies in making future decisions. In an effort to provide a solid database for the Comprehensive Plan, the City of Tybee Island has developed a detailed and accurate population estimate utilizing the 2000 US Census Bureau information provided by the DCA and the City's Certificates of Occupancy (CO) database for new residential units.

Table 1. City of Tybee Island - Population Projections

	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
Tybee Island	2,240	2,541	2,842	3,117	3,392	3,536	3,832	4,100	4,346	4,564	4,746
Rate of increase		13.44%	11.85%	9.68%	8.82%	4.25%	8.37%	7.00%	6.00%	5.00%	4.00%
New residents		301	301	275	275	144	296	268	246	217	183

Source: DCA, City of Tybee Island

Population figures for 1980 through 2000 were gathered from the 2000 US Census Bureau information. In order to accurately estimate Tybee Island's population in 2005, the number of residential COs issued between 2001 and 2005 was multiplied by the average household size as established by the 2000 US Census Bureau. The total number of residential units issued COs on Tybee Island during that timeframe was 95. In order to account for those new residential units that would primarily be used for vacation rentals (and would therefore not add to the additional year-round population count), this number was reduced by 27% (in accordance with the current percentage of residential units used for vacation rentals) to 69 new residential units. This number was multiplied by the average household size (2.07) to determine the population growth between 2001 and 2005. Based on this methodology, the City's population increase between 2001 and 2005 was 144 people or 4.25%.

To estimate the population growth between 2005 and 2010, a similar methodology was utilized. The number of residential units issued COs in 2006 was 96. Based on the average number of new residential units issued COs between 2001 and 2006, it was further assumed that approximately 100 additional residential units would be constructed between 2007 and 2010. Assuming that the same percentage of units is inhabited by year-round residents and that the average household size would remain the same, this would equate to a population growth of 296 from 2005 to 2010.

To estimate the population growth from 2010 through 2030, it was assumed that the growth rate would decrease due to the limited amount of developable land remaining on Tybee Island. The rate of decrease in the population growth percentage was estimated to be

approximately equal to the rate of decrease observed in population growth between 1980 and 2000.

Table 2 compares a number of different methods for projecting future population to the population projection included in Table 1. Included in this table is the DCA projection, which assumes that the historic growth patterns established during the 1980, 1990 and 2000 Censuses continue in the future. In addition, a population projection from a study performed by Georgia Tech is included, which looks more closely at local population trends and land use patterns. As is evidenced by the table below, the DCA projection anticipates that the same number of new residents will be added to Tybee Island every five years. This constant growth rate is unlikely to continue in the future due to the limited amount of developable land. On the other hand, the Georgia Tech study anticipates that the rate of growth will decrease at an even greater rate than anticipated by the City of Tybee Island’s population figures.

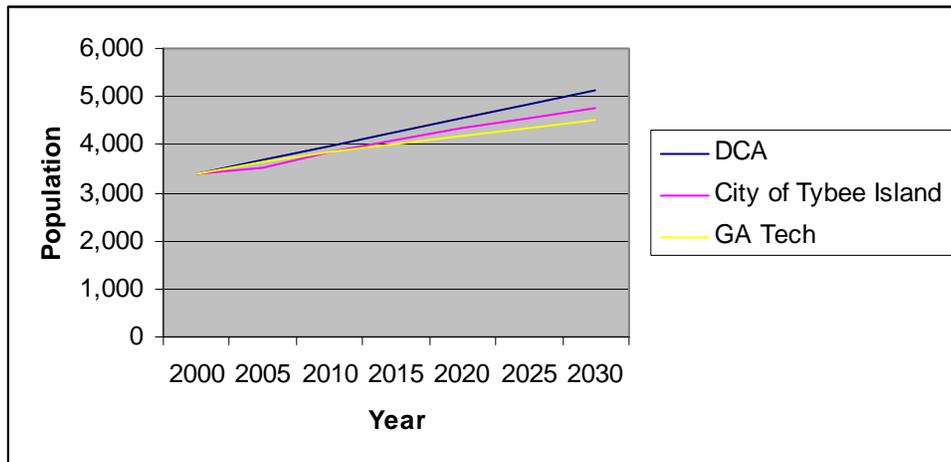
Table 2. Population Projections

	2000	2005	2010	2015	2020	2025	2030
DCA Projections	3,392	3,680	3,968	4,256	4,544	4,832	5,120
City of Tybee Island (COs)	3,392	3,536	3,832	4,100	4,346	4,564	4,746
GA Tech Study	3,392	3,626	3,832	4,021	4,193	4,347	4,495

Source: DCA, City of Tybee Island, Georgia Tech

Figure 1 graphically displays the different projection methods with existing population estimates developed by the DCA and the regional Georgia Tech population study.

Figure 1. Population Projection Comparison



1.2 Year-Round Population vs. Seasonal Population

The City of Tybee Island has a unique set of circumstances in that a significant percentage of the population is seasonal. An inventory of seasonal rental properties was conducted as part of the Community Assessment element of the Comprehensive Plan. As shown in Table 3

below, the City of Tybee Island contains 3,091 residential properties. This includes single-family homes, multi-family homes, condos, etc. It has been determined that a total of 852 of these properties are seasonal rentals. This accounts for nearly 27% of the total amount of residential property on the island. As a result, the population on the island varies greatly throughout the year.

Table 3. City of Tybee Island Rental Properties

Total Residential Properties	3,091
Total Rental Properties	852
Percentage of Rental Properties	27.6%

Source: City of Tybee Island

During the summer months, when seasonal rental units, hotels and motels are filled to or near capacity, there is a significant increase in population. Table 4 indicates that a seasonal population increase of approximately 2,702 tourists/visitors is possible (assuming all rentals are at full capacity with an average of two visitors per rental unit.) This represents a population increase of approximately 76% for a total population of 6,238 during high volume summer months.

Conversely, during off-season months, the population on the island is much lower (3,536). This trend makes it difficult for many small businesses because they become dependent on revenue generated from the seasonal population, and have trouble surviving the off-seasons months. This trend also creates an issue for year-round residents as many of the services and businesses on Tybee Island are tailored more toward the seasonal tourist market. Lastly, the City must understand the seasonal influx of residents in order to adequately plan for future facilities and services including wastewater capacity, water supply, and public safety. All of these services must be able to accommodate the additional population during the summer months.

Table 4. Seasonal Population Increase

Type of Seasonal Rental	Number of Units
Residential Seasonal Rental Units	852
Atlantis Hotel	11
DeSoto Hotel	37
Dunes Inn	53
Howard Johnson's Admirals Inn	41
Ocean Plaza Beach Resort	200
Royal Palm Motel	22
Sandcastle Inn	60
Sea Breeze Inn	60
Tybee Beachside Inn	15
Total Units	1351
Seasonal Population (2 people per unit)	2702
Population Increase	76.41%

Source: City of Tybee Island

The City is highly dependent on the tourism industry, and it will be the responsibility of the City to work with the business community to find a way to provide services for both permanent and seasonal residents, and to retain and attract small businesses. The map in Figure 2 below shows the distribution of rental properties around the City.

Figure 2. Rental Properties Map



1.3 Population Comparison

The City of Tybee Island has experienced continuous population growth over the last 20 years. The City's population was 2,240 people in 1980 and increased to 2,842 in 1990, an increase of roughly 27%. The population of the City continued to increase during the time span of 1990 to 2000 and from 2000 to 2005, with an increase of 19.4% and 4.2% respectively.

Table 5 compares population totals for the City of Tybee Island, Chatham County, and the State of Georgia. Population within the City of Tybee Island has increased at a greater rate than that of Chatham County as a whole. This presents the City with a number of issues related to the natural environment, City services, infrastructure, and the overall quality of life. It is important to note that the rate of population growth within the City of Tybee Island slowed between 1990 and 2000, and it appears that this trend will continue in the future.

Table 5. General Population

Jurisdiction	1980	1990	2000	2005	% Increase 1980 - 1990	% Increase 1990 - 2000	% Increase 2000 - 2005
Tybee Island	2,240	2,842	3,392	3,536	26.9%	19.4%	4.2%
Chatham County	202,226	216,935	232,048	239,504	7.3%	7.0%	3.2%
Georgia	5,457,566	6,478,216	8,186,453	8,868,675	18.7%	26.4%	8.3%

Source: DCA, City of Tybee Island

Table 6 compares the population trends in the other incorporated areas in Chatham County. This table indicates that Tybee Island is among the top four cities in the County in terms of population growth. The cities of Pooler, Garden City, and Bloomingdale are experiencing a large growth in population due to the availability of developable land and the affordability of new housing units. In contrast, the cities of Savannah and Port Wentworth have encountered declining populations over the last 25 years. However, it is likely that the municipalities will experience population growth in the near future due to imminent development and annexations.

Table 6. Population Comparison

Jurisdiction	1980	1990	2000	2005	% Increase 1980 - 1990	% Increase 1990 - 2000	% Increase 2000 - 2005
Tybee Island	2,240	2,842	3,392	3,536	26.9%	19.4%	4.2%
Thunderbolt	2,165	2,786	2,340	2,384	28.7%	-16.0%	1.9%
Garden City	6,895	7,410	11,289	12,388	7.5%	52.3%	9.7%
Savannah	141,390	137,560	131,510	129,040	-2.7%	-4.4%	-1.9%
Pooler	2,543	4,453	6,239	7,163	75.1%	40.1%	14.8%
Bloomingdale	1,855	2,271	2,665	2,868	22.4%	17.3%	7.6%
Port Wentworth	3,947	4,012	3,276	3,108	1.6%	-18.3%	-5.1%
Vernonburg	178	74	138	128	-58.4%	86.5%	-7.2%

Source: DCA, City of Tybee Island

1.4 Population by Age

The following tables compare the age composition of the population in the City of Tybee Island and Chatham County. Comparison is made based on percentage composition of age ranges as established by the DCA from 2000 US Census data.

Table 7. Age Composition in Tybee Island & Chatham County

Category	1980	1990	2000
Tybee Island			
0 – 4 Years Old	5.6%	5.0%	3.0%
5 – 13 Years Old	10.8%	9.9%	8.0%
14 – 17 Years Old	5.0%	3.4%	2.8%
18 – 20 Years Old	3.5%	3.4%	2.2%
21 – 24 Years Old	6.9%	4.2%	3.2%
25 – 34 Years Old	17.0%	15.0%	10.4%
35 – 44 Years Old	9.9%	17.8%	16.4%
45 – 54 Years Old	10.2%	12.2%	20.5%
55 – 64 Years Old	11.8%	10.4%	14.9%
65 and over	19.2%	18.7%	18.5%
Chatham County			
0 – 4 Years Old	8.2%	7.9%	6.7%
5 – 13 Years Old	14.2%	14.6%	14.3%
14 – 17 Years Old	7.3%	4.0%	4.0%
18 – 20 Years Old	6.0%	4.8%	4.9%
21 – 24 Years Old	7.8%	6.3%	6.4%
25 – 34 Years Old	16.5%	17.4%	14.6%
35 – 44 Years Old	10.5%	14.3%	15.0%
45 – 54 Years Old	9.6%	9.6%	12.8%
55 – 64 Years Old	9.6%	8.5%	8.6%
65 and over	10.4%	12.8%	12.8%

Source: DCA

The distribution between different age groups has been pretty consistent when comparing the City of Tybee Island to Chatham County. The City of Tybee Island experienced a significant increase in the age cohort of 45-54, going from roughly 12% in 1990 to 21% in the year 2000. Overall, the City is encountering the largest population growth in people that are older than 45. The percentage of people 45 years old or over grew from 41.2% in 1980 to 53.9 % in 2000. This aging population will call for more consideration for public and private services designed for this older demographic.

1.5 Population by Age Projection

The population by age projection (Table 8) shows increases in the following age groups: 35-44, 45-54, and 55-64. Overall, the increase in the population combined with the increase in the percent of population that is 45 years old or over (62% of the population by 2030) will result in an even more dramatic increase in the number of older adults. It is important to be aware of this shift in demographics when planning for the future facilities and services.

Table 8. Population by Age Projections (percentage)

Category	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
0 – 4	5.6%	5.3%	5.0%	3.9%	3.0%	2.6%	2.3%	2.0%	1.7%	1.5%	1.3%
5 – 13	10.8%	10.3%	9.9%	8.9%	8.0%	7.6%	7.2%	6.9%	6.6%	6.4%	6.2%
14 – 17	5.0%	4.1%	3.4%	3.1%	2.8%	2.5%	2.2%	2.0%	1.7%	1.6%	1.4%
18 – 20	3.5%	3.5%	3.4%	2.7%	2.2%	2.0%	1.8%	1.6%	1.5%	1.4%	1.3%
21 – 24	6.9%	5.4%	4.2%	3.7%	3.2%	2.7%	2.2%	1.8%	1.4%	1.1%	0.8%
25 – 34	17.0%	15.9%	15.0%	12.5%	10.4%	9.4%	8.5%	7.8%	7.2%	6.6%	6.1%
35 – 44	9.9%	14.4%	17.8%	17.1%	16.4%	17.4%	18.3%	19.0%	19.6%	20.2%	20.7%
45 – 54	10.2%	11.3%	12.2%	16.7%	20.5%	22.1%	23.4%	24.6%	25.6%	26.5%	27.3%
55 – 64	11.8%	11.1%	10.4%	12.9%	14.9%	15.4%	15.8%	16.2%	16.5%	16.8%	17.0%
65+	19.2%	18.9%	18.7%	18.6%	18.5%	18.4%	18.3%	18.2%	18.1%	18.1%	18.0%

Source: DCA

1.6 Average Household Size

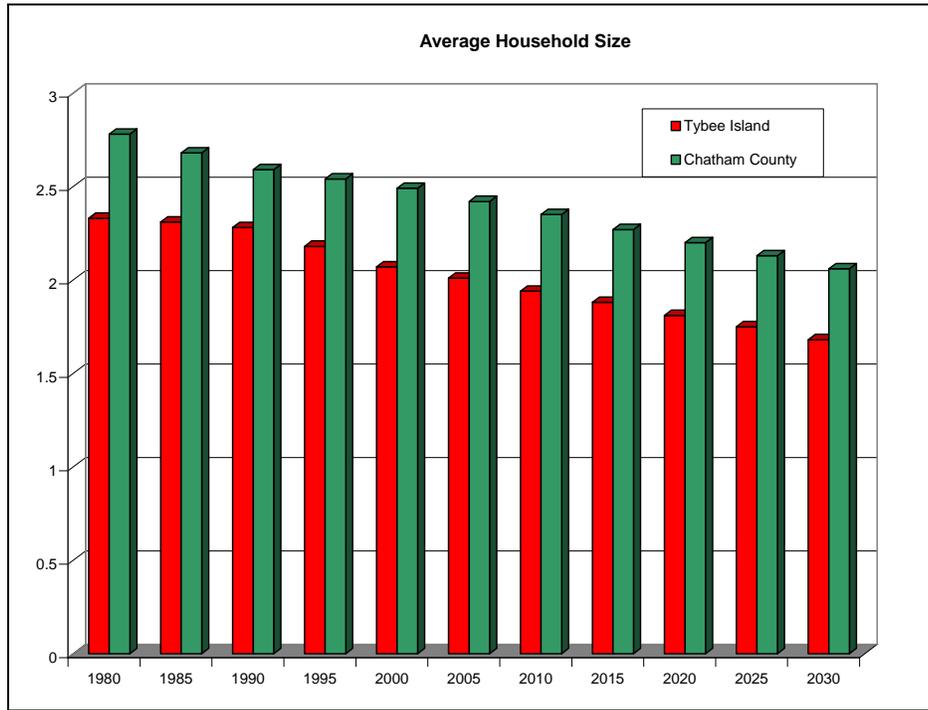
The number of people that make up the typical “household” in Chatham County and Tybee Island has followed a national trend toward smaller households as people are having fewer children, the population is aging, and the number of persons living alone has increased as reflected in Table 9.

Table 9. Average Household Size

Jurisdiction	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
Tybee Island	2.33	2.31	2.28	2.18	2.07	2.01	1.94	1.88	1.81	1.75	1.68
Chatham County	2.78	2.68	2.59	2.54	2.49	2.42	2.35	2.27	2.2	2.13	2.06

Source: DCA

Figure 3. Average Household Size



Source: DCA

1.7 Number of Households

Between the years 1980 and 2000 the City of Tybee Island saw significant increases in the number of households when compared to Chatham County. The City will continue to see a rise in the number of households on the island, but the increase is likely to level out over time.

Table 10. Number of Households

Category	1980	1990	2000	2005	% Increase 1980 - 1990	% Increase 1990 - 2000	% Increase 2000 - 2005
Tybee Island	910	1,188	1,568	1,932	130.5%	132.0%	123.2%
Chatham County	71,323	81,111	89,865	94,501	113.7%	110.8%	105.2%

Source: DCA

Table 11 presents the projected number of households:

Table 11. Projected Number of Households

Category	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
Tybee Island	910	1,049	1,188	1,378	1,568	1,932	2,235	2,586	2,992	3,462	4,006

Source: DCA

1.8 Racial Distribution

The racial distribution for the City of Tybee Island has remained nearly unchanged over the past 25 years. It is predicted that this trend will continue and that the population of the island will continue to be predominately white.

Table 12. City of Tybee Island - Racial Distribution

Category	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
White	95.76%	96.34%	96.80%	96.34%	95.93%	95.95%	95.99%	96.01%	96.02%	96.03%	96.05%
African American	2.19%	1.85%	1.55%	1.73%	1.89%	1.85%	1.81%	1.76%	1.74%	1.72%	1.70%
American Indian	0.63%	0.67%	0.70%	0.64%	0.56%	0.54%	0.55%	0.54%	0.53%	0.52%	0.53%
Asian/Pacific Islander	1.16%	0.98%	0.81%	0.83%	0.85%	0.82%	0.78%	0.73%	0.70%	0.68%	0.66%
Other	0.27%	0.20%	0.14%	0.48%	0.77%	0.84%	0.91%	0.96%	1.01%	1.06%	1.09%

Source: DCA

1.9 Educational Attainment

The significance of education in today’s competitive workplace is difficult to exaggerate. Comparison with Chatham County demonstrates that the number of people with college and graduate degrees in Tybee Island is significantly higher (nearly twice as high in 2000) than in the County as a whole. This indicates that Tybee Island’s workforce is less “blue collar” and more likely to hold professional types of positions or to be retired from professional positions.

Table 13. Educational Attainment – City of Tybee Island

Category	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
Less than 9th Grade	8.35%	5.94%	4.01%	3.30%	2.71%	1.85%	1.13%	0.49%	0.00%	0.00%	0.00%
9th to 12th Grade (no diploma)	11.47%	9.09%	7.21%	6.54%	5.96%	5.11%	4.41%	3.78%	3.24%	2.75%	2.34%
High School Graduate (includes equivalency)	21.25%	22.39%	23.26%	21.01%	19.13%	18.80%	18.55%	18.30%	18.09%	17.90%	17.75%
Some College (no degree)	13.04%	13.66%	14.11%	17.77%	20.81%	22.01%	23.01%	23.90%	24.65%	25.33%	25.92%
Associate Degree	NA	NA	6.02%	5.23%	4.57%	NA	NA	NA	NA	NA	NA
Bachelor’s Degree	8.17%	7.20%	6.44%	11.55%	15.83%	17.01%	17.99%	18.87%	19.61%	20.28%	20.86%
Graduate or Professional Degree	5.85%	5.71%	5.59%	8.44%	10.79%	11.55%	12.20%	12.73%	13.23%	13.66%	14.04%

Source: DCA

Table 14. Educational Attainment – Chatham County

Category	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
Less than 9th Grade	11.45%	8.53%	5.80%	4.63%	3.54%	1.86%	0.29%	0.00%	0.00%	0.00%	0.00%
9th to 12th Grade (no diploma)	10.87%	10.77%	10.68%	9.77%	8.93%	8.52%	8.13%	7.77%	7.43%	7.10%	6.80%
High School Graduate (includes equivalency)	17.82%	18.33%	18.80%	17.86%	16.98%	16.80%	16.64%	16.48%	16.33%	16.19%	16.06%
Some College (no degree)	8.47%	10.56%	12.50%	13.65%	14.72%	16.04%	17.28%	18.45%	19.55%	20.59%	21.57%
Associate Degree	NA	NA	3.16%	3.16%	3.16%	NA	NA	NA	NA	NA	NA
Bachelor's Degree	4.69%	6.28%	7.75%	9.18%	10.51%	11.73%	12.89%	13.97%	15.00%	15.96%	16.88%
Graduate or Professional Degree	3.30%	3.62%	3.92%	4.63%	5.29%	5.71%	6.10%	6.47%	6.82%	7.15%	7.46%

Source: DCA

1.10 Average Household Income

Household income is the total income generated by all wage earners within one dwelling unit. Average household income is the annual income, in dollar amount, averaged between all households in Tybee Island. Average household incomes in Tybee Island are slightly higher than those in Chatham County as a whole and lower than the statewide average. In the year 1990, average household income for Tybee Island was less than that of the County and State. The City experienced an increase of nearly 130% between the year 1990 and 2000, which put the City above the county’s average income level. It is likely that this trend will resume for the City as property values and the demand for housing in the beach community continue to rise.

Table 15. Average Household Income (in dollars)

Jurisdiction	1990	2000	% Increase
Tybee Island	\$30,300	\$69,159	128.2%
Chatham County	\$34,078	\$53,742	57.7%
Georgia	\$36,810	\$80,077	117.5%

Source: DCA

1.10.1 Household Income Distribution

Figure 4 below is based on data from the 2000 US Census Bureau and illustrates the percentage of households on Tybee Island and Chatham County that have an annual household income within a specified range. The income distribution is virtually the opposite between these two jurisdictions. In Chatham County, 50% of the households average less

than \$40,000 a year collectively. It is likely that the City will continue to see an increase in the higher income ranges. This is directly related to the affordability of property on the island.

Figure 4. Household Income Distribution



1.11 Per Capita Income

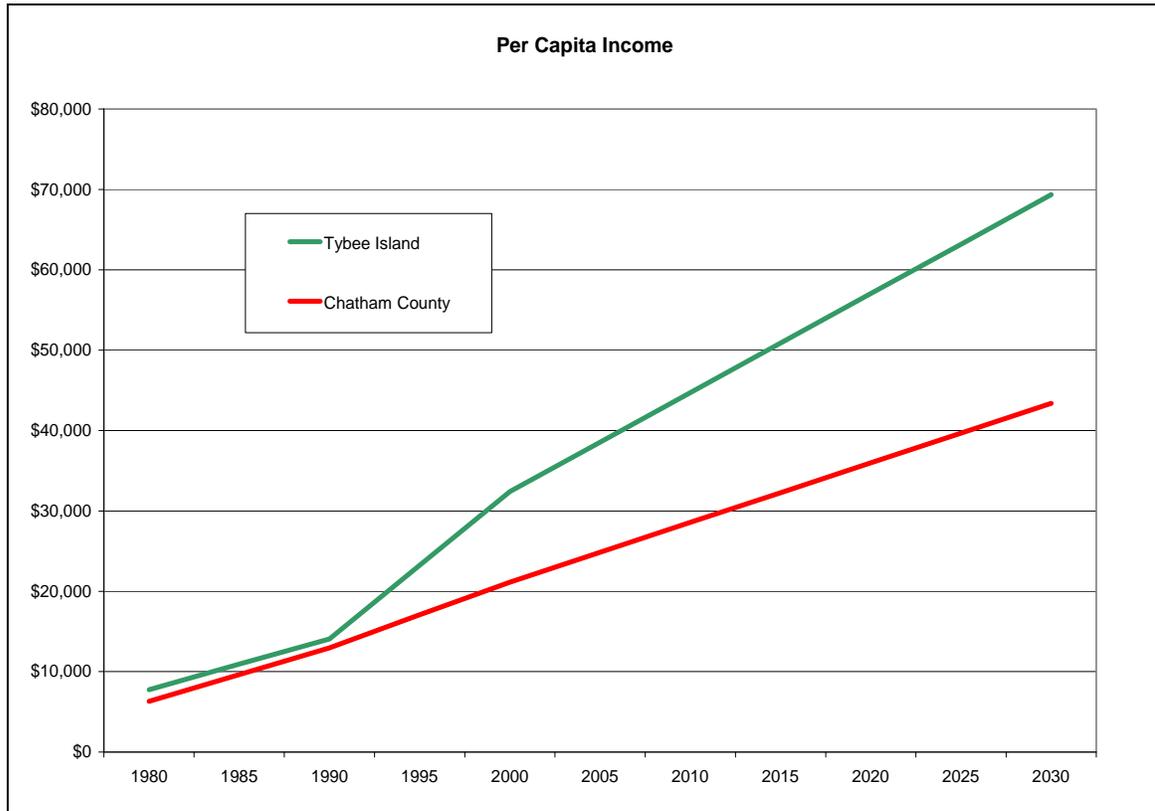
Per capita income is calculated by dividing the total income by the total population. As illustrated by the table below, both the City of Tybee Island and Chatham County show an upward trend in per capita income, part of which is due to inflation. The City of Tybee Island, however, has a rate of increase in per capita income that is much higher than that of Chatham County, as illustrated by the chart in Figure 5. This is consistent with both household income and the distribution of household income by income ranges discussed above.

Table 16. Per Capita Income (in dollars)

Jurisdiction	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
Tybee Island	\$7,775	\$10,923	\$14,070	\$23,238	\$32,406	\$38,564	\$44,722	\$50,879	\$57,037	\$63,195	\$69,353
Chatham County	\$6,328	\$9,656	\$12,983	\$17,068	\$21,152	\$24,858	\$28,564	\$32,270	\$35,976	\$39,682	\$43,388
Georgia	NA	NA	13,631	NA	21,154	NA	NA	NA	NA	NA	NA

Source: DCA

Figure 5. Per Capita Income Comparison



2. Economic Development

2.1 Economic Base

Table 17 below provides a summary of the census data to date and the projections based on past trends for employment by industry type for the City of Tybee Island.

Table 17. Employment by Industry

Category	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
Total Employed Civilian Population	992	1,124	1,256	1,503	1,749	1,938	2,128	2,317	2,506	2,695
Agriculture, Forestry, Fishing, Hunting & Mining	10	23	35	18	0	0	0	0	0	0
Construction	96	109	121	156	190	214	237	261	284	308
Manufacturing	110	130	150	137	123	126	130	133	136	139
Wholesale Trade	46	32	18	36	54	56	58	60	62	64
Retail Trade	168	220	272	187	101	84	68	51	34	17
Transportation, Warehousing, & Utilities	113	104	95	80	65	53	41	29	17	5
Information	NA	NA	NA	NA	37	NA	NA	NA	NA	NA
Finance, Insurance, & Real Estate	55	59	63	80	96	106	117	127	137	147
Professional, Scientific, Management, Administrative, & Waste Management Services	38	44	49	105	161	192	223	253	284	315
Educational, Health & Social Services	165	142	119	240	360	409	458	506	555	604
Arts, Entertainment, Recreation, Accommodation & Food Services	77	57	37	183	328	391	454	516	579	642
Other Services	30	115	200	154	108	128	147	167	186	206
Public Administration	10	23	35	18	0	0	0	0	0	0

Source: DCA

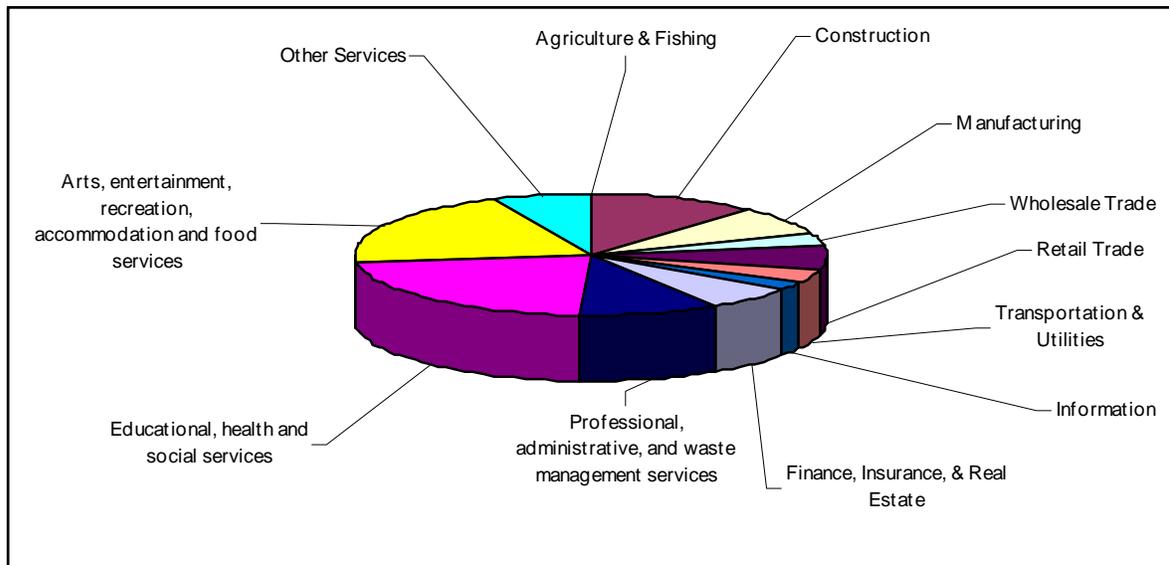
As the chart in Figure 6 demonstrates, the economy in Tybee Island (as determined through the 2000 US Census Bureau) is primarily made up of a few key industry types. The major employers for the workforce of Tybee Island include:

- Arts/entertainment/recreation/accommodation/food services
- Education/health/social services
- Professional/scientific/management/administration/waste management services
- Construction.

These four categories account for over 60% of the employed population of the City. A major downturn in any of these industries could have a dramatic effect on the economy of the City.

The major trend apparent from future projections related to employment by industry is that the current leading sectors will see a slight rise in the total number of people employed while the other industries will remain fairly stable. Figure 6 shows the current breakdown of percent of population employed by each industry type.

Figure 6. Tybee Island Industry Distribution – Employment by Industry (2000)



2.2 Employment by Industries Comparison

Table 18 compares the percentage of residents employed by each industry type in the City of Tybee Island versus all of Chatham County.

Table 18. Employment by Industry – County Comparison

Category	1980		1990		2000	
	Tybee Island	Chatham County	Tybee Island	Chatham County	Tybee Island	Chatham County
Agriculture, Forestry, Fishing, Hunting & Mining	1%	1%	3%	1%	0%	0%
Construction	10%	8%	10%	8%	11%	8%
Manufacturing	11%	16%	12%	13%	7%	11%
Wholesale Trade	5%	5%	1%	4%	3%	3%
Retail Trade	17%	18%	22%	19%	6%	13%
Transportation, Warehousing, & Utilities	11%	10%	7%	9%	4%	6%
Information	NA	NA	NA	NA	2%	2%
Finance, Insurance, & Real Estate	5%	6%	5%	5%	5%	5%
Professional, Scientific, Management, Administrative, & Waste Management Services	4%	3%	4%	4%	9%	8%
Educational, Health & Social Services	17%	17%	9%	19%	21%	22%
Arts, Entertainment, Recreation, Accommodation & Food Services	8%	6%	3%	1%	19%	12%
Other Services	3%	4%	16%	11%	6%	5%
Public Administration	8%	6%	8%	6%	7%	5%

Source: DCA

When compared to Chatham County, it is evident that the economy of Tybee Island relies much more heavily on the arts/entertainment/recreation/accommodation/food service industry. This is directly related to the reliance on tourism as a source of revenue. Chatham County, on the other hand, is more evenly distributed in terms of how the population is employed.

Table 19 below compares employment trends in the City of Tybee Island to the State of Georgia and the Nation. The distribution of employment by industry remains fairly consistent for the State of Georgia and the Nation. However, the percentages of employment in the manufacturing and retail trade sectors are significantly lower for the City. The percentages for construction and service related sectors are significantly higher in Tybee Island than in Georgia and the Nation. This trend is directly related to the impact the tourism industry has on the local economy. It is unlikely to see a significant shift in the distribution of employment by industry in the future for the City of Tybee Island.

Table 19. Employment by Industry – State & National Comparison

Category	Tybee Island	Georgia	Nation
Agriculture, Forestry, Fishing, Hunting & Mining	0%	1.4%	1.9%
Construction	11%	7.9%	6.8%
Manufacturing	7%	14.8%	14.1%
Wholesale Trade	3%	3.9%	3.6%
Retail Trade	6%	12.0%	11.7%
Transportation, Warehousing & Utilities	4%	6.0%	5.2%
Information	2%	3.5%	3.1%
Finance, Insurance & Real Estate	5%	6.5%	6.9%
Professional, Scientific, Management, Administrative & Waste Management Services	9%	9.4%	9.3%
Educational, Health & Social Services	21%	17.6%	19.9%
Arts, Entertainment, Recreation, Accommodation & Food Services	19%	7.1%	7.9%
Other Services	6%	4.7%	4.9%
Public Administration	7%	5.0%	4.8%

Source: US Census

2.2.1 Employment Status

Unemployment rates are computed by comparing the number of total adults in the workforce with the number of civilian adults that are unemployed. Unemployment rates in Tybee Island compare very favorable with those of Chatham County and the State of Georgia. The City data also indicates a downward trend in the unemployment rate, which is consistent with both countywide and statewide trends.

Table 20. Unemployment Rates

Category	Tybee Island		Chatham County		Georgia	
	1990	2000	1990	2000	1990	2000
Total Labor Force	1,319	1,843	105,637	113,087	3,351,513	4,129,666
Unemployed	63	83	7,079	6,595	188,102	223,052
Unemployment Rate	4.8%	4.5%	6.7%	5.8%	5.6%	5.4%

Source: DCA

2.3 Occupation

Table 21 gives a breakdown of the City's workforce by their occupation. The numbers are compared with those of Chatham County and indicate the same workforce composition as was indicated by the table above. As a percentage of the total, Tybee Island's workforce comprises more professional and service workers than the County as a whole. The larger percent of professional workers is consistent with the City having a higher median income

and a higher level of educational attainment than the County. The high percent of workers in the service industry can be tied to the local economies reliance on tourism.

Table 21. Workforce by Occupation

Occupation	Tybee Island	Chatham County
Management, professional, and related occupations	41.8%	32.3%
Service occupations	20.6%	16.8%
Sales and office occupations	17.9%	27.2%
Farming, fishing, and forestry occupations	NA	0.2%
Construction, extraction, and maintenance occupations	11.3%	10.5%
Production, transportation, and material moving occupations	8.4%	13.0%

Source: DCA

2.4 Personal Income by Type

Personal Income by Type is an indicator of how residents of Tybee Island are supporting themselves. The information provided in the table below demonstrates that there is a growing percentage of people in the City who rely on retirement for their income. This is consistent with the age distribution within the community, specifically growing percentage of older residents.

Additionally, Table 22 indicates there are a growing number of self-employed residents, which is a positive trend if the City wishes to encourage the development of neighborhood commercial businesses. There has also been a slight increase in income generated from rental properties, which is predictable since income generated from tourism accounts for a large percentage of revenue within the City.

Table 22. Tybee Island's Labor Force Information

Category	Tybee Island			Chatham County		
	1990	2000	% Difference	1990	2000	% Difference
Wage or Salary	75.60%	67.90%	-7.70%	72.90%	69.30%	-3.60%
Self Employed	4.00%	11.20%	7.20%	5.40%	6.00%	0.60%
Rental Income	6.00%	7.10%	1.10%	8.20%	9.10%	0.90%
Social Security Income	6.80%	5.90%	-0.90%	6.20%	5.80%	-0.40%
Public Assistance	0.10%	0.10%	0.00%	0.80%	0.70%	-0.10%
Retirement Income	5.50%	6.50%	1.00%	5.20%	7.00%	1.80%
Other	1.90%	1.20%	-0.70%	1.20%	2.10%	0.90%

Source: DCA

2.5 Wages

Table 23 below shows the median wage earned in the City of Tybee Island for males and females verses the median wages earned in the County as a whole. The higher median wages are reflective of the types of industries and occupations that are predominant in the working population of the City.

Table 23. Median Earnings

Median earnings (dollars)	Tybee Island	Chatham County
Male full-time, year-round workers	\$45,833	\$35,132
Female full-time, year-round workers	\$30,694	\$24,686

Source: DCA

2.6 Place of Employment

Table 24 shows the percentage of the total population in the City of Tybee Island that works within or outside of the City limits. These numbers are derived as a percentage of the total population on the island and are based on information from the 2000 US Census Bureau.

The percentage of people that work in the City has remained constant between 1990 and 2000. The employment options within the City are primarily related to the service industry that caters to the many tourists that visit the island annually. As a result, this percentage of people that work in the City has remained the same despite the increase in population. Conversely, the percentage of people that work outside the City is rising. This is related to the fact that the island does not offer a great deal of employment options for residents. As the population continues to rise, the amount of people working outside of the island will likely also increase.

Table 24. Tybee Island's Employment Information

Category	Tybee Island		Chatham County	
	1990	2000	1990	2000
Total population	2,842	3,392	216,935	232,048
Worked in City Limits	13.0%	13.0%	42.5%	42.4%
Worked outside of City Limits	30.0%	38.2%	1.2%	1.6%

Source: DCA

The City of Tybee Island keeps records of job numbers by major employer for several business and public entities within the City. These numbers, presented in Table 25, show that employment opportunities in Tybee Island are highly seasonal. While this is not a complete listing of all employers in the City, it provides clear evidence of the City's dependence on the tourism industry.

Table 25. Tybee Island's Major Employers

Major Employers	In Season	Off Season
Savannah Beach/Oceanside Nursing Home	135	135
Ocean Plaza	125	55
City of Tybee Island	85	105
Beachside Colony	40	23
Tybee Market	15	15
Chu's Convenience	18	18
Tybee Historical Society	15	15
Oceanfront Rentals	13	13
Total	446	379

Source: City of Tybee Island

2.7 Commuting Patterns

According to the 2000 US Census Bureau data, the majority of residents either drive alone or carpool to work. Not even half a percent of residents rely on public transportation as a mean of traveling to work. This can be related to the fact that convenient public transportation does not exist on the island. The downtown Savannah area is very pedestrian friendly and traffic congestion is not an issue to the same degree as it is in many other cities. As part of the comprehensive planning process, the City of Tybee Island will evaluate alternative transit options to transport residents and service workers to and from the downtown Savannah area.

Table 26. Commuting Patterns

	Tybee Island	Chatham County
Car, truck, or van - drove alone	83.7%	76.4%
Car, truck, or van - carpooled	8.3%	13.4%
Public transportation (including taxicab)	0.2%	3.2%
Walked	1.7%	2.9%
Other means	2.0%	1.6%
Worked at home	4.0%	2.5%
Mean travel time to work (minutes)	26.6	22.3

Source: DCA

2.8 Economic Resources

Economic development in Tybee Island is supported by the City through a number of quasi-governmental organizations:

- Savannah Area Chamber of Commerce. The economy in the Greater Tybee Island area is made up of a diverse workforce that includes manufacturing, distribution, military, healthcare, tourism, and retail. As the local economy continues to prosper, the need for a well-trained and educated workforce continues to rise. The Savannah Area Chamber works to provide educational opportunities to citizens to ensure they have the opportunity to develop the necessary skills. The Chamber also acts as the voice of the business community by providing assistance with government affairs through lobbying at the local, state, and federal levels. The Chamber markets the Savannah area to both tourists and potential new businesses.
- Tybee Island Tourism Council. The Tybee Island Tourism Council is focused on promoting the island to tourists and drawing new businesses to the island. The Tourism Council provides potential visitors with valuable information about local events and attractions. The Council also works closely with the Savannah Area Chamber of Commerce in terms of marketing the island to potential businesses.

2.8.1 Education & Training

A number of educational institutions and training opportunities are available for citizens in the Tybee Island area. Located in the Chatham County are the following colleges and universities:

- Savannah College of Art and Design
- Savannah State University
- Armstrong Atlantic State University
- Savannah Technical College
- Georgia Tech – Savannah Campus
- University of Phoenix
- ITT Technical Institute
- South University

The Savannah-Chatham County Board of Education also provides various training and educational opportunities to citizens.

3. Housing

3.1 Types of Housing

The percentages of different types of housing in Tybee Island are displayed in Table 27. The projections in gray are calculated based on growth rates evidenced over the last 20 years. The current trend is towards single-family attached units. Examples of single-family attached units are townhouses, condos, row houses, etc. Also, the number of higher density multi-family units is predicted to experience a slight increase over time. This trend may be avoided if future growth is limited by developing more lower-density housing options.

Table 27. Housing Types

Housing Types											
Category	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
Single Units (detached)	64.2%	57.8%	54.3%	53.2%	52.3%	51.1%	50.3%	49.6%	49.0%	48.5%	48.1%
Single Units (attached)	1.2%	2.8%	3.7%	6.2%	8.1%	8.8%	9.3%	9.7%	10.1%	10.3%	10.6%
Double Units	15.6%	11.7%	9.5%	9.7%	9.8%	9.3%	8.9%	8.5%	8.2%	8.0%	7.8%
3 to 9 Units	14.9%	12.3%	10.8%	13.7%	16.0%	16.1%	16.2%	16.3%	16.3%	16.4%	16.4%
10 to 19 Units	0.9%	1.6%	2.0%	3.5%	4.6%	4.9%	5.2%	5.4%	5.6%	5.7%	5.9%
20 to 49 Units	1.9%	3.1%	3.7%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
50 or more Units	0.9%	8.5%	12.6%	9.2%	6.5%	7.0%	7.4%	7.7%	8.0%	8.2%	8.4%
Mobile Home or Trailer	0.2%	1.7%	2.5%	2.5%	2.4%	2.7%	2.8%	3.0%	3.1%	3.2%	3.3%
All Other	0.3%	0.7%	0.8%	0.5%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%

Source: DCA

Another factor that is important to consider is how the number of dwelling units compares with the trends in housing types. The significant increase in the number of housing units between the years 1980 to 2000 and is starting to level off, which is partly due to the lack of developable land remaining on the island.

3.2 Condition of Housing

The condition of housing as reported in the 2000 US Census Bureau is summarized in Table 28. The percentage of households with insufficient plumbing and kitchen facilities in Tybee Island is less than that of the surrounding county and State. This implies that the City does a good job in terms of maintaining adequate housing and property maintenance standards for residents.

Table 28. Condition of Housing Units

Category	Tybee Island		Chatham County		Georgia	
	1990	2000	1990	2000	1990	2000
Total housing units	2,150	2,695	91,178	99,683	2,638,418	3,281,737
Lacking Plumbing Facilities	0.0%	0.3%	0.4%	0.8%	1.1%	0.9%
Lacking complete kitchen facilities	0.0%	0.5%	0.8%	1.0%	0.9%	1.0%

Source: DCA

Table 29 lists the percentage of housing units built during decades past. Please note that this table was developed from data collected as part of the 2000 Census survey, and that it is only as accurate as the responses of the homeowners surveyed. The error inherent in relying on homeowner’s recollections or estimates of when their homes were built can explain why the table below seems to indicate that in the year 2000 more homes were constructed in the past (specifically in the 1960’s, 1950’s, and 1930’s) than in 1990.

However, for the purpose of this study, we have assumed that even if homeowners couldn’t remember or didn’t know the exact decade in which their house was built, they did know that it was definitely constructed before 1980. This indicates that, based on the information from 1990, nearly 60% of the total housing units on the island were built prior to the year 1980. In the year 2000, around 50% of housing units were constructed prior to 1980. This trend indicates that the older, traditional housing types unique to the island are being redeveloped or replaced. Current development trends have placed a tremendous amount of pressure on residents to sell property for the value of land alone. Historic houses and cottages are being demolished and new houses are taking their place. It is critical that more efforts are made to protect these houses through restoration.

Table 29. Age of Housing Units

Category	1990	2000
Built 1970 - 1979	19.6%	9.8%
Built 1960 - 1969	6.4%	8.6%
Built 1950 - 1959	9.6%	12.3%
Built 1940 - 1949	12.4%	7.3%
Built 1939 or earlier	10.6%	14.5%

Source: DCA

3.3 Occupancy

Figures from the 2000 US Census Bureau data related to housing occupancy are included in Table 30. In the City of Tybee Island, there appears to be a significant increase in the number of owner-occupied housing units, with a decline in the number of renter-occupied units. Home-ownership leads to a greater personal and financial investment in the home, which creates a vested interest in the appearance and condition of the neighborhood as a whole. The high percentage of vacant units is somewhat deceiving as these numbers are most likely related to the high number of vacation rental properties on the island.

Table 30. Occupancy Characteristics

Category	Tybee Island		Chatham County		Georgia	
	1990	2000	1990	2000	1990	2000
TOTAL Housing Units	2,150	2,695	91,178	99,683	2,638,418	3,281,737
Housing Units Vacant	44.6%	41.4%	11.0%	9.8%	10.3%	8.4%
Housing Units Owner Occupied	28.1%	41.0%	52.3%	54.5%	58.2%	61.8%
Housing Units Renter Occupied	21.6%	17.7%	36.6%	35.7%	31.5%	29.8%

Source: DCA

3.4 Housing Costs

Housing costs and average rental costs throughout Georgia are on the rise as evidenced in the table below. However, the City of Tybee Island experienced a tremendous increase in average property values (150%) between 1990 and 2000. On the other hand, the State of Georgia and Chatham County had an increase in average property values of 57% and 52% respectively. While housing costs are increasing throughout the state, the dramatic increase for the City of Tybee Island is consistent with the realization that housing on island is becoming less affordable.

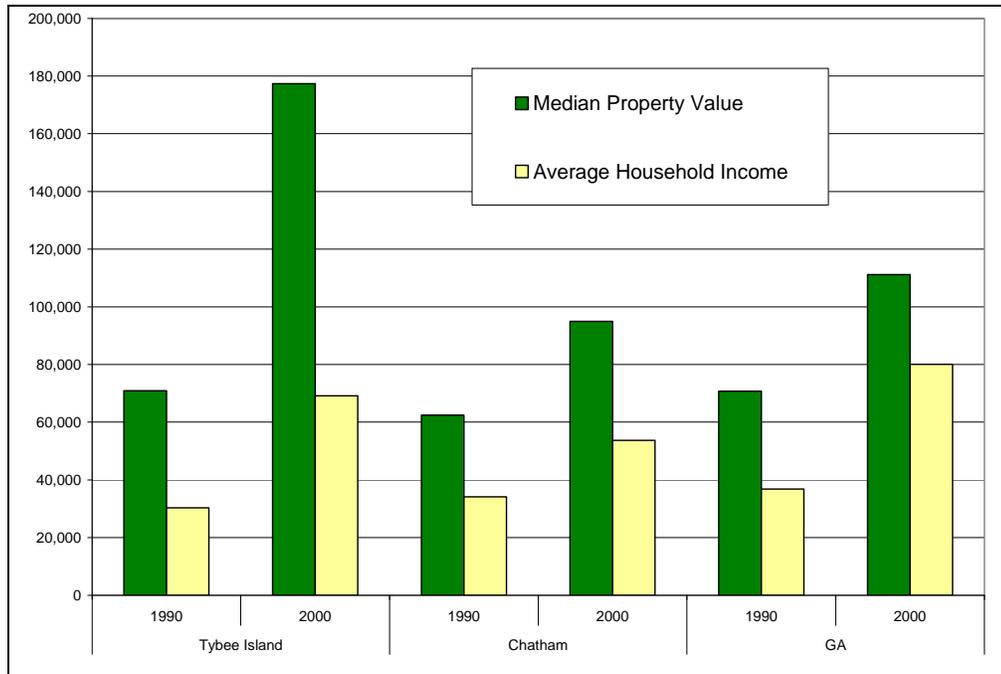
Table 31. Housing & Rental Costs (in dollars)

Category	Tybee Island			Chatham			Georgia		
	1990	2000	% Growth	1990	2000	% Growth	1990	2000	% Growth
Median property value	70,900	177,400	150.2%	62,400	95,000	52.2%	70,700	111,200	57.3%
Median rent per month	511	663	29.7%	406	589	45.1%	433	613	41.6%

Source: DCA

The average household income is approximately \$70,000/per year according to data collected in the 2000 US Census. Typically, it is most favorable when the median property value is less than twice the average household income. This trend indicates that property on Tybee Island is becoming less affordable when compared to the average household income. Figure 7 compares average household income with median property value based on 2000 Census data.

Figure 7. Average Household Income vs. Median Property Value



In 2004, Chatham County Tax Digest calculated the average sale price of homes on Tybee Island at \$455,851. This number more accurately represents the increasing value of property on the island and better supports the notion that property is becoming less affordable.

Affordable housing is defined as annual owner costs less than or equal to 30% of annual gross income. Annual costs are estimated assuming the cost of purchasing a home at the time of the Census based on reported value of the home. Assuming a 7.9% interest rate and national averages for utility costs, taxes, and hazard and mortgage insurance, multiplying income times 2.9 represents the value of a home a person can afford to purchase. For example, the average household with an annual gross income of \$70,000 is estimated to be able to afford a home worth \$203,000 without having total costs exceed 30% of their annual household income.

Additionally, the average household income increased by 128% and the median property value increased by 150%. This indicates that homes were less affordable on Tybee Island in 2000 than they were in 1990. However, rent on the island appears to be more affordable for residents than it has been in the past since median rent values have increased at a rate that is less than the average household income.

3.5 Cost Burdened Housing

Cost-burdened households are those households paying 30% or more of their net income on housing costs. Table 32 shows the percentage of total households in the City of Tybee Island that are cost burdened based on the definition above. The total percentage of cost burdened households in 2000 is 31.1%. It is difficult to compare this number to the total number of

cost burdened households in 1990 because the number of households with a cost burden above 50% was not calculated. However, the number of households with a cost burden between 30% and 49% decreased only slightly between 1990 and 2000 when compared to countywide trends. This can be attributed to the fact that both median household income and property value rose dramatically during that same period.

Table 32. Cost Burden

Category	Tybee Island		Chatham County	
	1990	2000	1990	2000
Total Number of Households	1,188	1,568	71,323	81,111
30% - 49%	23.5%	20.2%	30.6%	17.1%
50% and greater	NA	10.9%	NA	14.2%
Not computed	4.4%	6.1%	3.1%	4.2%

Source: DCA

3.6 Special Needs Housing

The City of Tybee Island does not currently have many services with regard to special needs. However, the growing elderly population will increase the demand for these types of services. It will be increasingly important for the City to focus on the needs and provide services that are more tailored to the aging population.

The Oceanside Nursing and Rehab center is located at 77 Van Horne Street in the North Beach Neighborhood. The Center provides long-term care, nursing facilities, and a number of other services.

The Savannah Beach Nursing and Rehab Center is a long-term nursing facility located at 90 Van Horne Street in the North Beach Neighborhood. The Center contains 150 beds and offers both onsite and offsite services to patients depending of the needs of individual patients. Services offered onsite at the center include; nursing, pharmacy, dental, occupational therapy, speech pathology, and a number of other services. The Rehab Center provides offsite services such as x-rays, clinical laboratory work, etc.

3.7 Job / Housing Balance

Table 33 illustrates the balance between housing and jobs within the City of Tybee Island. A balanced community generally has a jobs-housing ratio of 1.25 to 1.75. Tybee Island had a ratio of 0.65 in 2000, which is up slightly from 0.58 in 1990. This trend can be attributed to the large number of seasonal residents, the lack of employment opportunities on the island for skilled workers, the influx of out-of-town population to work in the service industry, and the large amount of tourist rentals. It is therefore evident that the City does not truly have the potential, nor does it strive to be a self-sustaining live/work community.

Table 33. Job Housing Balance

Category	1990	2000
Population	2,842	3,392
Average Household Size	2.28	2.07
Number of Households	1,188	1,568
Housing Units	2,150	2,695
Employment	1,256	1,749
Employment / Population Ratio	0.44	0.52
Employment / Housing Unit Ratio	0.58	0.65

Source: DCA

3.8 Public Facilities

3.8.1 Water System

There are 2,880 metered residential and 103 metered commercial customers served by the City of Tybee Island's water system. In 2006, 19.5% of total water consumption was by commercial users. The primary source of raw water supply consists of three wells, which are drilled into the Upper Floridan Aquifer. The City's current water withdrawal permit is 0.96 MGD for the daily average and 1.6 MGD for a monthly average.

The City of Tybee Island participated in the 2005 update of the Chatham County Water Supply Management Plan. The average annual usage in 2004, as reported in this Plan, was 0.887 MGD. Based on the average annual usage and the number of customers, the average per capita usage in the City of Tybee Island was calculated to be 216.7 GPD, although this number is deceptively high since the total water usage includes commercial, as well as residential customers and also reflects to seasonal influx of tourists. The City of Tybee Island is actively engaged in a Water Conservation Program, and has even been awarded a Water First Certification for their water resources protection efforts. The City's water conservation program includes compliance with the State's outdoor water schedule, distribution of low flow plumbing kits, and shallow wells for irrigation.

The Water Supply Plan Update reported that the average daily per capital usage in Chatham County as a whole was approximately 136 GPD, which was reduced by 5 GPD since the Plan was last updated in 2000. This decrease was realized despite a countywide population increase, which provides that the water conservation measures set forth in the Water Supply Plan have effectively reduced water usage in Chatham County.

Assuming that the City's average daily water usage is 0.887 MGD, but the City is permitted for 0.96 MGD, there is approximately 73,000 gallons per day of capacity remaining under the existing water withdrawal permit. If the average per capital usage is 216 GPD, the system has existing capacity to serve an additional 338 residents. To put this in perspective, the City of Tybee Island anticipates adding an additional 564 in the next 10 years. This does not

account for the additional capacity necessary to serve an increased number of summer residents.

In light of these water use projections, the City must continue to improve system efficiency and promote water conservation. These measures will allow the City to “create” additional capacity within the existing system. However, based on the limited amount of additional capacity remaining, it would be prudent for the City to begin investigating alternative water supply sources and planning for future water supply. Such planning becomes even more pertinent, when considered in light of the threat of saltwater intrusion in the Upper Floridan Aquifer. Current projections based on current level of pumping within the aquifer, estimate that the City of Tybee Island’s well may become salty within 100 years.

3.8.2 Sanitary Sewer

Approximately 2,862 residences are served by the City of Tybee Island sanitary sewer system, which is composed of 13 wastewater lift stations that lift the water to elevations required for flow by gravity to the City’s 1.15 MGD wastewater treatment facility. The treated wastewater is discharged to the Savannah River. The City is regularly upgrading the sanitary sewer transfer facilities to meet the growing needs of Tybee Island.

When planning for the sanitary sewer system, engineers typically estimate that approximately 80% of water supply used per capita will be returned to the wastewater system. In the City of Tybee Island, this would equate to approximately 173 GPD of wastewater generated per capita. Again, this number must be considered in light of the per capita water supply estimate that incorporates commercial and domestic usage and also accounts for the seasonal increase in population. Based on a per capita usage of 173 GPD, the existing wastewater treatment facility has the capacity to serve 6,647 residents. While this number may seem significantly larger than existing and future population numbers, it is important to remember that the summer influx of tourist increases the population by as much as 76%. The city does have a seasonal discharge permit that allows for higher flows during summer months to accommodate the tourist population.

3.8.3 Storm Sewer System

The Stormwater drainage system on Tybee Island is comprised of a series of pipes, swales, and ditches that convey the runoff from the public right-of-ways to the Back River, dunes, and marshes. There are currently 13 new projects on the Capital Improvement List and the City is pursuing a GIS inventory of the municipal separate storm sewer system to better address current and future needs.

The City of Tybee Island has a Phase I NPDES Municipal Separate Storm Sewer System (MS4) Permit to operate their drainage system. This permit was most recently renewed in 2005, and the City’s SWMP was updated in association with the reissuance of the permit. The revised SWMP includes programs that address public education, MS4 operations &

maintenance, development regulation, water quality monitoring, inspections, and municipal good housekeeping.

3.8.4 Fire Department

Established in 1936, the City of Tybee Island Fire Station is located at 512 Jones Street and responds to emergency medical, fire, and utility assistance calls. The Department is a member of the Chatham Fire Chiefs Association. The association involves a mutual aid agreement between surrounding Fire Departments to assist one another in the event that an emergency warrants additional assistance. The Tybee Island Fire Department is made up of roughly 50 volunteers, a Training Officer, Assistant Fire Chief, and a Fire Chief. The department houses four pumpers and two utility vans and contains other equipment specifically designed for emergency situations. The Fire Department currently has a Class IV rating and responds to roughly 75 calls annually.

3.8.5 Public Safety

The Tybee Island Police Department is located on Van Horne Street on the north end of the island. The Police Department employs 17 uniformed officers, four civilian dispatchers, and three clerical workers. The department maintains and operates 15 patrol cars and replaces two vehicles every year. The average life of each vehicle is roughly seven years.

3.8.6 Parks & Recreation

The City contains two significant parks that account for a total of 13 acres of land. Memorial Park is a 4.5-acre space located near City Hall along Butler Avenue. This park offers a number of activities such as tennis courts, sand volleyball, and basketball courts. The park also contains a playground for children, a lighted pavilion, a dog park, and public restroom facilities.

Jaycee Park is approximately nine acres and is located in the North Beach area. The park contains a soccer field, softball field, and a concession stand with public restroom facilities. Jaycee Park also has a jogging trail, gazebo, basketball court, children's playground, and a scenic meandering waterway.

The City of Tybee Island operates the Rivers End Campground and RV Park located in the North Beach area of the island. The park was acquired by the City in 2006 in an effort to ensure the preservation of the area. The park contains approximately 100 camp sites that include full hook-ups with sewer, free cable, water and electric only, and primitive tent sites. The park is open year-round and offers a swimming pool and screened pavilion. Figure 8 illustrates the locations of some of the Public Facilities and Services on Tybee Island.

3.8.7 Other Facilities

The following list identifies some other facilities that are available to residents and tourists on Tybee Island:

- The Youmans-Solomon Complex (the gym). The gym was built in 2004 next to the old school in Memorial Park. The building is 10,534 sq feet with offices, restrooms and showers, and a concession stand.
- Post Theater. The theater was originally built in 1930 and is owned currently by the Friends of the Tybee Theater. It is located on Van Horne and the group intends to operate the building as a theater when the renovations are complete.
- The Teen Center. The Teen Center was originally built in 1910, and sits adjacent to Jaycee Park. It is 2,900 square feet and has ping-pong and pool tables for the teens.
- The Guard House. The Tybee Island Community Center was built in 1905. The facility contains a great room, large meeting room, full working kitchen, and a large outside area with picnic tables. The building is 3,200 square feet, 2,320 square feet are heated and 680 are porches. The City uses the building as a meeting house, a polling place, and for various citizen groups such as the Tybee Island Bridge Club and the Tybee Island Beautification Committee. It is currently being remodeled.
- Tybee Island Pier/Pavilion. The Pier and Pavilion are located at the end of Tybrisa Street. These features are an island focal point and offer a variety of uses to both residents and tourists. On the premises are picnic tables, a snack bar, and public restrooms. Aside from offering fantastic views, the area also functions as a meeting place and plays host to a number of special events. The pavilion can be rented for weddings, family reunions, and other social events. The original Tybrisa Pavilion was built in 1891 by the Central Georgia Railroad and was a well known destination for both day-trippers and seasonal visitors. However, the original Pavilion was destroyed by fire in 1967. Construction of the existing Pavilion was completed in 1996.

Figure 8. Map of Facilities & Services



4. Natural & Cultural Resources

4.1 Natural Resources

The City of Tybee Island is approximately 3.2 square miles or 2,061 acres and like many coastal communities, the City contains a unique array of natural resources. The entire City of Tybee Island falls within the boundaries of the FEMA 100-year flood zone. Coastal marshlands and beaches account for a significant percentage of the total area on the island. Collectively, these resources represent 35% of the City area with coastal marshlands totaling roughly 450 acres and beaches 260 acres. There are roughly 30 miles of streams and waterways in the City. These features add to the diverse habitat present in the community. Natural resources on the island are illustrated in Figure 9.

The beach, dune and marsh ecosystems are complex, intricately interconnected, and provide important habitat for many species of birds and animals. The coastal marshlands are home to many species of wading birds including herons, egrets, ibis, and storks as well as small mammals and reptiles, such as the Diamond Back Terrapin. The beaches provide habitat and/or a migration rest stop for shorebirds and seabirds including the black skimmer, oyster catcher, sandpipers and plovers. The beaches are also an important nesting ground for several species of threatened and endangered sea turtles such as Loggerheads and Leatherbacks.

The City of Tybee Island is dedicated to environmental resource protection. Thanks to the Coastal Marshlands Protection Act, marshes cannot be filled or destroyed. Coastal estuaries provide important habitat for oysters and other shellfish, shrimp, crab, and act as nurseries for many species of fish. Populations of wading birds and small mammals depend on these species for food. Unfortunately, development adjacent to the marsh can have negative impacts. Non-point source pollution from stormwater runoff can impair water quality in the coastal estuaries, which in turn can adversely affect commercial and recreational fisheries that depend on the species listed above. Through public education and regulatory ordinances, the City of Tybee Island will continue to work to monitor and control erosion and sedimentation, stormwater system discharges, and other forms of non point source pollution that can negatively impact the coastal marshland ecosystem.

The beaches, dunes, and coastal marshes are protected by state laws but the maritime forests and brushlands above the intertidal line (mean high sea level or 5.6 ft.) are not. Maritime forests can be found on Tybee Island and nearby barrier islands and back barrier island (*coll. Hammocks*.) These habitats contain evergreen forests of pine, palms, live and laurel oaks, magnolias, and a dense understory of ever green shrubs and palmettos. Brushlands are located between the maritime forests and the coastal marshlands. These habitats can be identified by the presence of wax-myrtle and southern red cedar. This ecosystem provides essential habitat for many species of birds, small and large mammals, and reptiles.

Tybee Island is extensively developed and much of the original natural habitat is gone. While canopy trees have been preserved in many locations, the understory that is part of the

complete ecosystem has been removed. Fortunately, some of the original maritime forest remains on Tybee. The city has established several public nature preserves or parks to preserve the remaining maritime forests, including the Sally Pearce Nature Trail, Blue Heron Park, and the Rivers End Campground. The Rosewood Painted Bunting Preserve is a mixed habitat of pine and wax myrtle adjacent to the dune system. This preserve is a breeding location for the Painted Bunting, considered to be an “at-risk” species. This colorful bird is indigenous to the southeast, and is a major attraction for bird watchers. The North Beach area of Tybee Island and Fort Pulaski are included on the State of Georgia’s Colonial Coast Birding Trail.

The City will continue to identify and inventory important habitat remaining on Tybee Island. Identified properties will be prioritized for acquisition by the City through grants, SPLOST, and other funding sources. The City will also continue to provide education to the public on these ecosystems and the importance of preserving these habitats through the developed of public preserves and parks, backyard riparian buffer preservation, and conservation easements.

Preserving natural habitats along with providing sound public access (parks, walking trails, boardwalks, etc.) to these sites enhances the quality of life for the residents of Tybee Island. In addition, habitat preservations also provides a destination or draw for eco-tourists including bird watchers, hikers, and kayakers. Ecotourism is an important component of the City’s economy and providing support for the growth of ecotourism will help to bolster the off-season economy that has previously been so devastating to local restaurants, inns, and hotels.

In an effort to address the unique environmental conditions on the island, the City of Tybee Island established the Environmental Ethics Resolution and Policy. The Resolution highlights the importance of natural resource management and works to create and maintain a healthy natural environment on the island.

4.2 Part V Environmental Planning Criteria

The City is in the process of adopting the Part V Environmental Planning Criteria for Wetlands which is the only criterion that is applicable to the City. None of the City’s land area falls within the jurisdictional boundaries of groundwater recharge zones, protected river corridors, or water supply watersheds as identified in Chapter 391-3-16 of the Rules for Environmental Planning Criteria of Georgia Department of Natural Resources Environmental Protection Division. Additionally, as the City of Tybee Island is on the coast of Georgia, the criterion for Mountain Protection is not applicable.

4.3 Cultural Resources

The City contains a number of significant cultural resources when paired with the various natural resources add to the number of tourists that visit the island annually. The main cultural resources on the island include the following:

- Tybee Island Lighthouse. The original Tybee Lighthouse was ordered by General James Oglethorpe in 1732 as a means of guiding mariners into the Savannah River. The lighthouse has been rebuilt several times over the years, but still stands on the same 5-acre site with all supporting buildings intact. The Lighthouse and Head Keepers house were recently renovated. The renovation paid great attention to detail and authenticity and addressed years of modernization and decay. The Lighthouse continues to be a must see for all visitors to the island.
- Fort Screven & Battery Garland. Informally referred to as Fort Tybee, Fort Screven was built on the north end of the island as a coastal defense and to guard the main nautical entrance to Savannah. The Fort remained as active military post until 1947 when it was sold to the Town of Tybee. The Tybee Museum is located in Battery Garland, which is the former gun battery and magazine for a 12-inch long range gun. The museum now holds collection and exhibits for hundreds of years of Tybee Island history. Located near the Lighthouse, the Museum and Fort draw a significant amount of visitors each year.
- Cockspur Lighthouse. The Cockspur Lighthouse was built in the 1830s and was originally used as a daymark for entrance to the South Channel of the Savannah River. The island where the lighthouse sits is made up of oyster shells and marsh grass and is covered at high tide. The lighthouse is visible from Highway 80, the north beaches, and other areas on the north end of the island.
- Tybee Pier and Pavilion. The pier and pavilion are located toward the south end of the island just off Tybrisa Street. Both have been significant landmarks on the island and continue to be among the most popular locations for visitors. The pier and pavilion are in a great location for fishing, people watching, and are host to a number of festivals and events throughout the year.

Figure 9. Map of Natural Resources



5. Intergovernmental Coordination

5.1 Adjacent Local Governments

The City of Tybee Island is located in Chatham County, Georgia and is adjacent to unincorporated parts of the County. Wilmington Island, Oatland Island, Whitmarsh Island, and Talahi Island are a series of unincorporated, back barrier islands that lie between the City of Tybee Island and the mainland. The Cities of Thunderbolt and Savannah are the nearest incorporated municipalities and are roughly 10 miles away.

5.1.1 Service Delivery Strategy

The City of Tybee Island has recently updated its Service Delivery Strategy with Chatham County by electing to continue the existing Service Delivery Strategy until October 2008. Tybee Island signed the updated Service Delivery Strategy on August 24, 2006 and it was accepted by the Chatham County – Savannah Metropolitan Planning Commission (MPC) on August 28, 2006. The City will continue to work with the MPC, Chatham County, and other local governments to update this Service Delivery Strategy prior to its expiration in October 2008.

5.2 Independent Special Authorities and Districts

Chatham County – Savannah Metropolitan Planning Commission (MPC)

The MPC is a joint planning agency of Chatham County and the City of Savannah. The MPC focuses on Comprehensive Planning, Historic Preservation, Development & Zoning, and Transportation as they relate to the County.

Coastal Georgia Regional Development Center (RDC)

The Coastal Georgia RDC is a multi-county planning and development agency that serves 10 coastal counties and 35 cities. The RDC provides local and regional planning services. Also provided are services that relate to transportation, water resources, Geographic Information Systems (GIS), economic development, and historic preservation.

Chatham Emergency Management Agency (CEMA)

The main priority of any government is to provide safety to citizens in the event of a disaster or emergency situation. CEMA is an agency established to protect people and property from the threat of these natural disasters, manmade disasters, and a variety of other emergencies that occur. CEMA offers preparedness tips for a variety of situations such as boating, earthquakes, evacuation procedures, hurricanes, tornados, terrorism, etc.

MedStar

MedStar provides medical emergency transportation to the City of Tybee Island.

Tybee Island Land Trust

The Tybee Island Land Trust is a non-profit organization that works to permanently protect areas of the island from development. The Trust currently holds conservation easements to a number of properties on the island. The easements will ensure that these sites are permanently protected in a natural state.

Coastal GA YMCA

The YMCA of Coastal Georgia is made up of 10 different locations in the greater Savannah area. The YMCA places great emphasis on the family and offers a variety of different services to its members. The Tybee Island YMCA is located near the corner of 5th Street and Jones and contains a fitness center, personal trainers, various fitness classes, youth sports, gymnastics, tennis, and fitness classes for seniors. The YMCA also offers after-school care for children, summer camps, sports camps, a teen center, and “morning” and “evening” out programs for parents. The location of the YMCA is illustrated in Figure 8 above.

Burton 4-H Center

The Burton 4-H Center on Tybee Island is located on a 6-acre hammock surrounded by salt marsh and provides environmental education and summer programs to over 6,000 students and adults a year. The Center’s Environmental Education Program offers biological and environmental education to school groups. The summer camp is a 5-day learning program and provides a hands-on learning environment for those who attend. The grounds are defined by the surrounding marshlands and contain a basketball court, a volleyball court, shaded picnic area, and a small gazebo. The site also contains dormitory buildings for students, a dining hall, a recreation hall, various staff housing, and an A-frame, which houses the office and two classrooms. The map in Figure 8 shows the location of the 4-H Center.

Tybee Island Marine Science Center

The mission of the Marine Science Center is “to promote the appreciation, conservation, and understanding of the marine ecosystem of coastal Georgia through education and service.” The Marine Science Center is located in the 14th Street beach parking lot, which is near the pier and pavilion. The Center opened its doors in 1988 and is currently sponsored by the Tybee Island Marine Science Foundation, the City of Tybee Island, and NOAA Gray’s Reef National Marine Sanctuary. The Center offers a number of different educational programs and activities throughout the year for both children and adults. On an annual basis, approximately 39,000 people participate in programs and visit the aquarium. On average, this number includes roughly 24,000 visitors and 15,000 students.

5.3 School Boards

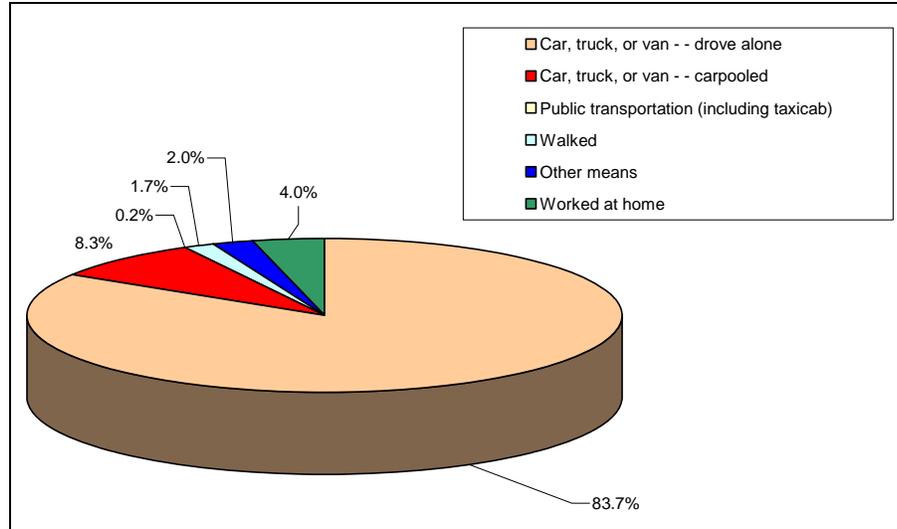
Saint Michael's Catholic School is the only elementary school located on Tybee Island, and it is a private parochial school. The island does not contain any middle schools or high schools. The City of Tybee Island is part of the Savannah-Chatham County Public School System. The Chatham County Board of Education is a governing body of the Chatham County School System. The primary role of the Board is the development and enforcement of school system policies that are then executed by the superintendent and staff. The following public schools serve the City of Tybee Island:

- Island Elementary, PK – 5th, total enrollment: 708. A total of 26 students attend Island Elementary and reside on Tybee Island.
- Marsh Point Elementary – PK – 5th, total enrollment: 886. A total of 33 students that attend Marsh Point Elementary reside on Tybee Island.
- Coastal Middle School, 6th – 8th, total enrollment: 790. A total of 43 students attend Coastal Middle School and reside on Tybee Island.
- Johnson High School, 9th – 12th, total enrollment: 1230. A total of 34 students attend Johnson High School and reside on Tybee Island.

6. Transportation

In the year 2000, over 90% of the employed workforce that lived in Tybee Island commuted to work outside of the City. It is likely that this trend will continue to increase because there are limited types and places of employment on the island and because the availability of jobs is not keeping up with the rate of population growth.

Figure 10. Commuting Patterns



6.1 Roads and Highways

The City of Tybee Island contains approximately 81 miles of streets and roadways. The only access to the island is provided via US Highway 80, which enters the island on the north-west corner. Upon crossing Lazaretto Creek onto the island, the land north of Highway 80 is predominately undeveloped and the area south consists of mostly coastal marshland and some residential hammocks (located in the unincorporated county). There is a diversity of land uses along Highway 80 that includes shops, restaurants, hotels, gas stations, offices, grocery stores, etc. This is the main transportation corridor on the island and provides services to residents and tourists visiting the island.

Traffic congestion can be a major issue on the island. During the height of the summer season, a combination of people vacationing on the island and day visitors to the island cause a tremendous increase in the amount of traffic. Since Highway 80 is the only means of vehicular access to the island, implementation of congestion mitigation and traffic calming measures are issues the City will need to examine as the year-round population and the tourism industry continue to rise.

In an effort to alleviate some of the traffic heading to Tybee Island, the Chatham County Long Range Transportation Plan has proposed the widening of US Highway 80 between Bull

River and Lazaretto Creek from two lanes to four. This has been identified with a “1B” priority. Priority 1 projects are those that have already received at least partial funding commitments. The letter (B) then further breaks the project down based on the level of commitment received. A “1B” priority means that the project is programmed for preliminary engineering and right-of-way only. This project will be funded through a combination of Federal, State, and Local funds when money is available.

6.2 *Alternative Modes of Transportation*

The City has placed a high priority on providing alternative modes of transportation to island residents and visitors. The proximity to the ocean and high numbers of tourists that visit the island each year creates an increased demand for alternative modes of transportation. The City contains a series of unopened roads (maintained by the City) dispersed throughout the island. These roads total approximately five miles and provide the opportunity to create a safe flow of non-automobile traffic around the island. The City wishes to enhance pedestrian mobility by creating bike routes, trails, and improving existing sidewalks.

The McQueen’s Island Trail is a 6-mile greenway trail that runs adjacent to the Savannah River from Bull River to Fort Pulaski. This trail was formerly used as a rail road corridor that provided connection between Tybee Island and Savannah. Included along the trail are picnic areas, workout stations, and interpretive signage discussing the surrounding vegetation and wildlife present in the area.

The City is working to acquire property and easements to allow for the extension and connection of this trail to the City. It is also proposed that the McQueen’s Island Trail be extended to the west to provide connection to River Street in downtown Savannah. The proposed 17-mile extension would cross rivers, pass historical landmarks, and would provide an excellent recreational opportunity for both residents and tourists visiting the County. The River Street – Tybee Island Trail will take bicyclists past historic landmarks, natural features, and expose riders to the unique coastal ecosystem of the area. Also proposed is the Tybee Island Corridor, which is a 15-mile paved bike lane along Highway 80 from the Wilmington Island Bridge in Thunderbolt to 19th Street on Tybee Island. A 5.1-mile stretch of the Tybee Island Corridor between Bull River and Lazaretto Creek includes a paved shoulder and bike lane and is planned to be constructed in conjunction with the proposed widening of Highway 80.

6.3 *Parking*

The City of Tybee Island contains lots for public parking and parking meters dispersed around the island. One of the main lots available for public parking is located in the North Beach area and provides access to the beach, lighthouse and Fort Screven museum. The other public parking venue is located on the southern part of the island near the pavilion and is in close proximity to the beach, shopping, and restaurants. These parking areas are illustrated on the Transportation Map in Figure 11 below. Parking meters are dispersed throughout the island and typically in close proximity to public beach access points. Also implemented is a “pay and display” parking system in a number of places throughout the City. This system will continue to be utilized and expanded to include more locations on the island.

Figure 11. Transportation Map

